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## **Human Development Concept**

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## **Концепция человеческого развития**

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Рекомендовано методической комиссией Института экономики и предпринимательства ННГУ для иностранных студентов, обучающихся по направлению подготовки 38.03.01 «Экономика» (бакалавриат) на английском языке

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В настоящем учебном пособии рассмотрены ключевые аспекты концепции человеческого развития, рассматривающей современное экономическое развитие в гуманитарном измерении. Основные идеи этой концепции сопоставлены с традиционными подходами к анализу проблем уровня жизни, экономического неравенства и бедности.

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## **Lesson 1. The rise of human development**

Economic development is broadly used term nowadays. But what does it mean?

It seems economic development is the same process as economic growth, measured usually by growth of GNP. Economic growth, of course, is very important for well-being of people. It was founded, for example, that life expectancy does have a positive correlation with GNP per head. But this relationship works through the impact of GNP on incomes of the poor and public expenditure, first of all, in health care. The impact of economic growth on life expectancy depends much on how the results of this process are used. That's why it isn't correct to identify economic development with economic growth.

By the 1970s, dissatisfaction had arisen with economic growth as an end in itself. A consensus began to spread that economic growth was not the same thing as "development". In many developing countries economic growth had been rapid, but inequalities, underemployment and pervasive poverty remained.

Spurring economic growth had implicitly become the goal of development efforts. Some theorists had recognized that increases in income were not equivalent to development but assumed that if growth were rapid and sustained enough, development would follow more or less automatically.

When growth did not deliver all the benefits that it was claimed that it would, attention began to shift to the goal of development. But what is "development"? "Economic development" became the strategic objective, instead of economic growth.

There is no universally agreed definition of economic development.

The Cambridge professor Ha-Joon Chung defines economic development "as a process of economic growth that is based on the increase in an economy's productive capabilities: its capabilities to organize – and, more importantly, *transform* – its production activities".

According to Marcelo M. Giugale – the Director of Economic Policy and Poverty Reduction Programs for Africa at the World Bank, “economic development is the process through which a community creates material wealth and uses it to improve the well-being of its members. This calls for many interrelated ingredients: healthy and educated workers, more machines and better infrastructure, advanced knowledge and path-breaking ideas, savers and financiers, peace and rule of law, and social inclusion and individual rights”.

The definitions have a lot in common but the second one stresses on social result of economic development – improving the well-being of community members.

Economic development became the strategic objective, instead of economic growth. This became identified with economic growth plus broad increases in employment and incomes such that inequalities and poverty were reduced.

Alongside economic development, the goal of “social development” was also held up as being valuable. Included in “social development” were such items as education, health, nutrition and culture.

Usually social development was considered to be a secondary goal. Economic development dealt with the “base”, social development with the “superstructure”. The prevailing assumption was that if economic development occurred, social development would follow in its footsteps. With increases in income, society could make sure that all its members were adequately fed, could afford to educate its members, and provide them with decent health care.

However, beginning in the 1970s some major currents of development thinking arose to question the close connection between economic development and social development. The most well-known came to be known as the “Basic-Needs” approach to development.

The basic position was that a direct approach had to be taken with respect to promoting social development. Economic development was an indirect, and not necessarily a very effective, means to promote the health, nutrition and education of population.

Economic growth had to be broad-based and employment-intensive, of course, but public policy must intervene to achieve this end and provide the population with access to social services and goods. It was unrealistic to expect economic growth alone to automatically provide for the basic needs of broad segments of the population.

This line of thinking was renewed again in the 1980s as a critique of policies of structural adjustment, which had been promoted as a less state-led and more market-friendly approach to capitalist development. The initiative was led by UNICEF and the policies they favored were known as “Adjustment with a Human Face”.

But the artificial dichotomy between economic development and social development had not yet broken down. The relationship between economic growth and the quality of people’s lives had not yet been clarified. Basic Needs had focused, for example, more on the provision of goods and services to people as beneficiaries, and less on people as active participants in development activities.

In the late 1980s the social development approach began to arise, inspired by the work of Amartya Sen. The basic proposition was that the objective of development is the improved quality of people’s lives. Once explained, this position seems to be intuitively obvious to people. But it had become overshadowed by the infatuation with economic growth and associated championing of laissez-faire capitalism. This latter two positions had complemented each other. The smooth functioning of the market mechanism was regarded as the best guarantor of economic growth, so the main function of the state was to facilitate the functioning of these mechanism.

