

HIGHER SCHOOL OF ECONOMICS
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**“HEALTH” OF NATIONS:
EVALUATING PHYSICAL, SOCIAL
AND MENTAL WELL-BEING
IN EUROPE AND CIS COUNTRIES**

Working paper WP17/2013/02
Series WP17

Working Papers of the Laboratory
for Comparative Analysis
of Post-Socialist Development

Moscow
2013

Yastrebov, G., Krasilova, A., Cherepanova, E. “Health” of Nations: Evaluating Physical, Social and Mental Well-Being in Europe and CIS Countries [Electronic resource] : Working paper WP17/2013/02 / G. Yastrebov, A. Krasilova, E. Cherepanova ; National Research University “Higher School of Economics”. – Electronic text data (300 Kb). – Moscow : Publishing House of the Higher School of Economics, 2013. – 64 p. – (Series WP17 “Working Papers of the Laboratory for Comparative Analysis of Post-Socialist Development”).

In this paper we define the major elements of the theoretical and methodological framework to the analysis of successful transformation in terms of ensuring society’s sustainability, i.e. a capacity to sustain human development. By that we particularly intend to understand an extent, to which the people’s needs in safety, education, health, self-actualization, demographic and social reproduction are satisfied. We also consider the limitations of existing evaluations, which are based on the generally accepted methodological tool such as UN Human Development Index. The authors design a broader definition of viability based on the classical definition of “health” by the World Health Organization, which was suggested as far back as in 1948. A considerable part of the article covers a review of empirical data collected from different sources (WHO, World Bank, UNDP etc.) related to the quality of human development in some countries of Europe and the CIS.

The research was supported by the grant from Russian Humanitarian Scientific Foundation (№ 12-03-00575) and is a part of Basic Research Program of the National Research University “Higher School of Economics”.

Key-words: health, well-being, human development index, CIS countries, social transformations

Исследование выполнено при поддержке гранта Российского гуманитарного научного фонда (№ 12-03-00575), а также является частью Программы фундаментальных исследований Национального исследовательского университета «Высшая школа экономики».

Отдельные идеи и результаты данного исследования обсуждались на следующих научных мероприятиях:

- 1) XVIII ежегодная апрельская конференция Высшей школы экономики (5 апреля 2012 г., Москва, НИУ ВШЭ);
- 2) конференция Европейской социологической ассоциации (9 сентября 2012 г., Женева, Женевский университет);
- 3) международный семинар “Civilizational Dynamics of Contemporary Societies” (24 сентября 2012 г., Санкт-Петербург, Социологический институт РАН).

Introduction

The major political and economic transformations of the late 20th century have led to a radical system change in Russia as well as other post-socialist societies. Yet the relative success of market reforms and the installation of liberal democracy in some countries and their apparent failure in the others require a critical analysis of the basic theoretical as well as methodological approaches to the explanation of these developments. A divergence of transition trajectories in the post-socialist world appears to have been caused by a poor (and, perhaps, intentionally wrong) understanding of the civilization context of these countries' development. This demands that we provide a profound and systematic analysis of the co-relation between socio-economic structures and the backbone elements of various civilizations (their institutional systems, systems of values, patterns of culture and the mentality of people).

Since the late 1990s Western literature has featured an increasing number of publications, which support theories of non-European modernity and variability of development, attempt to distinguish *modernization* from *westernization* and are usually based on the large-scale cross-cultural studies of different civilizations. These ideas have gained particular support in developing countries, where authors draw attention to the lack of explanatory power of existing social theories and their incompatibility with non-Western forms of *modern* society.

A shift from *econocentrism* (which evaluates development in purely economic terms, e.g. economic growth) and *economic determinism* (which regards economic structures as a primary factor of development) to a study of variability of development models is reflected in the rise of alternative theories (e.g. the concept of 'multiple modernities' [Eisenstadt 1999a,b], the 'varieties of capitalism' approach [Amable 2003; Lane, Myant 2006; Hancké, Rhodes, Thatcher 2007, etc.], and civilization theories [Toynbee 1987; Spengler 1991; Huntington 1996; Arnason 2003, etc.]), as well as the advancement of large-scale survey programs that provide sufficient empirical data for such purpose (e.g. World Value Survey, European Value Survey, European Social Surveys, International Social Survey Program, including various UN research programs).

Nevertheless, it appears that this line of research is poorly represented in Russia and other post-socialist countries of Europe. Most debates related to this subject are reduced to a discussion of historical and cultural constraints that counter Western-like modernization.

We would argue that defining a problem this way makes little sense (if none at all), since the current setting of socio-economic structures in these countries maybe inappropriate to the underlying logics of their development as a part of particular civilization systems [e.g. *Shkaratan* 2010]. For example, in spite of the similar reforms social and economic development in Russia and some CIS countries has spun off (and now follows) in the direction, which is certainly different from that of most countries in Central and Eastern Europe. And these differences concern not only and not so much the rate and the quality of their economic growth, but a certain environment, which determines the capacity for human development throughout every social stratum and, eventually, constitutes societal *sustainability*.

But how do we evaluate the successfulness of post-socialist development, if we are to consider an obvious insufficiency of such criterion as economic growth (or economic efficiency)? How do we account for the specifics of development in certain countries and regions in such comparative analysis? What parameters could be regarded as universal in this respect and are such comparisons possible at all?

Within the framework of this project we have been developing a set of indicators, which would provide a comprehensive universalist account of the general level of human development in a given society. This paper is the first attempt to claim our approach and discuss its applicability with respect to empirical data on selected European and CIS countries.

Setting key definitions: *human development*, *human capacity* and *sustainability*

One of the major methodological issues in research dealing with evaluation of social and economic development is a problem of definitions given the existing terminological diversity. Such terms as *human development* or *human capacity* have been introduced in 1980s and, in fact, challenged the economocentrist approach, which was based on the

assumption that economic growth is a major driver to social and political advancements in developing societies. These concepts were developed along with the introduction of new indices and indicators that allow quantitative measurement of structure and quality of such complex and equivocal process as development of contemporary societies.

The ideology that stands behind one of the most popular and widely accepted *Human Development Index* (or *HDI*) is based on conceptual work of a well known economic philosopher Amartya Sen. He was among the first ones who suggested to regard the process of development as a process of gradual expansion of opportunities for self-fulfillment of people, i.e. '*freedom of choice* between possible *life-styles*' or 'capability expansion' [Sen 1983, p.44; Sen 1990, p.755]. According to some other authors the ideology of these indices was a natural reaction to overindulgence with the theories, which tried to apply the economic concept of capital to human individuals, their traits, talents, as well as social relations with other individuals and so on. This peculiar reaction was similar to a protest against the 'economization' of life [Borodkin, Kondryantsev 2003, s.143]. In other words, accepting the universal value of human development not only undermined the notion of economic growth as a major driver to social progress, but provided the basis for a set of alternative theoretical views which opposed the rather utilitarian approach of those, who supported the human capital theory.

The canonical structure of HDI has been first suggested by a Pakistani economist Mahbub ul Haq. Although it has been altered a number of times throughout its use, HDI structure was always based on three major components such as life expectancy, education enrollment and GDP per capita. Mahbub ul Haq was also an initiator to a corresponding series of now popular Human Development Reports, which are being published annually since 1990 by UN [UNDP... 1990].

However, with all the simplicity and multidimensionality of the structure of HDI it is not free from deficiencies, which have become a matter of critique ever since the introduction of index [Hopkins 1991, pp.1471-1472; Streeten 1995, pp.xii-xiv, etc.]. For instance, HDI of a single country itself has nothing to deliver on the scale of its poverty, income distribution or inequality in health provision and education. It also has to be noted that HDI cannot be used as a general measure of human capacity, i.e. a society's capacity to develop modern industries, advanced technology, science, etc. And still, the drawbacks of HDI as a synthetic measure of social and economic development are

compensated for by the easiness of its calculation and accessibility of simple comparable data. One of the most recent attempts to refine all of existing HDI data since 1990s has been fulfilled by a Russian economist Victor Krasilschikov, who has done a great deal on producing comparable and unbiased HDI measurements that allow for better and more precise comparisons across time [Krasilschikov 2010].

Owing to the origins of the term *human development* Tatiana Zaslavskaya (Russian economist and sociologist) has developed a more comprehensive concept of human capacity, i.e. ‘a willingness and capacity of a society for active self-fulfillment, timely and adequate response to various external challenges and successful competition with other societies’ [Zaslavskaya 2005, s.10]. It is obvious that such definition is a lot more substantial than the one of UN’s concise *human development*. This is further reflected in its unusual structure: the core concept can be disintegrated into four major aspects – demographic, socioeconomic, sociocultural and activist. E.g. at the operational level the *demographic* capacity of a society is represented by the age-sex structure of its population, average life expectancy of men and women, net reproduction rate, marriage/divorce ratio, etc. The *socioeconomic* aspect embraces the qualification and professionalism of the current workforce, the demand for such labor in society, the level and structure of employment, etc. The *sociocultural* capacity is reflected in significant specifics of the national mentality, which is materialized in the process of socialization under certain cultural contexts. And, finally, the *activist* capacity is an extent, to which people are capable of entrepreneurship and innovation, a state of consciousness determined by the prevalence of creative personal qualities and values [Zaslavskaya 2004, s.28]. And yet such comprehensive concept is apparently too complex for developing a single simple value, which makes it useless for quantitative cross-country comparisons. What is more, there were no such attempts as to put this measure into real practice.

Recently in Russia as well as in other countries there have been developed numerous alternatives to HDI, which seek to embrace not only human development per se but human capacity, and especially its creative and intellectual aspects. Among those the following two indicators could be mentioned: *Synthetic Development Index* or an *Index of Socio-Humanitarian Development*.

The Synthetic Development Index (SDI) suggested by Russian researchers V. Bushuev and V. Golubev is a type of environmental development index which

accounts for ecological issues that certainly affect human capacity along with other factors (education, health provision, etc.). According to its authors this index reflects not only the character of economic reproduction (GDP), but the character of reproduction of human, ecological and natural resources as well. According to the central idea, which stands behind its conceptual structure, measures that sustain certain ecological balance are just as an important type of economic activity as anything else, even in spite of its indirect effects [Bushuev, Golubev 2002, s.163; Bushuev, Golubev, Tarko 2004, s.6-13].

Similar ideas form the core concept of the Socio-Humanitarian Development Index (SHDI), which adds up other important dimensions, such as social capital, the rate of human capital accumulation and ‘viability’, i.e. a synthetic measure that combines relative fertility and life expectancy. Another ‘exotic’ measure is a quantitative value of social ill-being, which is calculated as a number of suicides per 100 thousand of population [Bushuev, Golubev, Zvolinskiy, Tarko 2008]. The latter is an attempt to account for such negative aspect of social transformation as social anomy by the analogy with classical work of Emile Durkheim ‘Suicide: a Study in Sociology’ (1897). Nevertheless, the major problem with measuring gross SHDI, according to the authors themselves, is the lack of required statistical data. Not all countries collect or publish such data. Besides, some data may not be collected on a regular basis, which also creates a problem of incomplete time rows.

Another interesting and intuitively simple approach to quantitative measurement of social progress has been suggested by the Dutch sociologist Ruut Veenhoven in 1996. He has developed a so called *Happy Life-Expectancy Scale (HLE)*, which is basically average life expectancy (in years) multiplied by the extent to which people consider themselves happy (measured through sociological surveys on a ten-grade scale) [Veenhoven 1996]. According to the simple logic of Veenhoven’s concept most people in the world prefer to live longer and happier lives, whereas anything else (money, property, etc.) is either of lesser importance, or should rather be considered as ‘inputs’ (rather than ‘outputs’). At the same time it is worth of noting that Veenhoven’s indicator is not strictly an indicator of human development or social progress, since it is only a judgmental value of happiness even if adjusted for life expectancy. Although biased by its definition, such judgmental value of happiness often varies historically as well as it is subject to certain cultural contexts (that may even regard the very idea of social progress as inconsistent with human happiness –

e.g. in many traditional cultures). Moreover there is little positive use for this indicator from the standpoint of human capacity, by which we would rather understand the facilitation of creative and intellectual self fulfillment of people.

However, in carrying out our project we also faced the problem of setting our definitions, and especially distinguishing the notions of *human development* and *human capacity*. As follows from a brief glance at some of the concepts above, both terms tend to represent a program-specific tool which is used for certain practical purposes and policy making, rather than they are considered as substances of scientific research. Such an initial methodological situation can be explained by the fact that the modern scientific community has not yet developed a common understanding of these matters, which could be more or less agreed upon in comparative studies.

First of all it has to be made clear that *human development* and *human capacity* are close, but not identical concepts. While the latter is strictly *a possibility* of achieving some state of human development in principle, development itself only refers to a process, which aims at ‘unlocking’ this capacity or, in other terms, a gradual progress towards that possible state of human development. But why is this difference so important? The point is that in such understanding the development of human capacity is more than just a process of promoting self-fulfillment (as is erroneously perceived by the authors of Human Development Reports) – it is rather a process of extending opportunities and pushing the limits of physical, creative and cognitive activity of people. This remark is so important for us since we regard existing societies not just as certain settings of political, social and economic organization, but as complex social systems that shape in the course of historical/civilization process. We further suggest that these historically protracted *civilization processes* shape a particular type of personality, traits, adaptation to certain types and cycles of labor activity, etc. and, thus, maybe regarded as factors which determine *human capacity*.

On the other hand, it is assumed that the goals of *human development* are independent of local and historical contexts, and, hence, may be regarded as universal. In this case we follow the ideas of Amartya Sen and accept that any progressive (or progress-oriented) societal transformation – be it economic, political or social change – should pursue the goal of human fulfillment in terms of personal growth, creativity and promoting individual talent. In other words, we regard the *extent of human development* as a sort of

universal barometer, through which existing vectors of political, social and economic organization of societies can be evaluated as adequate with respect to particular civilization context.

In the wide sense we're concerned with *human development* as a process which is central to maintaining *sustainability* of contemporary societies. By *sustainability* we imply societies' 1) capacity for quantitative reproduction, and 2) integral ability to withstand certain dysfunctions or pathologies, among them: *social* (i.e. extreme rates of inequality, social disintegration, anomy and crime, etc.), *physical* (i.e. low life expectancy, poor physical as well as mental health, etc.) and *moral* (or *mental*, i.e. moral and intellectual degradation).

In such understanding the latter, so to say, qualitative aspect of sustainability is closely related to the notion of health and well-being, which has been accepted by the World Health Organization in 1948, according to which 'health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity'¹. For a single individual such state can usually be achieved with satisfaction of corresponding needs can be represented in form a certain hierarchy (e.g. the 'Maslow pyramid'): the higher the rank of needs satisfied, the better the state of human well-being in terms of its social, mental and physical aspects. By this we suggest to define *individual human development as an extent, to which an individual's needs in health, security, education, self-fulfillment, physical and social reproduction, etc. are actually satisfied*. Subsequently, *on a societal level the higher human development would imply that the more people are able to fulfill their high-order needs*.