A human-centered perspective on development began to supplant an income-centered perspective. Aggregate statistics on national income, even in per caput terms, do not reveal how income is distributed among the population or who benefits from the distribution and how. The existence of positional goods (whose values derive from the fact that only a small proportion of potential consumers can have them) makes income an unreliable gauge of true living standard. Even if

people's income rises, they may still be unable to acquire things like houses in prime locations or elite education that gives access to top jobs, if others have also become richer and are able to stump up even more money than people can. According to Ha-Joon Chung, this problem is more severe in richer economies, as the finer things in life tend to be positional goods, while essential goods are usually not.

Also, people value many things that are not directly dependent on income<sup>^</sup> greater access to knowledge, better health, improved working conditions, security against crime and violence, freedom and participation.

Thus, the expansion of output is only a means; the end of development must be human well-being. The real test is to determine how to connect economic growth to human development.

There are two attitudes to the process of this development. One view sees development as a "fierce" process – a world in which wisdom demands toughness. In particular, it demands calculated neglect of various concerns. The temptation to be resisted can include having social safety nets that protect the very poor, providing social services for the population at large, departing from institutional guidelines in response to identified hardship, and favoring political and civil rights and the "luxury" of democracy. This things, it is argued in this austere attitudinal mode, could be supported later on, when the development process has borne enough results. The different theories that share this general outlook diverge from one another in pointing to distinct areas of softness that are particularly to be avoided, varying from financial softness to political relaxation, from plentiful social expenditures to complaisant poverty relief.

This attitude contrasts with an alternative outlook that sees development as essentially a "friendly" process. Depending on the particular version of this attitude, the congeniality of the process is seen as exemplified by such things as mutually beneficial exchanges, or by the working of social safety nets, or of political liberties, or of social development – or some combination (Sen, A.)



The second approach is more preferable for proponents of the human development concept.

## **Lesson 2. The main characteristics of human development approach**

Human development is usually expressed in one of two ways: 1) the expansion of human capabilities or 2) the enlargement of people's choices. These are two ways of expressing the same concept. Capabilities have to do with people's abilities to undertake valued or worthwhile activities.

Amartya Sen makes distinction between people's functionings – their activities, their “beings and doings” – and their capabilities. A functioning is an achievement, whereas a capability is the ability to achieve, and this implies that the achievement can take various particular forms. Functionings are more direct expressions of living conditions, whereas capabilities embody the notion of freedom to choose among a set of functionings or activities.

Functionings that are relevant for well-being can vary from such elementary and universally accepted ones as escaping avoidable morbidity or mortality, being adequately nourished, having mobility, to more complex one such as achieving self-respect or taking part in the life of community.

Living conditions are states of existence, and functionings reflect the various aspects of such states, while the set of feasible functionings is the capability of a person. A stark example of the contrast is that while a person may have the capability of being well nourished, he or she can satisfy this capability in various ways, through the intake of different foods and maintenance of good health. With capability to be well-nourished, the person does not have to starve, but still he might choose to give up food by fasting. This latter choice dramatizes the inherent aspect of freedom in the concept of capability.

Development can be seen as a process of expanding the real freedoms that people enjoy.

Freedom is central to the process of development for two reasons.

The evaluative reason: assessment of progress has to be done primarily in terms of whether the freedom that people have are enhanced.

The effectiveness reason: achievement of development is thoroughly dependent on free agency of people.

The freedom to lead different types of life is reflected in the person's capability set. Freedom is dependent on a number of factors, including a person's own characteristics as well as social and political institutions. The other way of expressing human development, namely, as an "expansion of human choice" focuses on the aspect of freedom, but does not answer the question whether the choices before the person are to be valued. One person might have a choice, for instance, between three alternatives, such as "bad", "awful" and "gruesome", while another might have a choice between "good", "excellent" and "superb". In other words, the goodness of a range of choice cannot be judged independently of the nature of the alternatives that constitute that range. The alternatives must be valued activities in terms of promoting human well-being.

Expansion of freedom is viewed as both the primary end and the principal means of development. They can be called respectively the "constitutive role" and "instrumental role" of freedom in development.

The substantive freedoms include elementary capabilities like being able to avoid such deprivations as starvation, escapable morbidity, as well as the freedoms that are associated with being literate and numerate, enjoying political participation and uncensored speech and so on. Development, in this view, is the process of expanding human freedoms.

The instrumental role of freedom concerns the way different kinds of right, opportunities, and entitlements contribute to the expansion of human freedom in general, and thus to promoting development. The effectiveness of freedom as an instrument lies in the fact that different kinds of freedom interrelate with one another, and freedom of one type may greatly help in advancing freedom of other types.

There are the following types of instrumental freedoms: (1) political freedoms, (2) economic facilities, (3) social opportunities, (4) transparency guaranties and (5) protective security.

Political freedoms refer to the opportunities that people have to determine who should govern and on what principles, and also include possibilities to scrutinize and criticize authorities, to have freedom of political expression and an uncensored press. They include the political entitlements associated with democracies in the broadest sense. Democracy and freedom rely on much more than the ballot box, which denotes no more than formal democracy. Also critical is the active involvement people's organizations in decision-making.

Economic facilities refer to the opportunities that individuals respectively to utilize economic resources for the purpose of consumption, or production, or exchange. Insofar as the process of economic development increases the income and wealth of a country, they are reflected in corresponding enhancement of economic entitlements of the population.

Social opportunities refer to the arrangements that society makes for education, health care and so on, which influence the individual's substantive freedom to live better. This facilities are important not only for the conduct of private lives (such as living a healthy life), but also for more effective participation in economic and political activities. For example, illiteracy can be a major barrier to participation in economic activities that require production according to specification or demand strict quality control.

Transparency guaranties deal with the need for openness that people can expect: the freedom to deal with one another under guaranties of disclosure and lucidity. This guaranties have a clear instrumental role in preventing corruption, financial irresponsibility and underhand dealings.

Protective security is needed to provide a social safety net for preventing the affected population from being reduced to abject misery, and in some cases even starvation and death. The domain of protective security includes fixed institutional

arrangements such as unemployment benefits and statutory income supplements to the indigent.

These instrumental freedoms directly enhance the capabilities of people, but they also supplement one another, and can furthermore reinforce one another.

There are a connection between political liberty, on the one hand, and the freedom to avoid economic disasters, on the other. Political freedom in the form of democratic arrangements helps to safeguard economic freedom (especially freedom from extreme starvation) and the freedom to survive (against famine mortality).

The contribution of economic growth has to be judged not merely by the increase in private incomes, but also by expansion of social services, that economic growth may make possible.

Creation of social opportunities, through such services as public education, health care can contribute both to economic development and to significant reductions in mortality rates.

The human development perspective differs from other approaches to development that are prevalent within the economic discipline. It focuses on ends, instead of means – on human well-being and freedom instead of on real income, real wealth, or commodity bundles. Ultimately, the focus has to be on what life people lead and what people can or cannot do, can or cannot be.

At the same time, the promotion of human capabilities, which implies achieving both valued functionings and the freedom to choose among various functionings is different from the standard goal of personal utility (expressed either in terms of pleasure, happiness or desire fulfillment). Utilitarianism is one of the theoretical foundations of modern neo-classical economics. Functionings are considered valuable in themselves, not because they might produce “utility”. An example of an argument that is often used against utilitarianism is that of a very deprived person who is poor, exploited, overworked and ill, but has come to be satisfied with his lot by social conditioning (religion, political propaganda, cultural

pressure). Should this person be considered to be doing well just because he is satisfied or happy?

There is a distinction between the formation of human capabilities, such as improved health, knowledge and skills, and the use that people make of their acquired capabilities, such as using their knowledge and skills in productive activities or in social and political activities. People need not only the opportunity to form capabilities, but also the opportunity to use them. This distinction is often applied to the success of the East Asian economies, which not only invested heavily in basic capabilities, such as health, education and skill formation, but also were able to utilize these capabilities because of their broad-based and rapid growth.

There is some concurrence in this respect between human development and human capital theory. Human development is the ultimate end, but making progress in human development in the medium term can also serve as valuable means to promote economic growth (through improving human capital and technology), and indirectly can further advance human development in general. Human development and human capital theory can agree that human capabilities are the most important input into production, but human development differs fundamentally in regarding the achievement of human capabilities as the ultimate end, valuable in itself, irrespective of its impact on production and income. Increased production has to be seen as a means to enhancing people's lives.

The formation of capabilities depend on economic, social and political opportunities. Opportunities involve access to the resources, means or activities to form or employ capabilities. According to Sen, opportunities are based on a person's "entitlements", which are defined as the alternative bundles of commodities over which that person can establish command. The mere presence of food in an economy does not, for example, entitle a person to consume it. Either the person has grown it himself, has generated income in other economic activities that can be used to purchase the food, or, failing such options, has a claim on the state to provide him with food. Customarily, a wage worker's entitlement is given

by what he can find employment, I .e., deploy his labor power. A person's entitlement depends on two conditions: 1) what the person owns or controls (e.g., land or labor power) and 2) what person can acquire through exchange.