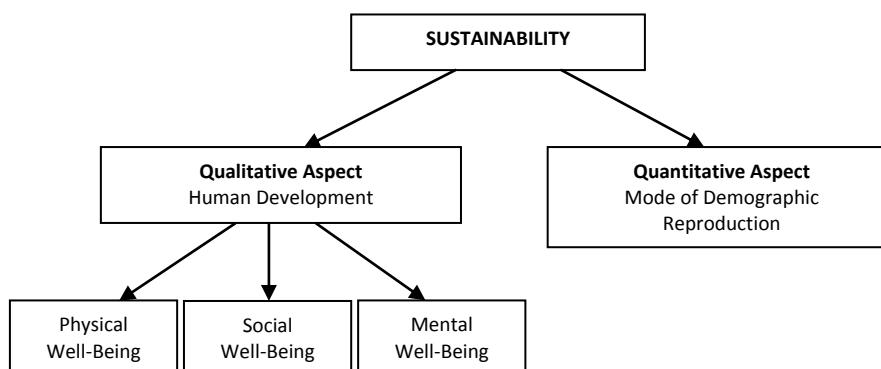
A schematic view of our definition of sustainability is provided in Figure 1. Thus, as has been already defined, *societal sustainability* can be specified by two aspects: *quantitative* – which is basically determined by the mode of society's demographic reproduction, and *qualitative* – which is equal to the state of its human development. The latter, in turn, has three aspects: *physical*, *social* and *mental*.

But why in evaluating sustainability one would have to consider the quantitative aspect – the mode of demographic reproduction? It is well known that most of the advanced (modern) societies feature a very low (or even slightly negative) rate of natural increase in their population. This is a consequence of the so called demographic

¹ Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19 June – 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

transition – a period of demographic stabilization in industrialized countries, which followed the demographic boom, i.e. a situation when relatively high rates of birth went along with sharply dropping death rates (because of increasing quality of health provision). This transition was a process of natural adaptation, when increasing demand for higher life quality had to be adjusted for the limited resources and productive ability of contemporary societies. This adaptation was reflected in adopting a new family model (i.e. a transition from traditional (rural) family to a modern (urban) nuclear family), the weakening of family ties, the revision of family values and, particularly, the decreasing role of religion in shaping family relations [Vishnevskiy (ed.) 2006, s.10-11, 137-138]. On the other hand, the less developed societies (e.g. in Asia and Africa) still feature a sufficiently expanded mode of demographic reproduction, which is usually accounted for their economic underdevelopment, traditionalism and extreme religiosity. Some of these countries have entered the phase of demographic transition only in the middle of the last century, and it is assumed the sooner or later they will begin to reproduce less extensively as it is characteristic of today's more advanced societies. However, in spite of the fact that ratio between deaths and births is largely dependent on the state of social and economic development, it is a more direct indicator of society's sustainability, since it reflects the capacity for quantitative reproduction of population. From here follows that sustainability is not just a static (as is with the case of quality and state of human development), but rather an enduring dynamic characteristic of society.

Figure 1. Qualitative and quantitative aspects of societal sustainability



According to this simplified model we suggest to define *rising sustainability* as a cumulative of positive tendencies both in qualitative and in quantitative respects: i.e. a stable increase in human development along with simple or expanded demographic reproduction. On the other hand, *dropping sustainability* would be flagged by persistent depopulation and continuing degradation of human quality. However, such extreme situations are quite rare in the real practice: even in the most developed countries the growing quality of life is usually associated with low (or even negative) rates of natural increase according to the well known principle of quantity growing into quality. Taken that finding optimal rates of demographic reproduction for each country vastly exceeds our current goals and resources, for now we would stick to a simple universal imperative: societies can be regarded as demographically sustainable as far as they can sustain certain quality of life without depopulation. In other words, being able of sustaining simple demographic reproduction in the long run is sufficient for being sustainable².

To select specific indicators, which are more or less relevant to the structure of human development, we refer to Abraham Maslow's hierarchy of needs [Maslow 1943]. However, we are not convinced that this hierarchy is universal in every context: in this case Maslow's 'pyramid' is only used to classify individual needs. Besides, it is also worth to mention here again that sustainability is not just a sum of individual well-being, but a rather complex societal characteristic which determines the very existential capacity of a society. That is why we suggest to regard an integral value of human development as a certain structure or balance of three of its components (physical, social and mental), rather than their hierarchy.

² In this we rely on a definition, according to which population is sometimes referred to as by demographers as a *self-reproducing* aggregate of people (thus implying immanency of the process of reproduction). Depopulation is usually regarded as a systemic failure of this function and was always perceived as a national catastrophe or as a serious existential threat by scientists and politicians [Sinelnikov 2010].

**Table 1. List of sample indicators of human development
categorized according to its various aspects**

Category of needs (Maslow)	Sample indicator description (imperative objective)	Aspect of human development
physiological	Physical and psychological disease (<i>min</i>)	physical
	Self-judgment about health (<i>max</i>)	physical
	Life expectancy (<i>max</i>)	physical
safety	Crime rates including homicide (<i>min</i>)	social
	Injury accidents (from transport and in production) (<i>min</i>)	social
love/belonging	Divorce rate (<i>min</i>)	social
	Abortion rate (<i>min</i>)	social
esteem	Social cohesion and interpersonal trust (<i>max</i>)	social
self-actualization	Suicide rate (<i>min</i>)	social
	Alcoholism, tobacco and drug use (<i>min</i>)	mental
	Enrollment in educational programs (<i>max</i>)	mental
	Character and intensity of leisure activities (<i>max</i>)	mental

Table 1 provides a list of major indicators, which correspond to different groups of human needs (according to Maslow), and according to certain aspect of human development. An imperative objective (minimizing or maximizing) for each indicator with respect to raising general levels of human development is marked in parentheses.

Since a more detailed description and substantiation of the indicators used in this research would be given further under corresponding sections, here we would only describe some of them briefly. For instance, we suggest that the rate and character of crime, the rate of injury and death through various accidents (be it transport, or production) sufficiently characterize the extent to which people's needs in safety are satisfied. A society that is sincerely concerned with raising human development should be more successful in preventing severe crime and lethal accidents.

Such indicators as a relative number of divorces and abortions could be regarded as markers for deviant reproductive behavior: the higher the divorce rate, the less people could be considered as attached to family values. Besides, higher level of divorce usually indicates of a higher number of incomplete families and abandoned children, whose adequate socialization becomes a serious social challenge. On the other hand, frequent

abortion are also a worrisome tendency, which may reflect attitude to reproductive health.

Interpersonal trust and social cohesion indicators would be a good proxy to assessment of general esteem, tolerance and respect for the others. Finally, in order to approximate people's cognitive activity and intellectual capacity we suggest to look at the practices of life-long learning and information retrieval.

Notes on data and measurement

In order to obtain all of the measurement scales we've taken the following steps: 1) ordering data according to their imperative objective (e.g. minimizing for suicides and maximizing for education enrollment); 2) standardizing data to a 100-grade scale (with 0 for minimal values and 100 for maximum values); 3) aggregating data on separate indicators to integral values by taking average.

The following expression was used to standardize all data to a 100-grade scale:

$$\frac{X_i - X_{min}}{X_{max} - X_{min}} * 100$$

where X_i is a statistics variable for an i -th country, X_{min} and X_{max} – its minimum and maximum value across all countries. Given the correct ordering of the data the higher value of this expression would correspond to better achievements relative to other countries, which were included in our analysis. For example, if a certain country has the worst record of suicide it would have a 0 value on a corresponding scale.

The aggregate of certain indicators into integral indices (for every aspect of human development: social, mental and physical) was generally obtained via the following calculation (in some exceptional cases a different formula was applied – the details are provided in the corresponding sections):

$$A_m = \sum_{j=1}^N \omega_j Y_j$$

where A_m is a value of an integral index for m ; Y_j is a value of one of the relevant j -th indicator (ordered and standardized accordingly); N – the number of relevant indicators; ω_j – weight of the j -th indicator in an integral index (in most cases equal to $1/N$).

And, finally, the aggregate value of human development (HD) is an average value from three of the corresponding indexes (with $M = 3$):

$$HD = \sum_{m=1}^M \frac{A_m}{M}$$

Table 2 (next page) lists all of the used variables with corresponding information on when and where the statistical data come from.

Table 2. Statistical data and their sources

Variable	Aspect of human development	Years	Source of data
Homicide rate	social	2007-2008	United Nations Office on Drugs and Crime
Injuries and deaths in industry	social	2006-2008	World Health Organization
Injuries and deaths caused by car accidents	social	2008	World Health Organization
Suicide rate	social	2008	World Health Organization
Divorce rate	social	2006-2008	Eurostat
Abortion rate	social	2008	World Health Organization
Interpersonal trust	social	2004-2008	European Social Survey
Active life expectancy	physical	2007	World Health Organization
Morbidity (infections)	physical	2004-2006	World Health Organization
Morbidity (heart disease)	physical	2004-2006	World Health Organization
Morbidity (diabetes)	physical	2004-2006	World Health Organization
Morbidity (cancer)	physical	2008	GLOBOCAN
Tobacco consumption	mental	2001-2008	World Health Organization
Life-long learning	mental	2009	Eurostat, European Labor Force Survey
Rates of information retrieval	mental	2010	Wikipedia
Drug addiction	mental	2003-2008	United Nations Office on Drugs and Crime
Alcohol consumption	mental	2003-2005	World Health Organization
Rate of natural increase	quantitative aspect	2005-2010	UNDP Population Reference Bureau

Physical aspect of human development

Physical health of individuals is fundamental to human development, since it directly affects the working abilities of people (manual, as well as intellectual) and their capacity to live a long and full-fledged life. The following basic elements were considered as components of the corresponding integral index: 1) *active life expectancy*; 2) *self-judgment about health*; the so called 3) '*diseases of the poor*' and 4) '*diseases of the rich*'.

It is assumed that the first two indicators should reflect the intrinsic (objective) and psychological (subjective) judgment about the state of physical well-being of people. The reason to distinguish between 'disease of the poor' and 'disease of the rich' is based on the assumption, according to which certain types of morbidity are related to the general level of society's social and economic development. The most direct cause-and-effect relation is explained through the state of health care system and adoption of certain life-styles. Well, it may seem as intuitively clear that poorer countries with less developed health care systems and lower incomes among the population would be more exposed to various disease. However, the interrelation between income and health is not as simple as it may appear: particularly, recently there's been much evidence, according to which wealthier nations are subject to certain physical malfunctions not typical to the poor (especially diabetes and reproduction malfunction among women, according to an overview of research results presented at the 8th conference of European Sociological Association in [Kolesnikova 2008, pp.89-91]).

Let us now take a closer look at each of the components. Life expectancy is conventionally accepted as one of the most comprehensive indicators, which characterize the general level of physical health of a population. It is calculated as an average expected number of years of life remaining at a given age. In our study we will rely on a more precise indicator – *disability adjusted*, or active life expectancy), since it is not just an aggregate of people's health, but also a productive period of people's life. However, after preliminary tests it has been established that using other indicators specified for various age groups quite insignificantly affects the overall results of analysis.

As was mentioned, most diseases can be classified into two major groups. Yet there are also a number of diseases, which have a certain geographical association. For instance, according to WHO statistics malaria, although quite typical among the poor, also has a

relatively high rate of incidence in some European countries, which can be attributed to certain climate and geographic conditions [Worrall, Basu, Hanson 2005]. Thus, after closely studying the available WHO statistics we distinguished between those disease, which are very sensitive to the quality of health care systems, and those, which are difficult or impossible to treat. These diseases make up the first five classes of the 10th International Statistical Classification of Diseases and Related Health Problems (ICD-10)³, which are usually unspecific to certain organisms⁴. Here's the full list:

- *infectious diseases* (particularly, tuberculosis, various forms of hepatitis, HIV and AIDS, etc.)
- *cancer* (malignant neoplasms)
- *diseases of blood and blood forming organs*
- *endocrine diseases*
- *metabolic diseases* (particularly, diabetes)
- *mental and behavioral disorders*

As a measure of morbidity for each disease (except for diabetes and diseases of blood and blood forming organs) the total yearly number of incidence per 100 thousand population was taken. The causes of using alternative measurements for other two cases would be discussed a little below.

The correlation analysis has shown that there is much inter-dependence between various infectious diseases: the higher rates of morbidity for one disease (e.g. tuberculosis) are usually accompanied by higher rates of morbidity from the others (e.g. hepatitis). Infectious diseases are also highly correlated to blood diseases (at statistically significant 0.80 for our sample of selected countries). Furthermore, both groups of diseases have a high level of incidence in economically poor countries, and significantly lower levels – in rich (as correlated against GDP per capita). One other particular observation is that higher morbidity from these kinds of diseases is often associated with higher mortality. This can be explained by the relatively poor development of medicine in the corresponding countries, when deaths cannot be postponed even if it is impossible to

³International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10). More information at WHO web-site: <http://apps.who.int/classifications/apps/icd/icd10online/>.

⁴ Diseases, which are similar in clinical, functional and morphological behavior in spite of different causes and mechanisms of development.

cure the disease itself. Another distinct feature, which distinguishes ‘diseases of the poor’ from ‘diseases of the rich’ is that they are quite often non-chronic.

To summarize, the following 5 diseases have been included in the corresponding sub-index: tuberculosis, gonococcus infections, HIV, hepatitis B and mortality from blood diseases (since complete data about morbidity are unavailable). As expected, the sub-index is well correlated to GDP per capita at statistically significant -0.63 (which is, in fact, slightly higher than separate correlations for each disease). Most data come from WHO database 2006 (most recent). Where unavailable data for closest years possible was used (inter-period correlations at 0.90+ show sufficient dynamic stability in statistics about other diseases).

The ‘diseases of the rich’ include diabetes and cancer, which are very difficult to cure and require constant medical treatment. These diseases are very individual, i.e. as opposed to infections they are not transferrable from one person to another, and are usually caused by unhealthy diet and lifestyle as a whole⁵. There is a number of statistics that evaluate the burden of the corresponding diseases, such as *morbidity* (number of people, who have been diagnosed in a certain period of time), *prevalence* (a share of people, who have been diagnosed at least once in their lifetime) and *mortality*. If higher rates of incidence of ‘diseases of the poor’ are usually associated with higher mortality rates, morbidity of ‘diseases of the rich’ is usually associated with higher prevalence. The possible explanation is that chronic diseases caused by unhealthy life-style usually cannot be cured completely, although better medical care help preventing them from being lethal. That is why, we suggest, it would be appropriate to use *morbidity statistics for cancer* and *prevalence statistics for diabetes*⁶.

Apart from diabetes and cancer we also intended to include mental diseases as part of ‘diseases of the rich’. However, there is still much uncertainty about the typical causes and mechanisms of mental disorders. One other problem is the lack of accurate data about their incidence in different countries. All of this has convinced us in carrying out the

⁵ For more detail see WHO Report on Preventing Noncommunicable Diseases in the Workplace through Diet and Physical Activity 2008: http://whqlibdoc.who.int/publications/2008/9789241596329_eng.pdf.

⁶ Apart from WHO data, there are also 2010 data of the International Diabetes Federation available. This data, however, lack dynamic stability. According to the Federation statements, statistics for diabetes are highly inaccurate and many countries simply lack experience to keep adequate records. However, WHO data were used.

comparison without considering mental disorders as part of our general measurement of physical inability.

The data about cancer were taken from GLOBOCAN⁷ statistics as cancer morbidity among women, since WHO statistics about general population were too fragmentary. The accuracy of using such approximation is, however, justified by high correlation between GLOBOCAN (women) and WHO (whole sample) data. As for prevalence of diabetes, WHO data was used.

In many cases we also had to do without including other typical diseases. However, this was usually explained by their close relation (or even affinity) with disease, already included in the list: for instance, HIV as related to AIDS, various types of hepatitis, etc.

Finally, apart from such objective values as morbidity and life expectancy we relied on subjective judgment of people about their own health. The corresponding data was taken from Gallup World Polls in 2006-2009⁸ as a share of respondents, who are generally satisfied with personal health. However, it has been established in further analysis that correlation between subjective and both objective measurements of physical health accounts for statistically significant 0.90. In fact, according to other studies subjective judgment about health appears to be one of the few self-judged values, which are very accurate with respect to corresponding objective measurements [e.g. *Miilunpalo* et al. 1997; *Mossey, Shapiro* 1982]. Having confirmed such relation we decided to do without this index in further comparisons.

Table 2 represents the final list of variables included in the index of physical development. All weights are distributed equally among sub-indices for life expectancy (1/3) and two categories of diseases (1/3 + 1/3).

⁷ GLOBOCAN, 2008. <http://globocan.iarc.fr/factsheets/cancers/all.asp>.

⁸ Statistical data downloaded from UN International Human Development Indicators database. More details in [*Clifton, Gingrich* 2007]. Relevant data can be downloaded here: <http://hdr.undp.org/en/statistics/data/>.

Table 2. Index composition for the physical aspect of human development

Variable	Group	Weight
Active life expectancy	Life expectancy	1/3
Disease of blood and blood making organs		1/15
Tuberculosis		1/15
Gonococcus infections	Diseases of the poor	1/15
Hepatitis B		1/15
HIV		1/15
Cancer	Diseases of the rich	1/6
Diabetes		1/6

Active life expectancy

For relevant data on selected countries refer to Table 1 in Appendix 1. The maximum life expectancy was observed in Switzerland and Italy with over 74 years of active life, although average for all of the Western Europe is only insignificantly lower and accounts for 72.9 years. However, it is highly dispersed in the countries of Southern Europe (e.g. 73.8 years in Spain against 68.1 in Croatia).

The situation is a lot worse in post-Soviet countries, where people live 6-7 years shorter on average. There is, however, much differentiation in these countries as well, since some of them appear to have achieved better success in raising the well-being of population after transition than others. For instance, Slovenia and Czech Republic almost make it to life expectancies in Western Europe (71.3 and 69.9 years respectively). Similar results are observed in Poland and Slovakia. On the other hand, the situation looks a lot more dramatic in Kazakhstan (with only 56.2 years), Ukraine, Belarus and Russia, where life expectancy lies between 60 and 62 years (12 years lower than Switzerland).

As far as self-judgment about health is concerned, the ranking of countries changes insignificantly. For instance, every 9 out of 10 citizens in Switzerland are satisfied with their health. The average figure in Western Europe is 85% with a minimum of only 80%. In post-Soviet countries it only accounts for 65% of population in general, with 55-56% of population in Ukraine, Belarus and Russia.

Diseases of the poor

The distribution of ‘diseases of the poor’ among poorer and richer countries in our list is consistent with the above mentioned hypothesis about the corresponding classification of diseases (for data refer to Table 2, Appendix 1). It appears that population in post-Soviet countries is generally more exposed to infectious and various blood-related diseases than citizens of Western Europe. The lowest rates of morbidity are observed in the more developed Scandinavian countries, while Italy, Germany, Spain and France are particularly better in the rest of ‘Old Europe’. They are followed by Great Britain, Austria, Belgium and Croatia.

As far as post-socialist countries are concerned, the burden of related diseases is also relatively low in Poland, Slovenia, Slovakia, Hungary and Czech Republic. However, morbidity rates in Kazakhstan, Russia, Ukraine and Belarus look particularly threatening.

Diseases of the rich

The observations about cancer morbidity among women to a certain extent classifies itself as ‘disease of the rich’ (for data refer to Table 1, Appendix 1). The highest rates of cancer morbidity have been recorded in Scandinavian countries (particularly, Denmark and Norway) and Western Europe (Netherlands, Belgium, UK and France). The disease, surprisingly, is very rare in Turkey, Greece and Kazakhstan, while, in general, the morbidity of cancer in post-socialist countries is quite low (especially Ukraine, Russia, Romania, Poland and Belarus). The whole distribution is very much the opposite of what has been observed in the case with ‘diseases of the poor’.

This regularity, however, is not so clear in the case with prevalence of diabetes. The lowest rates of the disease are recorded in Switzerland, Greece and Kazakhstan (lower than 1% of population). The situation looks more or less fine (1-2% of population exposed) in Turkey and a number of post-socialist states: Bulgaria, Lithuania, Belarus and Russia. However, its prevalence is very much dispersed in Scandinavian countries: from 2% in Norway to 4.2% in Denmark. Italy, Portugal and Spain look especially bad with 4.5%, 5% and 6.5% respectively. With the only exception of Switzerland diabetes is also quite common in Western Europe (3.6% of population on average). The peak figure is registered in Czech Republic with 7% diabetics.

Integral Scale of Physical Development

The integral value of physical development is a standardized average of the three corresponding sub-indices. In studying the relations between each of its components the following regularities have been established: the ‘diseases of the rich’ are negatively correlated with other two sub-indices, while there is an almost functional link between active life expectancy and ‘diseases of the poor’ (-0.89). As was shortly discussed above, this is explained through typically non-lethal nature of chronic diseases and better medicine, which are associated with more developed countries. The final rating of countries according to the integral index of physical is given in Table 3, Appendix 1.

The short glance at this rating bears convincing proof about the poor physical health of people in the less developed post-socialist countries. Their higher rates of morbidity with infectious and blood-related diseases (and, respectively, lower life expectancies) are barely compensated for by lower incidence of cancer and diabetes. At the same time, the situation is also uncertain in the more developed countries of ‘Old Europe’: Greece (South), Switzerland (Center) and Sweden (North), which represent different socioeconomic models, appear to demonstrate equal success in keeping health of their nations.

Social aspect of human development

The domain of *social* is extremely diverse, especially in the sense that indicators which describe its various components are numerous. Besides, there is no single view on what an ideal socially advanced society must look like. All of this greatly complicates the task of selecting particular indicators, which may adequately and precisely characterize social aspect of human development.

The lack of knowledge about optimal values of social indicators in cross-country comparisons (let alone the availability of such statistics) induce researchers to rely on scoring models which allow for distinguishing the extent of certain social pathologies (or ‘social disease’). Simply put, from the standpoint of social progress the main objective would be to reduce social pathologies to their minimum.

A theoretical concept which describes the shape and ‘pathogenesis’ of ‘social disease’ is a theory of social anomy developed by Emile Durkheim, Robert Merton and Talcott

Parsons, each of whom offered their own original interpretations. However, the general point in all of these interpretations is that anomy is closely related to the spread of deviant behavior in a society. Deviance is something that doesn't meet general norms or expectations, which have been formally or informally established in a given society or community of people, which is why it is usually perceived as negative. By certain acts of deviant behavior we usually understand crime, drug abuse, alcoholism, suicide, various deviations in sexual behavior, etc. Most of related data is easily accessible, since they are widely accounted in demographics.

Relying on the concept of social anomy (or 'social disease') as a basic concept we pursue the goal of ensuring methodological integrity in our approach to the analysis of various aspects of human development. I.e. the latter is regarded as the general assessment of the quality of population, its physical, social and mental health (the higher the level of human development – the less society's exposure to various 'diseases'). For example, previously we regarded physical aspect of human development purely in terms of the physical health of population (estimates of various disease incidence, the general level of health, life expectancy, etc.), while further we will also introduce the concept of 'mental health'.

The list of empirical indicators, which have been categorized into social aspect of human development, can be divided into five major groups: *crime*, *suicide*, *injury*, *family* and *social cohesion*. Let us now consider indicators of each of these groups in greater detail.

The first thing we did was selecting a set of indicators, which characterize the intensity of various crimes (calculated as incidence per 100 thousand population). Among these: intentional homicide, kidnapping and human trafficking, crime against property (robbery, burglary and theft), drug related crimes, etc. However, due to existing differences in official definitions of criminal behavior and methods of their registration in different countries, incomplete and often inaccurate records, imperfect law enforcement, or simple lack of data we had to adopt a different strategy in evaluating comparable crime rates⁹. The share of crime, which is not reported to the police and, thus, fails to be recorded, is a priori unknown and is often referred to by the criminologists as the 'dark

⁹ The practical impossibility of such comparison has been established as far back as in the first half of the last century by the so called International Statistical Institute and the International Penal and Penitentiary Commission [The rules for drawing up... 1947].

figure' (i.e. an estimated portion of crime). Its value may vary considerably from country to country depending on many factors, among them type of existing legal system, crime definitions, effectiveness of crime prevention and control, level of public trust in law enforcement institutions, etc.¹⁰ Some empirical studies evaluate the actual number of crimes as 10-15 times that of the numbers reported in statistical records, [see, for example, *Gilinskiy* 2007]. The particularly significant difference between actual and reported crime is characteristic among the post-socialist countries, where the registration of crime is subject to the fluctuations of political environment. This, however, doesn't mean that some Western European countries are free from 'playing numbers', although political effect is significantly lower in this case. All of this has to be accounted for, at least, somehow in order to provide more or less adequate comparisons.

It has been confirmed that the more serious crime is, the less likely it is to be overlooked in official records [e.g. *Dolgovaya* (Ed.) 2001, p.111]. This is intuitively explained by the fact that exceptionally serious crimes such as murder are equally regarded as socially hazardous in all cultural contexts. This implies that they leave little room for misinterpretations and are, thus, tracked and recorded especially well in any more or less developed society. Following this line of argument we have conducted a preliminary analysis of crime statistics across selected countries and confirmed the earlier findings of other researchers about the impossibility of such full scale comparisons. However, if we are to select the most accurate proxy of crime situation, this would, indeed, be homicide owing to its double tracking system (through police records and mortuary houses). Besides, homicide is probably the most telling counter of aggression and social disintegration in society.

In fact, the next group, briefly 'suicides', also includes a single indicator and that is age-standardized mortality rate from intentional self-harm or suicide per 100 thousand population. Along with crime, suicide rate is acknowledged by many sociologists as one of the basic indicators of anomie. These ideas were first expressed in the classical work of Emile Durkheim "Suicide, a Study in Sociology" (1897). In explaining this phenomenon he emphasized that social rules (norms) play an important role in regulating people's lives. During crises or rapid social change former life experience may no longer correspond to

¹⁰ <http://www.unodc.org/documents/data-and-analysis/Forum/Volume5-2006-R.pdf>.

the new ideals, as a result people feel disoriented, as their collective order has been violated, which, in turn, promotes the spreading of deviant behavior. The spread of suicide as the most extreme case of such behavior, on the one hand, depends on the degree of social integration, economic and institutional stability. On the other hand, it reflects the ability of people to accept new social norms, to incorporate into a new social order.

A different aspect of social development is closely related to the value of human life and human capacity or, precisely, how it is perceived in a society. This, we suggest, is reflected in the measures, which are taken against accidental injuries that may occur in production or even everyday environment. Among the indicators, which fell into the group of ‘injuries’, the following have been accepted as most reasonable (again, in relative numbers, i.e. incidence per 100 thousand population): 1) persons killed or injured in road traffic accidents, and 2) deaths due to work-related accidents. However, a number of related indicators, which could provide a more precise information about the rate and intensity of injuries, were, again, neglected (number of people injured due to work-related accidents; people receiving social/disability benefits; cases of invalidity/disability; share of disabled in working age engaged in regular occupational activity, etc.). As earlier, these measures have proven to be very much sensitive to the differences in tracking and recording of injuries. For example, countries with better developed health insurance systems seem to keep a more accurate (i.e. far-reaching) tracking, than those with less or even underdeveloped.

And yet the differences in general injury rates provide useful insight about the extent, to which life-saving technologies have become an organic part of society’s system organization. We assume that a more advanced traffic management (including higher quality road construction) and lower corruption among the police are very important factors to the number of road accidents and, consequently, the number of their victims. On the other hand, people themselves are also responsible for their own safety, which is why the number of road accidents also includes information about the state of corresponding – safety-oriented – consciousness. Besides, and this is equally true for both indicators used, accidents are often caused by their victims because of irresponsible attitude to their own life and health, as well as to the life and health of the others. The general level of ‘injuries’, thus, reflects not only the security of human activity (which

reflects society's judgment about the value of human life), but also the spread of responsible life-saving behavior among people (i.e. individual judgment about the human life).

The variable group 'family' is basically a set of indicators, which characterize the intensity of abortions and divorces in a society. Initially, we assumed that we would also include such indicators as average number of years spent in all marriages by a woman in fertile age¹¹, as well as data on orphanage and homelessness. However, we've faced a serious problem with the lack of corresponding data for selected countries. We also considered including such indicators as maternal mortality rate, adolescence fertility rate (births per 1,000 women aged 15-19 years), level of compensation during parental leave (as a percentage of salary) and duration of maternity leave. But after some reasoning it has become clear that they provide little information about the social aspect of human development (rather they are a measure of development of health system, in the first case, style of partnership (discussed below) and government natal policy).

It is clear that decisions about marriage and termination of pregnancy are to a greater extent regulated by cultural expectations, traditions, norms and laws in a given society. It is also clear that corresponding rates would also reflect the global demographic trend, which, according to some demographers and sociologists, can be characterized as a decline of marriage popularity and a shift to variety of alternative family models: from child-centered family patterns towards individualistic-oriented 'mature' couples with one or no child, conscious planning of birth, etc. This trend is also referred to as *the second demographic transition* [van de Kaa 1987].