Entitlements, which focus on the command over commodities, either through ownership of assets or ability to trade, are only instrumentally important – as means to the enhancement of human capabilities. The ultimate objective is the conversion of commodities, acquired through entitlements, into human well-being – e.g., the conversion of the intake of food into nourishment. Food insecurity, for example, denotes a lack of entitlement to food and thus a shortage of food intake, whereas undernourishment denotes an unsatisfactory state of being – a person being somehow inadequate in energy or strength or having associated with insufficient intake of food.

Three essential choices for people are: to lead a long and healthy life, to acquire knowledge, to have access to resources needed for a decent standard of living. Basic pillars of human development are: equity, sustainability, productivity, empowerment, cooperation and security.

Human development is built on the concept of equity, which implies equality of opportunity provided to people to develop their human capabilities (such as being healthy, living a long life, being well-nourished and being informed and educated) on which the advancement of all other capabilities depend.

Human development does not value one person's life more than another's. It based on the universalism of life claims. This is the principle that binds human development in the future, and explicitly with environmental preservation and regeneration. The objective of protecting and regenerating the environment is to guarantee to future generations a similar level of opportunity for human development as the present generation.

Sustainability is based on the principle of intergenerational equity. We have a moral obligation to do at least as well for our successor generation as our predecessor did for us. This entails not incurring economic, social or ecological

debts that future generations unfairly will have to shoulder. Such debts “borrow from future” to sustain artificially high level of opportunity today.

But sustainability makes little sense if it implies sustaining life opportunities that are miserable and indigent. People are not interested in sustaining human deprivation. One of the fundamental problems with the term “sustainable development” is that it does not clearly define what “development” is and therefore what is supposed to be sustained. People are not interested in sustaining per se an aggregate stock of physical, natural and human capital. Sustaining such a stock is not an end in itself, but a means to sustain a certain level of human development.

However, adopting the principle of intergenerational equity also logically entails endorsing intragenerational equity. It is not consistent to be concerned about the well-being of future generations while ignoring the plight of the poor today. There is a close link between global sustainability and global poverty. Preservation of the environment, for example, has to go hand in hand with ensuring the meeting of basic human needs. But this might well imply the restricting of the world’s income and consumption patterns as a precondition to the sustainability of human development.

### **Lesson 3. Work and leisure as factors of human development**

Work has been the defining condition of humanity throughout of its history.

Until the nineteenth century, most people in today’s rich countries typically worked seventy to eighty hours a week, with some people working over 100 hours. This meant that they were working at least eleven hours, and possibly up to sixteen hours, per day, except on Sundays.

Today, few work that long even in poor countries. The average working week ranges between thirty-five and fifty-five hours. Even so, the majority of the adult population spends around half of their waking hours at work, outside weekends and paid holidays.

Work is basically treated as a means to get income. We are seen to value income or leisure, but not work in and of itself. In the Neoclassical view, people

put up with the disutility from work only because they can derive utility from things they can buy with the resulting income. In this framework, people work only up to the point where the disutility from additional unit of work is equalized with the utility that they can derived from additional income from it.

But for most people, work is a lot more than simply a means to earn income (Chung H.-J.). When we spend so much time on it, what happens in the workplace affects our physiological and psychological well-being.

Work shapes people. People who like their jobs have a greater sense of self-fulfillment.

It is well understood that factory work, compared to work in shops or even agricultural work, makes workers more politically aware and disciplined because of its very nature – a large number of people working in a closely connected and synchronized way in a confined and organized space.

There are jobs – crafts, arts, design, teaching, research, - that are often considered more intellectually interesting, thanks to their higher creative contents.

Work greatly affects our well-being in physical, intellectual and psychological terms.

Some jobs are more physically demanding, dangerous and harmful for health than others. Working longer makes people more tired and harms in the long run.

The psychological dimension relates to the employer-employee relationship. Even if the job is identical, those who are provided with fewer breaks during work, put under excessive pressure to perform or made to feel insecure are less happy than their counterparts working for more decent employers.

Combining the moving assembly line with the Taylorist principle, the mass production system was born in the early years of the twentieth century. The idea is that production costs can be cut by producing a large volume of standardized products, using standardized parts, dedicated machinery and moving assembly. This would also make workers more easily to replace and thus easier to control, because, performing standardized tasks, they need to have relatively few skills.