The following decline in attractiveness of traditional family patterns and growth in society's tolerance of abortion and divorce, however, brings many negative consequences to the society, both on individual and at the national level [e.g. Ponzetti 2003, pp.1-7, 475-495]. The major argument here is that these processes bring serious psychological discomfort to many people, parents as well as children. The need for care, love and belonging is one of the basic human needs, just as once was suggested in famous Maslow's hierarchy. Thus, failing to satisfy such needs should be considered very harmful with respect to corresponding aspect of social development.

¹¹ For methodology see [Zakharov 2009].

Another important societal characteristic is social cohesion, which is commonly being understood as a state of social integration and interpersonal trust. Social cohesion, thus, depends on homogeneity of values and strength of interpersonal relationships in a society. Sociologists often consider social cohesion as one of the key elements of an integral characteristic of the quality of life [see, e.g. *Veenhoven* 2003; *Noll* 2002]. To determine the general level of social cohesion and trust in selected countries we used data from the European Social Survey 2004, 2006 and 2008¹². Three periods were used in order to obtain scores for as much European countries as possible to provide a wider scope of comparison.

The overall index for social development has been calculated as follows. First, we obtained scores for each variable (except for ‘social cohesion’, see further) and standardized them on the relative scale from 0 (min) to 100 (max). Separate scores for numerous variables contained within ‘family’ group and ‘injury’ group were also standardized to obtain averages for each category, first, and standardized average scores for each category, second. To evaluate the level of social cohesion we did the following. First, for each of the waves of European Social Survey average rates of interpersonal trust were calculated for each country. The following expression was used: *average rate of interpersonal trust* = $(1 * <\text{percentage of those who chose 0}>^{13} + 2 * <\text{percentage of those who chose 1}> + \dots + 11 * <\text{percentage of those who chose the answer 10}>) / 1.1$. Finally, as in the case with physical aspect of human development after applying weights to standardized values for each category, overall index was calculated.

¹² ESS country samples represent adult population over 15 years old.

¹³ The exact question used: “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can’t be too careful and 10 means that most people can be trusted”.

Table 3. Index composition for the social aspect of human development

Variable	Group	Weight
Intentional homicide	Crime	1/5
Deaths from industrial accidents	Injuries	1/10
Deaths and injuries in car accidents		1/10
Suicides	Suicides	1/5
Divorces	Family	1/10
Abortions		1/10
Interpersonal trust	Social cohesion	1/5

Crime

According to our estimations of crime based on homicide rates post-socialist countries seem to hold a very unpleasant ‘leadership’. Although the situation within this group is quite homogenous, Russia’s figure looks extremely bad exceeding the group’s average more than 3 times. Similar situation is typical of another ‘big’ and oil-rich post-socialist state Kazakhstan. On the other hand, smaller countries, such as Lithuania, Estonia, Ukraine and Belarus, are slightly beneath the average, while more western Poland, Hungary, Slovenia and Slovakia are doing even better than that.

As far as Western Europe is concerned, Finland, Turkey and, strikingly, Belgium are among the most unsuccessful cases, while Austria, Norway, Switzerland and Germany seem to be most efficient with keeping probabilities of homicide beneath 0.1% (in Russia and Kazakhstan, this probability is more than 10 times higher).

Suicide

The rating for suicide is more or less similar to that of crime. Countries with maximum suicide rates among the selected again include Russia and Kazakhstan with additions of Lithuania and Belarus. It is peculiar, however, that the correlation between suicide and homicide for the whole list of countries is close to insignificant (see Table 1 in Appendix 2), which means, there is no strict relationship between the level of violence in society and the state of its anomie.

As far as post-socialist countries are concerned, the minimum numbers of suicide were reported in Bulgaria, Romania, Czech Republic and Slovakia. A quite favorable situation is observed in South European states, such as Croatia and Turkey, while in the Western world the suicide rates are very low in UK, Netherlands and Germany. Again, Finland and Belgium give reason to worry about suicide and the efficiency of measures taken against it.

Injuries

First, we found no interdependence between the selected 'injury' variables (see Table 2 in Appendix 2). For instance, Belarus, which has the lowest injury rates from road traffic accidents, is doing too bad with respect to work-related accidents (its rates are much higher than the average for post-socialist countries). It is quite peculiar that similar situation is observed in Kazakhstan. On the other hand, Slovenia – a small state in the western part of CEE – seems to cope much better on both fronts, rather than one alone.

Yet in spite of this partial inconsistency of both scales, it is possible to single out 'winners' and 'losers'. It seems that the best protection from accidental injury is sustained in such well-developed countries as Denmark, Finland, Netherlands and France. On the other hand, Austria and less developed Croatia and Portugal are doing worst in this respect. The general pattern, however, is that Scandinavian countries seem to sustain better protection, especially with respect to road traffic accidents, while the rest of Western Europe is only slightly better than average.

Family

Crude divorce rate was taken as a number of divorces divided by average population for a given year. The corresponding values in Table 3, Appendix 2, are expressed in numbers per 1000 population.

The comparisons reveal significant differences across selected groups of countries. For instance, the average number of abortions (calculated as per 1000 live births) for post-socialist countries is almost two times higher than that of Western and Southern Europe. Russia features the largest number of abortions, where it is almost equal to a number of effective births. Even compared to other post-socialist countries, such as Romania, Bulgaria and Estonia, this figure is two times greater. Besides, women often resort to abortions in Kazakhstan. In the Western Europe this figure is particularly high in

Sweden, UK and France. The smallest number of abortions is reported in Poland, which directly reflects the efficiency of forbidding abortions established under the strong influence of the Polish Catholic Church. Some experts, however, argue that a considerable proportion of abortions in Poland are simply not recorded by official statistics; according to expert estimates this figure may vary from 8 to 20 abortions per 1000 live births [*Sakevich* 2010]. A relatively low level of abortions is observed in Austria, Croatia and Portugal.

As for divorces they seem to occur most seldom in such South European countries as Italy, Croatia and Greece. The situation is quite the opposite in the more developed Western countries, especially Belgium, Denmark and Switzerland. There is, as well, little regularity in divorce rates among the post-socialist states. On the one hand, Slovenia, Poland and Romania seem to be more or less successful in keeping families together, while Ukraine, Russia and Belarus – not.

Social cohesion

The resulting scale, where levels of social cohesion were evaluated for each country, is given in Table 4 in Appendix 2. The rating shows countries with highest level of interpersonal trust at the top, and lowest level of interpersonal trust – at the bottom. Since European Social Survey did not include Belarus, Kazakhstan and Lithuania (at least, yet), we had to renounce this statistic in further calculations in these three countries¹⁴.

The highest levels of interpersonal trust are observed in the Northern countries of Europe, such as Denmark, Norway, Finland and Sweden. Their average value reaches 6.9. The top and middle part of this is occupied by Western European states, with highest scores (6.1-6.2) found in smaller states, such as Netherlands and Switzerland, and lowest (5.0-5.7) – in European ‘giants’, such as UK, France and Germany. It is also quite notable that among countries with relatively high levels of interpersonal trust (5.4 – very close to whole sample’s average) lies Spain, while the rest of the South European countries – Italy, Croatia and even neighboring Portugal – feature significantly lower levels.

¹⁴ Nevertheless, we assigned proximate values of interpersonal trust for Belarus, Kazakhstan and Lithuania based on our expert assumption about cultural homogeneity with other countries, which were included ESS. Thus, we assigned Kazakhstan with value equal to that of Russia (4,5); Lithuania – to that of Latvia (4,6); and Belarus – average of values for Russia and Ukraine (4,65). The results of further analysis, however, confirmed that the relative rank of these countries in the general rating of social development is not subject to any change.

Post-socialist countries, including Russia, are placed fairly together at the bottom of the resulting scale. As is shown, in the whole post-Soviet region Romanians and Bulgarians are, probably, least of all inclined to trust other people, while, on the other hand, post-socialist Estonia and Czech Republic seem to have developed and sustained a high level of social cohesion in spite of the transition.

Integral scale of social development

The standardized index values for each group of variables, as well as averages for each group of countries, are provided in Table 6, Appendix 2. The ranking according to integral scale of social development is given in Table 5, Appendix 2.

It has to be noted though that owing to index composition and the nature of data used certain scale values only make sense in relation to each other. That is maximum value corresponds to the highest success achieved with respect to social aspect of human development. According to this scale Netherlands, Greece, UK and Denmark appear to be the most comfortable societies in Europe, as far as the state of social well-being is considered. It is also quite notable that Scandinavian states as a distinct group social democratic countries generally show good results. At the same time there is much greater spread in Southern and Western Europe, among which ‘outsiders’ include Austria (with surprisingly high levels of accidental mortality), Croatia, Belgium (high homicide and weak family ties) and Portugal (with particularly low levels of interpersonal trust).

Post-socialist countries, as by now would have been expected, are at the bottom of this rating, with Russia being in the most disadvantageous position. However, other CIS countries, such as Kazakhstan, Belarus and Ukraine are only slightly better in this respect. All of Russia’s close neighbors feature high levels of suicide and homicide, various forms of irresponsible behavior and extremely low levels of social trust. Even the more ‘western’ Lithuania shows equal signs of social decay, while Poland, Slovakia and Czech Republic seem to cope much better.

Mental aspect of human development

Whereas physical health can more or less easily be measured in quantities (morbidity or life expectancy statistics, etc.), social ‘health’ can only be evaluated through indirect

measures (such as homicide, divorce or suicide rates, etc.). The latter is theoretically justified through the notion of possible social pathologies (i.e. theory of social anomy, theory of deviant behavior, etc.). As has been shown earlier, this creates a number of difficulties, which are related to general adequacy (validity and comparability) of existing data and make it necessary to hold certain assumptions about such indirect relationships. In considering mental (i.e. intellectual and spiritual) component of human development we face even greater difficulties, since there exists no widely accepted conceptual foundation or methodology of its empirical measurement.

At the same time we realize that mental health is an inherent and as much as significant aspect of human development, as its physical and social aspect. Moreover, the role of this component in securing sustainable development of society has grown even significant owing to the rising importance of knowledge and technology. Thus, it has to be particularly noted that mental aspect of societal well-being is based not only on the absence of psychical or emotional derangement, but rather on satisfying of human need in self-actualization and self-implementation (in production, as well as in leisure activities), personal growth, good education, etc. From such interpretation of mental development follows a certain list of empirical indicators, which may be included in the corresponding index. Here we also follow from the concept of 'healthy' society, i.e. a society, which is capable of withstanding certain pathologies in its development¹⁵.

In selecting a list of empirical indicators we've also faced another problem. And the problem was that some indicators have an ambiguous meaning and can either be related to mental or social aspect of human development. In solving this problem we came to a following conceptual distinction. After all, mental development is primarily concerned with exercising individual will, be it exposure to bad habits or involvement in various education programs. On the other hand, social development is concerned with everything, which shapes social climate in an environment: i.e. social integration/disintegration, spread of deviant behavior, etc.

All currently available variables related to the corresponding index have been categorized into three general groups: *addictions* (as an integral measure of irresponsible

¹⁵ It is worth to be noted here that the problem of mental, or spiritual health, is often considered as lying at the edge between science and religion. This gives rise to a number of rather disputable discourses like *theological psychology* [Gundarov 2001] or *existential anthropology* [Mercurio 2003], etc. However, these theoretical discourses are not specially considered in this research.

behavior towards personal health); *education* (as a measure of population's involvement in various education programs); and *leisure* (as a set of indicators, which describe the diversity and intensity of leisure activity and its utility with respect self-actualization, investments in human, social and cultural capital).

The first category – *addictions* – includes three basic indicators, which reflect the spread of self-destructive behavior among people: 1) drug use; 2) the volume and style of alcohol consumption; 3) share of tobacco smokers.

The use of drugs, especially hard ones, is no doubt one of the most horrible human addictions, which not only destroy addicts physically and psychically, but also affect further generations. There is a number of empirical evidence that drug use not only considerably shortens life expectancy directly, but raises the probability of mental and social disorder, involvement in crime, suicides, etc. [Kinner et al. 2009, Darek et al. 2010].

It is often assumed that the volume and specifics of drug use very much depends on a geographical location of a country, and particularly its involvement in drug trafficking. For instance, a UN World Drug Report 2010¹⁶ claims that scales of drug use are determined by supply and demand in a given country (i.e. the closer a country is to a drug supply nod, the higher the rates of drug use; e.g. Afghanistan and the 'Golden Triangle' in South-Eastern Asia: Thailand, Myanmar, Laos). However, the volume of drug use is also a function of such factors as drug law enforcement and drug legislation. On the other hand, much responsibility for drug use still lies on people themselves.

The above mentioned Drug Report gives the following classification of drugs according to their chemical compound: 1) opiates; 2) cocaine; 3) amphetamines and 4) cannabis. All of these drugs are prohibited in all of selected countries (partially except for Netherlands). When including data on drug use in one of our categories we also considered the extent of harm, which these drugs bring to people and society. This consideration is based on a number of expert studies [e.g. *van Amsterdam* et al. 2010; *Nutt* et al. 2007]. In one of the recent researches alcohol and tobacco are also compared to drug use (see Figure 2). The figure shows that cocaine and various opiates are listed among the most damaging drugs, both for human personality and society as a whole, while tobacco and alcohol, although not as strong, also have a devastating effect

¹⁶ World Drug Report 2010. UN Office on Drugs and Crime.
<http://www.un.org/ru/development/surveys/docs/drug2010.pdf>.

comparable to other drugs. Finally, cannabis (which is considered a soft drug) is considered the least evil drug in both respects.

In constructing the general index cocaine, opiates and amphetamines were attributed to 'hard drugs', while cannabis – to 'soft drugs'. Alcohol and tobacco consumption were attributed to 'hard drugs' owing to extent of harm they do to society and individuals.