This system destroys the intrinsic value of work by making it simplistic and repetitive, while vastly reducing the worker's control over his labor process; standardized tasks make the monitoring of workers easier while the intensity of work can be easily increased by accelerating the assembly line.

The mass production system, a century after its invention, still forms the backbone of the production system. But since the 1980s it has been taken to another level so-called lean production system.

Unlike the Fordist system, the Toyota system does not treat workers as interchangeable parts. It equips workers with multiply skills and allows them to exercise a lot of initiative in deciding work arrangement and suggesting minor technological improvement.

For many people, work is a lack of basic human rights. For much of human history, huge numbers of people were deprived of the most basic human right of "self-ownership" and were bought and sold as commodities – that is, as slaves.

After the abolition of slavery in the nineteenth century, around 1.5 million Indians, Chinese went overseas as indentured laborers to replace the slaves.

Indentured labor was not slavery, in the sense that the worker was not owned by the employer. But an indentured laborer had no freedom to change jobs and had only minimal rights during contract period (three to ten years).

There are still a lot of people whose work is founded upon the violation of their fundamental human rights. Still a lot of people are engaged in other forms of forced labor. Some people have voluntarily signed up for them initially, but they may be prevented from leaving their jobs, due to either violence or debts to the employer, artificially inflated by over-charging on their recruitment, travel, food or accommodation. Some international migrant workers toil under conditions similar to the indentured laborers of the late nineteenth and the early twentieth centuries.

The ILO estimates that, as of 2012, around 21 million people in the world engaged in forced labor. This is 0.6 per cent of the estimated global workforce of 3.3 billion (or 0.3 per cent of the world population).

The ILO also estimates that there are 123 million child laborers, aged between five and fourteen, around the world – equivalent to 3.7 per cent of the global workforce. However, in a number of poorest countries around half the children are believed to be child laborers.

In most rich countries, people work around thirty-five hours per week, also the working week is considerably longer in the East Asian countries.

In today's poorer countries, people work much longer than their modern-day counterparts in rich countries. Some of them can work up to fifty-five hours per week on average, as in Egypt and Peru.

These numbers underestimate the time we are occupied with work. In countries with poor public transport and sprawled-out living spaces, the long hours spent by people commuting to and back from work can severely reduce their welfare.

In many countries, some people are working excessively long hours (the ILO defines this above forty-eight hours per week), which exposes them to potential health risks. Others are in time-related underemployment; that is, they are working part-time even when they want to work full-time.

In developing countries, many people are in disguised unemployment in the sense that they have a job that adds little output and mainly acts as a way to get some income. Examples include rural people working on an overcrowded family farm and those poor people in the informal sector "inventing" jobs so that they can beg without appearing to beg.

The weekly working hours do not provide us with the full picture. In some countries, people work every week of the year, while in others they can have several weeks of paid vacation. Thus we need to look at annual working hours to get the full picture of how much people work in different countries.

Of the OECD member countries, the ones with the shortest annual hours are the Netherlands, Germany, Norway and France. The longest working hours are found in South Korea, Greece, the USA and Italy. Chile, developing country member of the OECD, at 2047 hours per year, is between Korea and Greece.

There are the cultural stereotypes of which people work hard and which don't. Mexicans actually work longer than the “worker ant” Koreans.

In the Eurozone crisis, the Greeks have been vilified as lazy “spongers” living off hard-working Northerners. But they have longer working hours than every country in the rich world apart from South Korea. The Greeks actually work 1.4 and 1.5 times longer than Germans and Dutch.

The main explanation for the faulty stereotypes is that people often mistakenly believe that poverty is the result of laziness and thus automatically assume that people in poorer country are lazier. But what makes people poor is their low productivity, which is rarely their own fault. What is most important in determining national productivity is the capital equipment, technologies, infrastructure and institutions that a country has, which are really things that the poor themselves cannot provide (Chung H.-J.).

As for the quality of work, there are no good indicators of the intellectual dimension, but we can at least get some indicators for the physical and psychological dimensions.

In terms of the physical dimensions of quality of work, the most readily available indicator is the rate of fatal injuries at work. Countries such as Australia, Finland, Norway, Sweden, Switzerland and the UK offer the safest work environment – one or two of their workers out of 100000 die every year from workplace injuries. The rates in most developing countries range between ten and fifteen.

The most readily available indicator of the psychological aspects of work are those related to job security. The most reliable measure is share of employers with less than six months' tenure, published by the OECD for its member countries. As of 2013, Turkish workers have the least job security (26 per cent). Workers in Greece, Slovakia and Luxemburg have the securest jobs (all around 5 per cent).