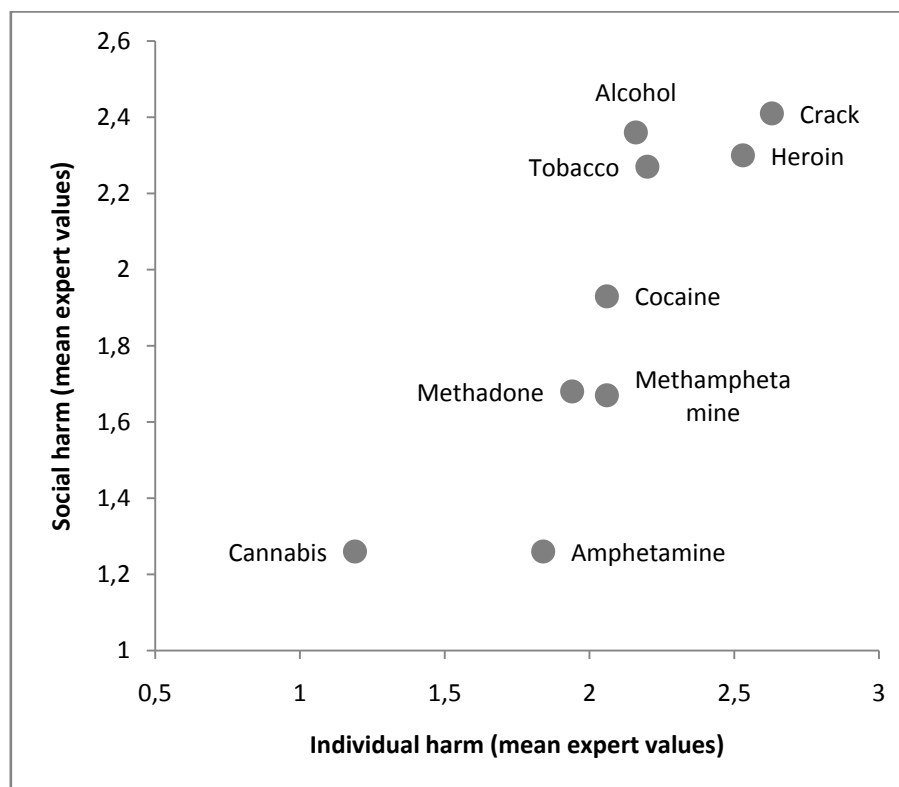
Let us now take a closer look at alcoholism. In its February 2011 bulletin World Health Organization claimed that alcohol's relation to morbidity and traumatism depends on two separate, but interrelated characteristics – volume of consumption and style of drinking behavior¹⁷. The evaluation of the latter parameter is based on the extent, to which the style of alcohol consumption leads to corresponding physical disorder and traumatism among the population: counting from 1 (the less harmful drinking behavior) to 5 (the most harmful drinking behavior)¹⁸. This classification is based on certain knowledge about the culture and tradition of alcohol consumption (drinking occasions, share daily drinkers, type of alcohols consumed, etc.)¹⁹.

¹⁷ Information Bulletin N°349. February 2011. WHO.
<http://www.who.int/mediacentre/factsheets/fs349/ru/index.html>.

¹⁸ <http://apps.who.int/ghodata/?theme=GISAH&vid=52540#>.

¹⁹ For more information see *Rehm* et al. 2003.

Figure 2. Expert evaluations of social and individual harm from various drugs



Source: [van Amsterdam et al. 2010]

In order to calculate the required indicator we've applied a weighting procedure, according to which the yearly average volume of alcohols consumed per capita were multiplied by drinking style coefficients. The coefficients were determined so that they provide the strongest correlation (0.73) with data on liver cirrhosis mortality (WHO 2001-2005). The resulting indicator allows for evaluating the scales of excessive alcohol consumption and the degree, to which it harms public health. The procedure will be discussed in better detail below.

Finally, the latter 'bad habit', which seriously affects public health, is tobacco smoking. On the one hand, this is quite a conscious act, which is based on individual choice (will). On the other hand, its destructive effect on health is not just a scientific fact – most smokers are well aware of how badly it damages their lives. Given the scales tobacco smoking worldwide it poses one of the most significant risks. For instance, the risk of heart attack for smokers is twice as higher among smokers than among non-

smokers. Besides, tobacco smoking is the cause of around 30% of all cancer deaths in USA²⁰.

Education is one of the major drivers of professional and personal growth in a modern society. This is why we pay particular attention to selecting indicators that describe the involvement of population in various education programs. In selecting these indicators to the corresponding category (*education*) we considered the following: 1) literacy rate; 2) distribution of population in a three-stage system of education; 3) number of people acquiring higher education per 100 thousand of population; 4) involvement in life-long learning.

Although literacy rate is one of the most fundamental figures that distinguish modern societies, we have to admit that overall literacy has been more or less achieved in most of selected countries. Which is why for further comparisons we had to skip corresponding data and consider other significant differences in education structure.

At first sight, distribution of population according to achieved stages of education appears as very informative indicator. However, its use has been very much complicated by the differences in national education systems. And, unfortunately, existing universal classifications (such as ISCED, for instance) do little to solve this problem of comparability. Moreover, corresponding data bear little or no information about the quality of such education, its value as a rational investment in human capital (for solid empirical evidence see [*Kapelyshnikov* 2007]). Thus, it would only be useful to characterize the institutional differences in education structure, rather than the character of individual decisions about investment in human capital, i.e. a characteristic attached to institutions rather than people themselves.

A very interesting concept that is closely related to contemporary economy and labor efficiency is a concept of lifelong learning. Since conventional three-stage education system only provides basic knowledge and skills required to enter the job market, lifelong learning becomes the only major mechanism, which helps people develop their professional skills further and keep themselves constantly up-to-date. In other words, it is all about constant investment of human capital and keeping it from depreciation in a

²⁰ *Cancer Facts & Figures 2011*, downloadable at www.cancer.org.

highly dynamic post-industrial economy. Apart from affecting labor efficiency it also determines the life-styles of people and, particularly, their consumption patterns²¹.

Since lifelong learning becomes such an important aspect of economic and social development, there emerge many national and international organizations and programs, which help coordinate business, state and public effort²². It seems to us that the rate of their development as well as involvement of population in these programs may serve as a good sign of how well societies are prepared to contemporary social and economic challenges. Following from here, we consider the corresponding indicators as describing particular aspect of mental development.

Finally, in order to characterize the character of people's leisure activity we have considered the following two indicators: 1) the rate of leisure diversity and intensity; 2) the rate of inquisitiveness or, so to say, intellectual curiosity. Particularly, by leisure activity we literally imply any human activity, which is not related directly to the production. However, it is not just any non-productive activity, but rather a set of acts that promote social and demographic reproduction of individuals: i.e. child birth and child-rearing practices, learning and self-development, public and civil activity, socializing, etc. This activity is not just some natural component of individual life, but an important part of social activity, which creates and accumulates cultural capital. In the context of mental development the intensity and diversity of leisure activity reflects the societal ability to preserve and develop certain norms of creative behavior and shape life-styles that promote balanced human development in all of its aspects: physical, social and, of course, mental.

In order to quantitatively describe the character of people's leisure activity we intended to use the specialized data from large-scale international surveys (such as International Social Survey Programme). These data sets allow for distinguishing certain types of leisure activity such as recreation, culture consumption, creativity, socializing and sports. However, the empirics were insufficient with respect to the list of selected countries, which is why, after all, we had to omit this rather informative aspect in our further comparisons.

²¹ Lifelong Learning in the Global Knowledge Economy: Challenges for Developing Countries, The World Bank Group, October 2002.

²² For example, Education and Training 2010 work programme (European Commission). 2008 Progress draft – http://ec.europa.eu/education/lifelong-learning-policy/doc/natreport08/council_en.pdf.

In order to characterize the inquisitiveness of population (i.e. the state of satisfaction of need for self-education) we've used a rather exotic indicator – an amount of pages per user retrieved from a well-known Internet knowledge base Wikipedia²³. However, it has to be noted that the data provided by the encyclopedia are not sufficiently accurate; besides, it has not been recognized publicly as a source of professional information. Nevertheless, given its scope and free accessibility Wikipedia serves as a major source of well organized and refined information in all aspects of science and culture.

In summary, to approximate the level of mental development we used the following indicators (see Table 5). The measure for volume and pattern of alcohol consumption was evaluated from WHO data on drinking styles (p) simply as (w), where $w = 1 + 0,2 * (p - 1)$. The integral value of mental development is a sum of indexes weighted according to the table below, standardized to a scale with maximum of 100 and minimum of 0.

Table 5. Index composition for the mental aspect of human development.

Variable	Group	Weight
Cannabis consumption	Addictions (light drugs)	1/30
Opiates consumption		1/30
Cocaine consumption	Addictions (heavy drugs)	1/30
Amphetamine consumption		1/30
Volume and pattern of alcohol consumption	Addictions (alcohol)	1/10
Share of daily smokers	Addictions (tobacco)	1/10
Wikipedia/Internet users	Leisure	1/3
Population involvement in life-long learning	Education	1/3

Addictions

To analyze the scales of drug addiction among population we relied on the data from UN Office of Drugs and Crime on the use of four types of drugs (a share of population, who have used drugs at least once in the last year, see Table 1 in Appendix 3). As clearly

²³ Publicly available multilingual free encyclopedia distributed by Wikimedia Foundation (non-profit Internet-supported organization). Contains over 18 million articles in 280 languages. Web-site: www.wikipedia.org.

follows from this data, the earlier suggested hypothesis, according to which the pattern of drug use is closely related to the geographic location of a country (precisely, closeness to the major channels and sources of drug trafficking), has little empirical support. For instance, the number of drug addicts, who use opiates (heroin, morphine, methadone, etc.), reaches its maximum in Russia, Ukraine, Kazakhstan and Estonia, but also in UK, Italy, Switzerland and Denmark. On the other hand, there are minimum serious drug addicts in such countries as Turkey, Lithuania, Poland, Czech Republic, Romania and, most of all, Scandinavian countries (0.3 % of population).

The geography of cocaine use is significantly different from that of opiates. The maximum number of cocaine addicts is reported in Spain (3% of population), UK, Italy, Belgium and Denmark (1-2.3%). This share is significantly lower in post-Soviet region (except for Slovakia, Slovenia, Bulgaria and Estonia), Turkey and Greece (0.1-0.3% of population). The major consumers of cocaine tend to concentrate in Southern (around 1.4%) and Western Europe (around 1% of population).

More or less similar picture can be observed with respect to the use of amphetamines (its correlation with the use of cocaine accounts for statistically significant 0.48). The top consumers are Norway, UK, Spain, Belgium, Denmark, Estonia and Latvia (generally around 0.85-1.3% of population), while least of all it is consumed in Romania, Turkey, Greece, Portugal, France, Slovakia (up to 0.2% of population). Thus, the use of amphetamines is mostly concentrated in the countries of Western and Northern Europe,

The use of cannabis is also highly correlated to the use of cocaine (0.70), while the drug itself is considered to be very soft and significantly less harmful. It is also much more frequently used than any other drug in all of selected countries. Major consumers are Italy, Spain, Switzerland, Czech Republic and France (8.6-14.6% of population). The average for Southern and Western Europe lies around 6.3-7.0% of population. It is, on the other hand, peculiar that cannabis is much less popular in Romania, Belarus, Greece and Turkey, and, generally, in the rest of post-socialist states (around 3.6%).

Judging by the available data the major patterns of drug use can be classified by the analogy with morbidity patterns: i.e. 'drugs for the rich' and 'drugs for the poor'. While the latter certainly include much heavier opiates (and, particularly, heroin, which comes mostly from Afghanistan), the 'rich' drugs include the more expensive cocaine (which is imported from Southern America) and amphetamines (produced mostly in Europe). For

instance, as far as average rates of heavy drug use are concerned (cocaine, opiates and amphetamines), Turkey, Greece, most CEE (Poland, Hungary, Lithuania, etc.) and South and countries seem to have achieved greater success in fighting against addiction. On the other hand, Russia, Kazakhstan and, most surprisingly, some Western and North European countries (UK, Belgium, Norway and Denmark) give reason to worry about.

With a bit of conventionality alcohol may be referred to as yet another ‘drug for the poor’. This is, perhaps, why larger amount of alcohol are consumed in the less developed countries of the post-socialist region: Hungary, Czech Republic, Russia, Ukraine, Estonia, etc. (more than 15 liters of pure alcohol per capita yearly, see Table 2 in Appendix 3). This becomes even more threatening when considering the patterns of drinking behavior in these countries. As was already mentioned above, the most risky drinking behavior creates the higher risk of liver cirrhosis: Hungary, Ukraine, Romania and Kazakhstan are marked for the highest rates of liver cirrhosis mortality (more than 40 per 100 thousand of population). In Russia this figure accounted for 35.7 per 100 thousand population in 2000-2002 [Zatoński et al. 2010].

A more favorable situation with respect to alcohol consumption is observed in Turkey (also considering its typical pattern of drinking behavior), where it is legally restricted. Alcohol consumption is also relatively low in Italy, Spain and Greece, Belgium, Switzerland, Germany and Norway. The ‘heaviest drinkers’ in Europe are Croatia, UK and Finland, which, however, doesn’t cause as much liver cirrhosis as in many post-socialist states.

To analyze the distribution of countries according to the share of daily tobacco smokers we relied on data from World Health Organization on population aged over 15 years old²⁴. The data were gathered by national statistical bureaus in each country from 2001 to 2008 (see Table 3 in Appendix 3).

Scandinavian countries again look much ‘healthier’ than the rest with less than quarter of population smoking daily. Western Europe, however, looks less homogenous with 20% smokers in Switzerland, 30% in Netherlands and 40% in Austria (in 2008 this country had the least restrictive anti-tobacco policy in the whole Europe [Simpson 2005]). Southern Europe is even more addicted to smoking, with highest share of smokers in

²⁴ WHO Report on the Global Tobacco Epidemic, 2008.

http://www.who.int/tobacco/mpower/mpower_report_full_2008.pdf.

Greece. Neither is the situation better in the post-socialist world, where only Slovenia demonstrates healthier life-styles (with 25% smokers). The worst situation among selected countries is observed in Russia, where 43% of the population smoke daily.

It would be quite logic to suggest that the indicator used here – the share of daily smokers – can be quite sensitive to anti-tobacco policies and, particularly, the cost of cigarettes. However, in using this data we wanted to show exactly, what amount of people is exposed to smoking, which is definitely quite irrational and irresponsible behavior with respect to personal health and the health of others. This is why we tried to look at the weighted scores, where tobacco use was adjusted for the cost of tobacco (data on the share of total expense on tobacco in GDP was used). Surprisingly, our initial rating of countries remained almost unchanged, except for the most extreme cases, such as Russia, where tobacco tax is among the lowest in Europe. Thus, in calculating the integral index we used the initial data without adjustments.

Lifelong learning

In this part we look at the share population aged from 25 to 64, who have participated in any kind of education or training in the last 3 months. However, on-the-job training and self-education are omitted here (see Table 3, Appendix 3).

We also look at the data about the intensity and diversity of leisure activity for comparison, although it wasn't included in the final index (due to insufficient data on several countries). With only one exception of Slovakia this indicator is highly correlated both, with frequency of information retrieval from Wikipedia and population involvement in lifelong learning (around 0.70). Thus, given its consistency with other related data we could easily do without it in further analysis.

The whole situation with lifelong learning resembles the patterns already observed in physical and social aspects of human development. The leading countries in this respect are Scandinavian social democracies Norway and Denmark (with 18% to 31% of population involved respectively). In Western Europe the situation is more or less similar in Switzerland (24%), UK (20%) and Netherlands (17%). However, in the rest of Western Europe this figure is nowhere higher than 15%. It is also quite notable that post-socialist countries are very different in this respect: with almost 15% in Slovakia, and 1.5% in Bulgaria and Romania.

Information retrieval

As was noted above, measuring of human inquisitiveness in different countries is very much complicated by the absence of relevant data. It is also highly problematic given the differences in statistical records of related data (like library use, etc.). That is why in finding the most relevant proxy for such measure we rely on Wikipedia's more or less accurate and straightforward statistics about the average monthly number of page views per 1 internet user in each country (see Table 4 in Appendix 3).

The table shows that Germans, Norwegians and Fins are among the most inquisitive internet users with 17-18 pages views a month per internet user. Encyclopedic knowledge is also highly popular in other countries of Western and Northern Europe (13-14 page views a month). Denmark and mostly South Europeans – Spain, Greece and Croatia – are, however, less hungry for such information (8-9 page views). The major part of articles in Wikipedia is written in English (over 3.6 million), German (over 1 million), French (over 1 million), Polish (793 thousand), Italian (790 thousand) and Spanish (748 thousand). The situation again looks different in the post-socialist world: with only 3 page views in Belarus to quite 'European' 15-16 in Poland and Estonia. Russia also looks relatively passive in this respect with 6 page views for a quite rich (700 thousand) encyclopedic article database in the native language.

Integral Scale of Mental Development

To construct the integral index for mental development all of selected sub-indices (Wikipedia page views, involvement in lifelong learning, share of smokers, etc.) were standardized and weighted according to the procedure already used before. The resulting distribution of countries is given in Table 5, Appendix 3.

The separate components of index for mental development are relatively high correlated with each other (around 0.46-0.50), while even better with the integral value (around 0.78-0.84). Table 5 in Appendix 3 shows clearly that Scandinavian countries demonstrate better mental development of their people as with other aspect of human development. Most West-European countries, especially Switzerland, UK and Germany, also keep relatively high levels. On the other hand, 8 out ten countries belonging to lower levels of this hierarchy are post-socialist states with Russia, again awfully backward.

References

- Amable B. (2003)** *The Diversity of Modern Capitalism*. Oxford: Oxford, New York.
- Arnason J.P. (2003)** *Civilizations in Dispute: Historical Questions and Theoretical Traditions*. Leiden, Boston: Brill.
- Bhugra D. (2005)** The global prevalence of schizophrenia. *PLoS Med.* 2(5).
- Borodkin F.M., Koudryavtsev A.S. (2003)** Chelovecheskoye razvitiye i chelovecheskiye bedy. *Mir Rossii*. No.1. [Human development and human misfortunes, in *Universe of Russia*].
- Bushuev V.V., Golubev V.S. (2002)** *Osnovy ergodinamiki*. Moscow: IAC Energiya. [The Basics of Ergodynamics]
- Bushuev V.V., Golubev V.S., Tarko A.M. (2004)** *Indikatory sotsioprirodnogo razvitiya rossiyskikh regionov*. Moscow: IAC Energiya. [Indicators of Socio-Natural Development in Russian regions]
- Clifton J., Gingrich N. (2007)** Are citizens of the world satisfied with their health? *Health Affairs*. 26(5).
- Council of the European Union*. Draft 2008. Joint progress report of the Council and the Commission on the implementation of the “Education & Training 2010” work programme “Delivering lifelong learning for knowledge, creativity and innovation”. 2008. http://ec.europa.eu/education/lifelong-learning-policy/doc/natreport08/council_en.pdf.
- Darke S., Torok M., Kaye S. Ross J. (2010)** Attempted suicide, self-harm, and violent victimization among regular illicit drug users. *Suicide & Life-Threatening Behavior*. 40(4).
- Dolgovaya A.I. (Ed.) (2001)**. *Kriminologiya*. Moscow: Izdatelstvo NORMA. [Criminology]
- Eisenstadt S.N. (1999a)** *Fundamentalism, Sectarianism, and Revolution. The Jacobin Dimension of Modernity*. Cambridge: Cambridge University Press.
- Eisenstadt S.N. (1999b)** *Paradoxes of Democracy, Fragility, Continuity, and Change*. Baltimore, MD: Johns Hopkins University Press.
- Gilinskiy J. (2007)** *Deviantologiya*. Moscow: Yuridicheskiy tsentr Press. [Deviantology]

Gundarov I.A. (2001) Zakon dukhovnoi determinatsii zdoroviya. In **Shatalov A.T. (Ed.)** *Filosofiya Zdoroviya*. Moscow: IF RAN. [Spirituality as a Factor of Health, in *Philosophy of Health*]

Hancké B., Rhodes M., Thatcher M. (Eds.) (2007) *Beyond Varieties of Capitalism. Conflict, Contradictions, and Complementarities in the European Economy*. Oxford: Oxford University Press.

Harrison L.E., Huntington S.P. (Eds.) (2000) *Culture Matters: How Values Shape Human Progress*. New York: Basic Books.

Hopkins M. (1991) Human Development Revisited: A New UNDP Report. *World Development*. 19(10).

Huntington S.P.(1996) *The Clash of Civilizations and the Remaking of World Order*. New York: Simon & Schuster.

Kapelyushnikov R. (2007) Evolyutsiya chelovecheskogo kapitala v Rossii. *Otechestvennye zapiski*. No.3 [The evolution of human capital in Russia, in *Domestic Essays*]

Khanna P. (2009) *The Second World: How Emerging Powers are Redefining Global Competition in the 21st Century*. New York: Random House.

Kinner S., George J., Campbell G., Degenhardt L. (2009) Crime, drugs and distress: patterns of drug use and harm among criminally involved injecting drug users in Australia. *Australian & New Zealand Journal of Public Health*. 33(3).

Kolesnikova I.S. (2008) Novatsii v sotsiologii meditsiny i zdoroviya. Zametki uchastnika VIII konferentsii ESA. *Sotsiologicheskiye issledovaniya*. No.4. [The new in sociology of medicine and health. Notes of the participant to the 8th ESA conference, in *Sociological Research*]

Krasilschikov V.A. (2010) *Chelovecheskoye razvitiye i izmeneniya v mirovoi sisteme*. Moscow: ILA RAN. [*Human Development and Change in the World-System*]

Lane D., Myant M. (Eds.) (2006) *Varieties of Capitalism in Post-Communist Countries*. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.

Lund C., Breen A., Flisher A.J., Kakuma R., Corrigall J., Joska J.A., Swartz L., Patel V. (2010) Poverty and common mental disorders in low and middle income countries: A systematic review. *Social Science & Medicine*. 71(3).

Maslow A. (1943) A Theory of Human Motivation. *Psychological Review*. 50(4). Pp.370-396.

Merkurio A. (2003) Ekzistentsial'naya antropologiya i personalisticheskaya metapsikhologiya. *Psikhoterapiya*. No.12. [Existential Anthropology and Metapsychology of Personality, in *Psychoteraphy*]

Merton R.K. (1939) Social Structure and Anomie. *American Sociological Review*. 3(5).

Miilunpalo S., Vuori I., Oja P., Pasanen M., Urponen H. (1997) Self-rated health status as a health measure: The predictive value of self-reported health status on the use of physician services and on mortality in the working-age population. *Journal of Clinical Epidemiology*. 50(5).

Mossey J.M., Shapiro E. (1982) Self-rated health: a predictor of mortality among the elderly. *American Journal of Public Health*. 72(8).

Noll H.H. (2002) Social indicators and quality of life research: background, achievements and current trends. In **Genov N. (Ed.)** *Advances in Sociological Knowledge Over Half a Century*. Paris: ISSC.

Nutt D., King L.A., Saulsbury W., Blakemore C. (2007) Development of a rational scale to assess the harm of drugs of potential misuse. *The Lancet*. 369.

Ponzetti J.J.Jr. (2003) *International Encyclopedia of Marriage and Family*. Vol. 1. Macmillan Reference USA.

Rehm J., Rehn N., Room R., Monteiro M., Gme, G., Jernigan D., Frick U. (2003) The global distribution of average volume of alcohol consumption and patterns of drinking. *European Addiction Research*. 9(4).

Sakevich V.I. (2010) Pomog li Polshe zapret abortov? *Demoskop Weekly*. No.433-434. [Has Abortions Ban Act helped Poland?, in *Demoscope Weekly*]

Sen A. (1983) Development: Which Way Now? *Economic Journal*. 93(372).

Sen A. (1990) Development as Capability Expansion. In **Griffin K., Knight J. (Eds.)** *Human Development and the International Development Strategy for the 1990s*. Basingstoke: Palgrave Macmillan.

Shkaratan O.I. (2010) Sistemy tsivilizatsiy i modeli sotsialno-ekonomicheskogo razvitiya Rossii i drugikh postkommunisticheskikh stran Evropy. *Mir Rossii*. No.3. [Systems of civilizations and models of social and economic development in Russia and other post-communist countries of Europe, in *Universe of Russia*]

Simpson D. (2005) Austria: Small But Deadly. *Tobacco Control*. 14(3-4).

Sinelnikov A.B. (2010) Chto bole priemlemo dlya naseleniya: stimulirovaniye rozhdaemosti ili pritok immigrantov? *Demograficheskiye issledovaniya*. No.1. [What is more acceptable to population: raising fertility or immigration?, in *Demographic Research*]

Spengler O. (1991) *The Decline of the West. An Abridged Edition*. New York: Oxford University Press.

Streeten P. (1995) *Foreword to: Mahbub ul Haq. Reflections on Human Development*. Oxford University Press.

The rules for drawing up criminal statistics, 1937 (1947). *Bulletin of the International Penal and Penitentiary Commission*. 12(3-4).

Toynbee A.J. (1987) *A Study of History (abridged by D.C. Somervell)*. New York: Oxford University Press.

UNDP Human Development Report 1990. Oxford University Press, 1990.

van Amsterdam J, Opperhuizen A, Koeter M., van den Brink W. (2010) Ranking the harm of alcohol, tobacco and illicit drugs for the individual and the population. *European Addiction Research*. 16(4).

van de Kaa D.J. (1987) Europe's Second Demographic Transition. *Population Bulletin*. 42(1).

Vasiliev L.S. (2008) Faktory evolyutsii. *Istoricheskaya psikhologiya i sotsiologiya istorii*. No.1. [Factors of evolution, in *Historical Psychology and Sociology of History*]

Veenhoven R. (1996) Happy Life-Expectancy: A comprehensive measure of quality-of-life in nations. *Social Indicators Research*. 39.

Veenhoven R. (2003) *Measuring Human Well-Being*. New Hampshire: Houndmills.

Vishnevskiy A.G. (Ed.) (2006) *Demograficheskaya modernizatsiya Rossii: 1900-2000*. Moscow: Novoe izdatelstvo. [*Demographic Modernization in Russia: 1900-2000*]

WHO Report on the Global Tobacco Epidemic, 2008.

Worrall E., Basu S., Hanson K. (2005) Is malaria a disease of poverty? A review of the literature. *Tropical Medicine & International Health*. 10(10).

Zakharov S.V. (2009) Rost rozhdaemosti: nachalo puti i dalniye gorizonty. *Doklad o razvitiy chelovecheskogo potentsiala v Rossiyskoi Federatsii 2008*. Moscow: UNDP. [Rising fertility: the beginning and future prospects, in *UN Human Development Report for Russian Federation 2008*]

Zaslavskaya T.I. (2004) *Sovremennoye rossiyskoye obschestvo. Sotsialnyi mekhanizm transformatsii*. Moscow: Delo. [*The Contemporary Russian Society. A Social Mechanism of Transformation*]

Zaslavskaya T.I. (2005) Chelovecheskiy potentsial v sovremennom transformiruyuschemsya obschestve. *Obschestvenniye nauki i sovremennost*. No.3. [Human capacity in contemporary transforming society, in *Social Sciences and Today*]

Zatoński W.A., a Sulkowska U., Mańczuk M., Rehm J., Boffetta P., Lowenfels A.B., La Vecchia C. (2010) Liver Cirrhosis Mortality in Europe, with Special Attention to Central and Eastern Europe. *European Addiction Research*. 16.

Appendix 1. Data on physical development

Table 1. Disability-adjusted life expectancy, incidence rates for “diseases of the rich” and self-estimated health

Countries	DALE ¹⁾ , years	Self-estimated health, %	Countries	Cancer incidence, per 100 thousands population ³⁾	Diabetes prevalence, %
Switzerland	74,5	89	Turkey	112,8	1,91
Italy	74,3	85	Greece	136,2	0,15
Spain	73,8	84	Kazakhstan	166,5	0,91
Sweden	73,6	80	Ukraine	173	2,25
France	73,4	84	Russian Federation	178,9	1,88
Norway	73	82	Romania	179,6	1,97
Germany	72,8	82	Poland	185,5	2,9
Netherlands	72,8	85	Belarus	186,7	1,8
Greece	72,5	82	Spain	187	5,09
Austria	72,4	85	Portugal	190,8	6,48
Belgium	72,3	88	Latvia	193,4	2,3
Finland	72,1	84	Austria	200,6	4,71
United Kingdom	72	85	Estonia	203,5	2,91
Denmark	71,5	84	Bulgaria	206,6	1,72
Slovenia	71,3	78	Lithuania	207,8	1,74
Portugal	71	80	Slovakia	223,4	5,45
Czech Republic	69,9	77	Croatia	229,3	3,5
Croatia	68,1	77	Slovenia	232,9	3,52
Slovakia	67,2	72	Hungary	235,6	4,35
Poland	67,1	72	Switzerland	236	0,1
Bulgaria	66	67	Finland	239,8	3,37
Estonia	65,9	64	Sweden	241,2	2,9
Hungary	65,8	69	Germany	245,7	3,2
Turkey	65,8	76	Italy	251,6	4,5
Romania	65,3	65	France	254,9	2,99
Latvia	63,8	63	Czech Republic	259,1	7,29
Lithuania	63	64	United Kingdom	260,5	3,74
Belarus	62,2	55	Norway	270,3	2
Russian Federation	60,1	56	Belgium	275,7	3,5
Ukraine	59,8	55	Netherlands	276,5	3,75
Kazakhstan	56,2	68	Denmark	325,3	4,18
Mean values across groups of countries					
NORTHERN EUROPE (SCANDINAVIA)	72,6	82,5		269,2	3,1
WESTERN EUROPE	72,9	85,4		250,0	3,1
SOUTHERN EUROPE	71,9	81,6		199,0	3,9
POST-SOCIALIST COUNTRIES	65,2	65,9		205,1	3,1
Across all countries	68,7	75,4		218,3	3,1

Notes: 1) DALE – disability-adjusted life expectancy; 2) self-estimated health – proportion of population generally satisfied with their health; 3) among women.

Table 2. Incidence rates for “diseases of the poor”

Countries	SDR, cerebrovascular diseases	Tuberculosis incidence	Gonococcal infection incidence	Viral hepatitis B incidence	HIV incidence
Switzerland	24,45	6,16	12,04	1,27	10,09
France	26,24	7,82	1,11	-	9,16
Italy	28,21	7,03	0,43	1,39	2,64
Norway	29,71	5,92	5,06	3,2	5,92
Spain	30,45	17,73	0,78	1,8	3,48
Sweden	31,66	5,39	7,46	1,81	4,02
Netherlands	32,3	6,13	10,75	1,47	7,2
Austria	32,73	10,32	8,89	6,91	5,25
Denmark	35,24	6,27	7,62	0,33	4,51
Belgium	38,45	9,89	5,07	5,29	9,43
Germany	40,78	6,09	3,07	1,43	3,23
Portugal	40,97	30,4	0,52	0,4	15,73
United Kingdom	41,79	13,46	31,76	0,68	12,56
Slovenia	48,26	10,31	1,74	1,29	1,64
Finland	49,03	5,32	4,42	0,7	3,63
Greece	49,43	5,2	-	1,64	4,32
Czech Republic	69,22	9,17	10,58	2,94	0,8864
Turkey	-	28,28	2,26	12,63	0,3875
Croatia	74,4	23,18	0,38	3,33	1,28
Poland	87,77	21,02	1,04	1,33	1,96
Slovakia	96,81	12,46	1,91	2,28	0,4999
Hungary	116,15	16,75	9,1	0,82	0,8043
Romania	126,28	112,56	6,25	5,92	1,01
Estonia	127,27	31,41	20,84	3,35	49,72
Lithuania	152,95	69,68	12,88	4,74	2,95
Bulgaria	164,61	40,73	2,14	10,24	1,2
Latvia	188,05	56,38	32,61	7,3	13,07
Belarus	222,65	52,83	62,49	3,85	7,53
Ukraine	224,04	88,54	33,11	9,64	28,44
Russian Federation	250,62	87,51	62,48	0,18	27,52
Kazakhstan	264,85	155	68,51	9,32	11,4
Mean values across groups of countries					
NORTHERN EUROPE (SCANDINAVIA)	36,4	5,7	6,1	1,5	4,5
WESTERN EUROPE	33,8	8,6	10,4	2,8	8,1
SOUTHERN EUROPE	44,7	16,7	0,5	1,7	5,5
POST-SOCIALIST COUNTRIES	144,2	46,9	19,8	4,1	10,6
Across all countries	91,5	30,9	14,2	3,6	8,1

Notes: 1) SDR – standardized death rate for age groups 0-64 years; 2) per 100 thousand of population; 3) “-” – no data available.

**Table 3. Integral index of physical development (IPD)
(composition and correlations)**

Countries	Diseases of the rich	Diseases of the poor	DALE	IPD
Greece	0,00	5,41	14,25	0,00
Switzerland	29,44	7,67	0,00	9,14
Sweden	55,78	4,45	6,01	24,39
Spain	58,94	3,59	4,90	25,01
France	60,68	2,52	5,29	25,57
Norway	56,53	7,36	8,30	27,50
Germany	59,79	2,64	12,94	29,16
Italy	73,06	0,00	2,55	29,29
Finland	59,52	2,60	14,97	30,06
Slovenia	58,79	2,54	23,66	34,20
Austria	59,65	17,47	11,31	35,99
Poland	39,10	8,76	43,07	37,31
Netherlands	73,88	6,90	12,42	38,50
United Kingdom	69,00	18,58	15,10	43,45
Belgium	71,43	15,34	18,10	44,60
Portugal	72,38	10,47	23,92	45,60
Croatia	57,53	11,29	38,95	46,13
Turkey	8,57	34,49	67,97	47,83
Denmark	92,30	2,18	22,61	51,00
Romania	29,11	40,38	60,65	57,83
Slovakia	73,02	9,81	50,13	59,31
Hungary	66,94	12,55	54,90	60,05
Bulgaria	34,98	39,60	60,13	60,22
Lithuania	35,51	36,85	70,65	64,57
Czech Republic	100,00	11,17	33,66	65,52
Estonia	44,58	52,46	57,71	70,72
Latvia	36,16	56,86	71,96	76,07
Belarus	29,73	61,34	85,82	82,30
Ukraine	29,61	79,88	91,31	94,81
Russian Federation	28,10	73,44	100,00	95,20
Kazakhstan	15,80	100,00	94,90	100,00
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)	66,04	4,15	12,97	33,24
WESTERN EUROPE	60,55	10,16	10,74	32,34
SOUTHERN EUROPE	52,38	6,15	16,92	29,20
POST-SOCIALIST COUNTRIES	46,59	37,36	61,82	66,01
Across all countries	51,0	23,8	38,0	48,8
Correlation coefficients	Diseases of the rich	Diseases of the poor	DALE	IPD
Diseases of the rich	1	-0,583	-0,521	-0,175
Diseases of the poor		1	0,889	0,864
DALE			1	0,905
IPD				1

Appendix 2. Data on social development

Table 1. Rates of homicide, suicide and assaults

Countries	Intentional homicide, per 100 thousands population	Cause of death: assault, % of all deaths	Countries	SDR, suicide and self-inflicted injury
Austria	0,5	0,06	Greece	2,85
Slovenia	0,5	0,07	Turkey	3,60
Norway	0,6	0,08	Italy	5,19
Switzerland	0,7	0,07	United Kingdom	6,12
Germany	0,8	0,06	Spain	6,46
Spain	0,9	0,10	Netherlands	8,05
Sweden	0,9	0,12	Portugal	9,59
Netherlands	1	0,11	Germany	9,82
Greece	1,1	0,14	Bulgaria	10,07
United Kingdom	1,2	0,04	Norway	10,19
Italy	1,2	0,10	Denmark	10,59
Portugal	1,2	-	Romania	11,17
Poland	1,2	0,14	Sweden	11,62
France	1,4	0,07	Czech Republic	11,79
Denmark	1,4	0,07	Slovakia	11,93
Hungary	1,5	0,16	Austria	12,69
Croatia	1,6	0,15	Poland	13,87
Slovakia	1,7	0,17	France	14,68
Belgium	1,8	0,18	Croatia	15,03
Czech Republic	2	0,08	Switzerland	15,12
Romania	2,2	0,21	Estonia	16,49
Bulgaria	2,3	0,13	Slovenia	17,19
Finland	2,5	0,24	Belgium	17,46
Turkey	2,9	-	Finland	18,45
Latvia	4,4	0,57	Ukraine	18,50
Belarus	5,6	0,49	Latvia	20,85
Ukraine	6,3	0,55	Hungary	21,54
Estonia	6,3	0,55	Belarus	25,31
Lithuania	8,6	0,57	Kazakhstan	25,91
Kazakhstan	10,6	1,17	Russian Federation	27,63
Russian Federation	14,2	1,33	Lithuania	30,72
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)	1,4	0,35		12,7
WESTERN EUROPE	1,2	0,36		12,0
SOUTHERN EUROPE	1,2	0,12		7,8
POST-SOCIALIST COUNTRIES	4,4	0,38		18,2
Across all countries	3	0,29		14,2

Table 2. Severe road traffic and work-related accidents

Countries	Persons killed or injured in road traffic accidents per 100 thousands population	Countries	Deaths due to work- related accidents per 100 thousands population
Belarus	93,74	United Kingdom	0,29
Denmark	101,61	Netherlands	0,4
Poland	126,04	Switzerland	0,61
Ukraine	128,2	Finland	0,7
France	131,16	Sweden	0,82
Greece	138,47	Belgium	0,9
Bulgaria	143,01	Denmark	0,93
Kazakhstan	146,07	Greece	0,97
Netherlands	157,61	Germany	0,98
Finland	166,69	France	1,03
Romania	182,46	Norway	1,09
Turkey	182,67	Hungary	1,18
Estonia	188,71	Italy	1,24
Russian Federation	198,78	Slovenia	1,32
Latvia	210,01	Poland	1,37
Slovakia	214,5	Slovakia	1,48
Spain	223,98	Spain	1,56
Norway	247,4	Estonia	1,57
Hungary	262,65	Czech Republic	1,67
Lithuania	270,8	Bulgaria	1,68
Czech Republic	283,58	Latvia	1,77
Sweden	289	Croatia	1,8
United Kingdom	308,49	Ukraine	1,86
Portugal	332,86	Belarus	1,91
Switzerland	344,95	Russian Federation	2,02
Italy	388,83	Romania	2,2
Belgium	389,78	Lithuania	2,29
Germany	531,88	Turkey	2,31
Croatia	579,6	Portugal	2,39
Austria	614,16	Austria	2,44
Slovenia	728,19	Kazakhstan	2,58
Mean values across groups of countries			
NORTHERN EUROPE (SCANDINAVIA)	201,2		0,9
WESTERN EUROPE	354,0		1,0
SOUTHERN EUROPE	332,7		1,6
POST-SOCIALIST COUNTRIES	233,1		1,7
Across all countries	267,9		1,5

Table 3. Abortions and divorces

Countries	Abortions per 1000 live births	Countries	Crude divorce rate
Poland	1,2	Italy	0,9
Austria	22,8	Croatia	1,1
Croatia	101,41	Slovenia	1,1
Portugal	129,5	Greece	1,2
Switzerland	142,9	Turkey	1,4
Belgium	149,45	Poland	1,7
Greece	153,38	Romania	1,7
Netherlands	156,23	Bulgaria	1,9
Germany	167,74	Kazakhstan	2
Finland	175,09	Netherlands	2
Turkey	205	Norway	2,1
Czech Republic	215,44	France	2,2
Spain	222,81	Germany	2,3
Italy	225,81	Slovakia	2,3
Denmark	231,64	Sweden	2,3
Slovenia	249,62	Austria	2,4
Lithuania	257,55	Portugal	2,4
Norway	265,37	Spain	2,4
France	274,71	United Kingdom	2,4
United Kingdom	274,95	Finland	2,5
Ukraine	281,04	Hungary	2,5
Slovakia	321,69	Estonia	2,6
Sweden	348,15	Switzerland	2,6
Kazakhstan	365,47	Denmark	2,7
Belarus	391,16	Latvia	2,7
Latvia	435,32	Czech Republic	3
Hungary	444,67	Lithuania	3,1
Bulgaria	470,88	Belgium	3,3
Estonia	525,33	Belarus	3,8
Romania	576,43	Russian Federation	5
Russian Federation	950,94	Ukraine	5,3
Mean values across groups of countries			
NORTHERN EUROPE (SCANDINAVIA)	255,1		2,4
WESTERN EUROPE	169,8		2,5
SOUTHERN EUROPE	166,6		1,6
POST-SOCIALIST COUNTRIES	393,9		2,8
Across all countries	281,7		2,4

Table 4. Interpersonal trust

Countries	Mean values of interpersonal trust (0 – min, 11 – max)			
	ESS2004	ESS2006	ESS2008	Average
Denmark	7,1	7,3	7,2	7,2
Norway	6,9	7,1	6,9	7,0
Finland	6,8	6,9	6,8	6,8
Sweden	6,4	6,6	6,7	6,6
Netherlands	6,2	6,1	6,3	6,2
Switzerland	6,1	6,1	6,1	6,1
Estonia	5,6	5,8	5,9	5,7
United Kingdom	5,6	5,8	5,7	5,7
Austria	5,6	5,6	-	5,6
Spain	5,4	5,5	5,4	5,4
Belgium	5,3	5,4	5,6	5,4
Germany	5,3	5,2	5,4	5,3
Czech Republic	4,8	-	5,3	5,0
France	5,0	5,0	5,0	5,0
Italy	4,9	-	-	4,9
Croatia	-	-	4,8	4,8
Ukraine	5	4,7	4,6	4,8
Hungary	4,6	4,8	4,6	4,7
Slovenia	4,7	4,6	4,8	4,7
Slovakia	4,6	4,8	4,7	4,7
Latvia	-	-	4,6	4,6
Russian Federation	-	4,5	4,5	4,5
Poland	4,2	4,6	4,7	4,5
Portugal	4,5	4,6	4,2	4,4
Greece	4,4	-	4,5	4,4
Romania	-	-	4,4	4,4
Bulgaria	-	4	4	4
Turkey	3,6	-	3	3,3
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)				6,9
WESTERN EUROPE				5,6
SOUTHERN EUROPE				4,8
POST-SOCIALIST COUNTRIES				4,7
<i>Across all countries</i>				5,2

**Table 5. The consistency of trust scores in
ESS 2004, 2006 and 2008**

	ESS2004 vs ESS2006	ESS2006 vs ESS2008	ESS2004 vs ESS2008
Pearson's correlation coefficient	0,975	0,986	0,969
Significance level	0,000	0,000	0,000
Number of coincident countries	20	20	21

**Table 6. Integral index of social development (ISD)
(composition and correlations)**

Countries	Crime	Suicides	Injuries	Family	Trust	ISD
Netherlands	3,65	18,66	0,00	14,73	38,0	0,00
Greece	4,38	0,00	13,58	4,35	56,0	1,03
United Kingdom	5,11	11,73	11,78	26,85	43,0	7,40
Denmark	6,57	27,77	8,89	28,12	28,0	7,67
Norway	0,73	26,34	27,50	22,46	30,0	10,10
Italy	5,11	8,40	45,41	4,80	51,0	12,52
Sweden	2,92	31,47	24,25	29,90	34,0	14,99
Spain	2,92	12,95	37,95	23,77	46,0	15,33
Poland	5,11	39,54	23,21	1,73	55,0	15,64
Switzerland	1,46	44,03	24,03	21,60	39,0	17,38
Finland	14,60	55,97	9,02	22,22	32,0	18,55
France	6,57	42,45	14,49	24,28	50,0	19,81
Germany	2,19	25,01	52,36	19,24	47,0	22,33
Turkey	17,52	2,69	54,24	9,95	67,0	24,10
Slovakia	8,76	32,58	34,85	28,34	53,0	26,04
Bulgaria	13,14	25,91	33,28	32,05	60,0	28,20
Czech Republic	10,95	32,08	46,77	30,99	50,0	30,22
Portugal	5,11	24,18	71,11	18,25	56,0	31,44
Belgium	9,49	52,42	36,28	30,92	46,0	31,59
Croatia	8,03	43,70	79,26	0,00	52,0	34,07
Romania	12,41	29,85	51,24	35,74	56,0	34,78
Austria	0,00	35,31	100,00	11,94	44,0	36,68
Slovenia	0,00	51,45	80,79	8,76	53,0	37,55
Hungary	7,30	67,06	31,43	38,16	53,0	38,48
Estonia	42,34	48,94	34,77	44,21	43,0	43,62
Latvia	28,47	64,59	42,28	40,16	54,0	48,75
Ukraine	42,34	56,15	36,71	64,22	52,0	55,67
Belarus	37,23	80,59	34,69	51,59	-	57,62
Kazakhstan	73,72	82,74	57,98	27,10	-	69,91
Lithuania	59,12	100,00	62,33	34,76	-	74,23
Russian Federation	100,00	88,91	47,96	100,00	55,0	100,00
Mean values across groups of countries						
NORTHERN EUROPE (SCANDINAVIA)	6,2	35,4	17,4	25,7	31,0	12,8
WESTERN EUROPE	4,1	32,8	34,1	21,4	43,9	19,3
SOUTHERN EUROPE	5,1	17,8	49,4	10,2	52,2	18,9
POST-SOCIALIST COUNTRIES	28,2	55,2	43,1	39,3	53,2	45,4
Across all countries	17,3	40,8	39,6	27,5	48,6	31,2
Correlation coefficients	Crime	Suicides	Injuries	Family	Trust	ISD
Crime	1	0,729	0,152	0,740	0,300	0,857
Suicides		1	0,213	0,590	0,112	0,786
Injuries			1	-0,088	0,442	0,519
Family				1	0,063	0,657
Trust					1	0,571
ISD						1

Appendix 3. Data on mental development

Table 1. Drug use

Countries	Cocaine prevalence, %	Opiates prevalence, %	Amphetamines prevalence, %	Cannabis prevalence, %
Turkey	0,1	0,05	0,2	1,9
Romania	0,1	0,15	0,1	0,9
Greece	0,1	0,28	0,2	1,7
Belarus	0,1	0,41	0,4	1,1
Poland	0,2	0,1	0,7	2,7
Czech Republic	0,2	0,13	0,7	9,3
Hungary	0,2	0,35	0,6	2,3
Russian Federation	0,25	1,64	0,4	3,5
Ukraine	0,25	1,15	0,4	2,5
Lithuania	0,3	0,1	0,3	2,2
Latvia	0,5	0,8	0,9	4,9
Finland	0,5	0,23	0,6	3,6
Sweden	0,55	0,17	0,4	2,1
Bulgaria	0,6	0,4	0,5	2,2
Netherlands	0,6	0,31	0,3	5,4
France	0,6	0,47	0,2	8,6
Portugal	0,6	0,47	0,2	3,6
Slovakia	0,6	0,58	0,2	6,9
Estonia	0,6	2,34	1,3	4,6
Germany	0,7	0,22	0,5	4,7
Switzerland	0,8	0,65	0,65	9,7
Norway	0,8	0,33	1,1	4,6
Croatia	0,9	0,36	0,7	5,2
Austria	0,9	0,43	0,5	3,5
Slovenia	0,9	0,53	0,5	4,1
Denmark	1	0,6	0,7	5,2
Belgium	1,25	-	0,85	5
Italy	2,2	0,79	0,65	14,6
Kazakhstan	-	1	-	4,2
United Kingdom	2,3	1	1	7,4
Spain	3	0,3	0,9	10,1
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)	0,7	0,3	0,7	3,9
WESTERN EUROPE	1,0	0,5	0,6	6,3
SOUTHERN EUROPE	1,4	0,4	0,5	7,0
POST-SOCIALIST COUNTRIES	0,4	0,7	0,5	3,6
Across all countries	0,7	0,5	0,6	4,8

Table 2. Alcohol consumption, liver cirrhosis

Countries	Alcohol consumption, liters/person per year	SDR, liver cirrhosis	Pattern of drinking score *
Turkey	1,87	-	3
Norway	7,81	3,45	3
Italy	10,68	11,59	1
Sweden	10,68	5,91	3
Greece	10,75	5,32	2
Belgium	10,77	-	1
Kazakhstan	10,96	42,07	4
Switzerland	11,06	7,38	1
Spain	11,62	9,89	1
Bulgaria	12,44	16,12	2
Latvia	12,50	16,87	3
Finland	12,52	18,83	3
Germany	12,81	15,93	1
Austria	13,24	17,56	1
Netherlands	13,25	4,59	1
Poland	13,25	16,23	3
Slovakia	13,33	26,05	3
Denmark	13,37	14,97	2
United Kingdom	13,37	11,86	3
France	13,66	11,76	1
Portugal	14,55	14,4	1
Lithuania	15,03	28,74	3
Croatia	15,11	23,6	3
Belarus	15,13	17,66	4
Slovenia	15,19	23,17	3
Romania	15,30	42,94	3
Estonia	15,57	23,75	3
Ukraine	15,60	44,52	5
Russian Federation	15,76	-	5
Hungary	16,27	47,44	3
Czech Republic	16,45	17,41	3
Mean values across groups of countries			
NORTHERN EUROPE (SCANDINAVIA)	11,1	10,8	2,8
WESTERN EUROPE	12,6	11,5	1,3
SOUTHERN EUROPE	12,5	13,0	1,6
POST-SOCIALIST COUNTRIES	14,8	26,7	3,3
<i>Across all countries</i>	<i>12,9</i>	<i>19,3</i>	<i>2,5</i>

Note: * – the score used to reflect the burden of disease caused by certain styles of alcohol consumption, on a scale from 1 (least risky drinking behavior) to 5 (most risky drinking behavior)

Table 3. Smoking, lifelong learning and leisure activity

Countries	Daily smokers, %	Countries	Population aged 25-64 participating in education and training, %	Leisure activity index
Sweden	16,25	Denmark	31,6	-
Switzerland	20,65	Switzerland	24	2,222
Finland	20,95	Sweden	22,2	2,097
Kazakhstan	21,50	Finland	22,1	2,143
Belgium	21,55	United Kingdom	20,1	2,035
Italy	22,30	Norway	18,1	2,142
Slovenia	23,35	Netherlands	17	...
Norway	24,90	Slovenia	14,6	2,091
Czech Republic	25,35	Austria	13,8	2,228
Lithuania	25,60	Estonia	10,5	-
Denmark	26,20	Spain	10,4	-
Germany	26,65	Germany	7,8	2,056
Romania	26,90	Belgium	6,8	2,043
France	27,10	Czech Republic	6,8	1,950
United Kingdom	28,35	Portugal	6,5	-
Netherlands	29,55	Belarus	-	2,189
Spain	29,90	France	6	-
Croatia	30,15	Italy	6	-
Poland	30,45	Russian Federation	5,6	1,734
Estonia	31,35	Ukraine	-	-
Portugal	31,65	Latvia	5,3	1,908
Latvia	32,10	Poland	4,7	1,849
Hungary	34,40	Lithuania	4,5	-
Bulgaria	34,55	Greece	3,3	-
Belarus	37,25	Slovakia	2,8	2,146
Ukraine	38,00	Hungary	2,7	1,772
Turkey	39,95	Croatia	2,3	1,934
Slovakia	40,60	Turkey	2,3	-
Austria	40,65	Kazakhstan	-	-
Russian Federation	43,25	Romania	1,5	-
Greece	48,05	Bulgaria	1,4	1,743
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)	22,1		23,5	
WESTERN EUROPE	27,8		13,6	
SOUTHERN EUROPE	32,4		5,7	
POST-SOCIALIST COUNTRIES	32,6		5,5	
Across all countries	30,0		9,5	

**Table 4. Average Wikipedia page views per month pro
Internet user**

Countries	Wikipedia page views
Norway	18
Germany	18
Finland	17
Sweden	16
Poland	16
Switzerland	15
Estonia	15
United Kingdom	15
Austria	14
Portugal	12
Czech Republic	12
Italy	12
Belgium	11
Netherlands	11
France	11
Slovenia	10
Lithuania	10
Bulgaria	10
Croatia	10
Greece	9
Denmark	8
Spain	8
Latvia	8
Hungary	7
Ukraine	7
Romania	7
Russian Federation	6
Slovakia	5
Kazakhstan	5
Belarus	3
Turkey	3
NORTHERN EUROPE (SCANDINAVIA)	14,8
WESTERN EUROPE	13,6
SOUTHERN EUROPE	10,2
POST-SOCIALIST COUNTRIES	8,9
<i>Across all countries</i>	<i>10,6</i>

**Table 5. Integral index of mental development (IMD)
(composition and correlations)**

Countries	Wikipedia page views	Lifelong learning	Addictions	IMD
Sweden	13,33	31,13	0,00	0,00
Finland	6,67	31,46	19,85	6,10
Switzerland	20,00	25,17	24,71	11,47
Norway	0,00	44,70	26,92	12,26
Germany	0,00	78,81	22,53	25,66
Denmark	66,67	0,00	42,90	29,38
Netherlands	46,67	48,34	26,77	34,89
Poland	13,33	89,07	33,55	41,28
Austria	26,67	58,94	53,79	42,84
United Kingdom	20,00	38,08	85,91	44,91
Slovenia	53,33	56,29	42,47	48,57
Portugal	40,00	83,11	31,94	49,90
France	46,67	84,77	28,65	52,17
Belgium	46,67	82,12	34,63	53,67
Czech Republic	40,00	82,12	44,24	55,00
Lithuania	53,33	89,74	25,09	55,81
Italy	40,00	84,77	56,84	61,88
Estonia	20,00	69,87	93,59	62,72
Bulgaria	53,33	100,00	39,59	66,99
Romania	73,33	99,67	21,29	67,60
Greece	60,00	93,71	45,51	69,83
Turkey	100,00	97,02	3,91	70,60
Croatia	53,33	97,02	56,82	73,41
Latvia	66,67	87,09	55,22	74,23
Spain	66,67	70,20	74,94	75,51
Hungary	73,33	95,70	52,17	79,75
Kazakhstan	86,67	98,01	46,61	84,30
Belarus	100,00	84,77	55,42	88,31
Ukraine	73,33	86,09	80,91	88,38
Slovakia	86,67	95,36	64,25	91,06
Russian Federation	80,00	86,09	100,00	100,00
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)	21,7	26,8	22,4	11,9
WESTERN EUROPE	29,5	59,5	39,6	37,9
SOUTHERN EUROPE	52,0	85,8	53,2	66,1
POST-SOCIALIST COUNTRIES	60,5	86,3	54,4	70,7
Across all countries	49,2	73,2	44,9	55,4
Correlation coefficients	Wikipedia page views	Lifelong learning	Addictions	IMD
MWPV / IU	1	0,500	0,240	0,817
Lifelong learning		1	0,154	0,762
Pernicious habits			1	0,607
IMD				1

Appendix 4. Index of Societal Health and the mode of demographic reproduction

Table 1. Index of Societal Health
(composition and correlations)

Countries	PHYSICAL	SOCIAL	MENTAL	ISH
Sweden	24,47	12,01	0,00	0,00
Switzerland	10,42	16,49	11,47	0,77
Norway	27,95	5,67	12,26	3,83
Finland	29,53	14,38	6,10	5,51
Netherlands	36,97	0,00	34,89	14,40
Germany	27,76	24,70	25,66	16,95
Greece	0,00	9,15	69,83	17,30
Denmark	47,39	2,53	29,38	17,43
United Kingdom	42,56	9,10	44,91	24,46
Poland	36,08	22,17	41,28	25,66
France	26,51	23,74	52,17	26,84
Italy	28,99	17,48	61,88	29,25
Austria	36,22	36,57	42,84	32,22
Spain	25,07	17,78	75,51	33,33
Slovenia	31,32	41,47	48,57	34,55
Belgium	41,34	32,78	53,67	37,16
Portugal	42,93	37,21	49,90	38,08
Turkey	37,23	35,45	70,60	43,47
Czech Republic	60,15	33,35	55,00	45,59
Croatia	43,85	37,81	73,41	48,27
Bulgaria	52,48	36,04	66,99	48,45
Romania	51,85	40,29	67,60	50,17
Estonia	64,02	42,52	62,72	54,05
Slovakia	53,34	30,85	91,06	56,48
Hungary	55,49	42,33	79,75	57,43
Lithuania	59,60	75,77	55,81	62,96
Latvia	67,76	52,26	74,23	64,22
Belarus	71,16	60,22	88,31	74,57
Ukraine	86,97	57,74	88,38	80,02
Kazakhstan	100,00	72,24	84,30	89,57
Russian Federation	82,17	100,00	100,00	100,00
Mean values across groups of countries				
NORTHERN EUROPE (SCANDINAVIA)	32,3	8,6	11,9	6,7
WESTERN EUROPE	31,7	20,5	37,9	21,8
SOUTHERN EUROPE	28,2	23,9	66,1	33,2
POST-SOCIALIST COUNTRIES	59,4	48,8	70,7	58,0
Across all countries	45,2	33,6	84,3	89,6
Correlation coefficients	PHYSICAL	SOCIAL	MENTAL	SHI
PHYSICAL	1	0,776	0,621	0,887
SOCIAL		1	0,665	0,908
MENTAL			1	0,872
SHI				1

Ястребов, Г. А., Красилова, А. Н., Черепанова, Е. С. «Здоровье наций»: оценка физического, социального и духовного благосостояния в странах Европы и СНГ [Электронный ресурс] : препринт WP17/2013/02 / Г. А. Ястребов, А. Н. Красилова, Е. С. Черепанова ; Нац. исслед. ун-т «Высшая школа экономики». – Электрон. текст. дан. (300 Кб). – М. : Изд. дом Высшей школы экономики, 2013. – 64 с. – (Серия WP17 «Научные доклады Лаборатории сравнительного анализа развития постсоциалистических обществ») (на англ. яз.).

В работе содержится попытка сформулировать основные теоретико-методологические посылки анализа постсоциалистических трансформаций с точки зрения обеспечения жизнеспособности обществ, под которой на операциональном уровне рассматривается степень реализации потребностей населения в безопасности, образовании, здоровье, самореализации, демографическом и социальном воспроизводстве. При этом, учитывая ограниченность существующих оценок на базе таких общепринятых интегральных показателей, как Индекс человеческого развития ООН, авторы разрабатывают собственное определение жизнеспособности на основе классического определения «здоровья», предложенного Всемирной организацией здравоохранения в 1948 г. Значительную часть работы занимает обсуждение собранной из различных источников (ВОЗ, Всемирный банк, ПРООН и т.п.) эмпирической информации о качестве человеческого развития в ряде стран Европы и СНГ.

Ключевые слова: здоровье, благосостояние, индекс человеческого развития, страны СНГ, социальные трансформации

Препринт WP17/2013/02
Серия WP17
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(на английском языке)