The great importance of the work for human development does not except the importance of leisure time. It is the time devoted to education, participation in community deals and so on.

Being in a state of unemployment is not the similar to have a leisure time. An unemployed person derives from being a useful member of society.

If people remain unemployed for long, their skills become out-dated and their confidence is eroded.

Unemployment has significant negative health effects. The combination of economic hardship and loss of dignity makes unemployed people more depressed and more likely commit suicide.

People should combine work and leisure.

#### **Lesson 4. The living standards and inequality**

During the twentieth century, historians and economists focused their discussion of living standards on the measurement of wages, adjusted for changes in the cost of living. The wages of different groups of workers were aggregate and compared with movements in the prices of “baskets of goods” representing their consumption expenditure. This had the merit of simplicity and reasonable precision, particularly if the nature of the occupations whose wages were being measured had not changed significantly.

The drawbacks of the method were that - being measured entirely on monetary income – it could not incorporate such issues as changes to the length of human life, that it did not adequately reflect the advent of new comforts and luxuries, that it was difficult to incorporate new occupations, and that it was always difficult to ensure that the whole, or even a majority of the population was considered.

In the middle of the twentieth century, living standards came to be defined by economists in terms of income per capita, in other words the total annual measured income of economy divided by the number in the population. The measurement of national income provided a means of comparing the average living standards of the population of a particular country either those of another country or with those of the past. It did not, however, remove the drawbacks of the previous calculations of real wages, in particular their exclusive concentration on monetary income.

It ignored the contribution of unpaid employment such as household and gardening, did not value leisure time, could not incorporate improvements in the quality of goods and services unless they were reflected in prices, could not take account of changes in health and mortality. Nor could it reflect changes in distribution of income.

In recent years, these problems with the use of national income analyses in the description of changes in the standard of living have been addressed in two separate ways.

First, a number of economists have followed Nordhaus and Tobin in seeking to make adjustments to measured income per capita so as to reflect elements of life which are not included within conventional measures of income per capita. The major such adjustments have been for non-paid work such as housework and gardening and for leisure.

The second approach has relied on the stress on “capabilities” as the true definition of living standards. It means to regard a greater standard of living as being given by an improved capability to live a rewarding and fulfilling life.

There are several different measures of living standards. One of them is the concept of “nutritional status” (Floud F., Fogel R.W., Harris B., and Sok Chul Hong). Nutritional status represents the energy which used for growth once the demands of body maintenance, resistance to disease, play and work have been satisfied. The primary evidence of nutritional status lies in our bodies and particularly in our height and weight. The measure of nutritional status is analogous to measures of capability. It sums up both the historical influence on parents and children and the capacity of that population to live, thrive, and contribute to economy and society. Some economists have sought to counter objections to the use of anthropometric indicators as an indicator of the standard of living.

Equality was one of the ideals behind the French Revolution. In the Russian Revolution equality was the driving motive.

Though it is the most commonly discussed one, income inequality is only one type of economic inequality. There is economic inequality in terms of distribution of wealth (ownership of assets, such as real estates or shares) or of human capital (that's word for skills that individuals acquire through education and training).

There are inequalities in terms of non-economic factors. In many societies people with “wrong” caste, ethnicity, religion, gender or ideology have been denied access to things like political office, university places or high-status jobs. For example, there is the terrible phenomenon of excess mortality and artificially lower survival rates of women in many parts of world. This is a visible aspect of gender inequality (Sen, A.).

There are number of different ways of measuring the extent to which income is unequally distributed. The most commonly used measure is known as the Gini coefficient, named after the early twentieth-century Italian statistician Corrado Gini. It compares real-life income distribution with the situation of total equality.

Gabriel Palma has proposed the use of the ratio between the income share of the top 10 per cent and that of the bottom 40 per cent as more accurate measure of a country's income inequality. Palma ratio overcomes the Gini coefficient's over-sensitivity to the changes in the middle of the income distribution.

Most inequality figures, like the Gini coefficient, are calculated for individual country. However, people have become more interested in the changes in the income distribution for the world as a whole. This is known as the global Gini coefficient.

Some scientists think that the global Gini coefficient is really not relevant, as the world is not a true community. Inequality matters only because we have feelings in relation to those others who are included in the statistics.

It is true global inequality is becoming more relevant, as people are increasingly aware of what is happening in other parts of the world, thanks to the development of mass media and the internet, and thus are beginning to develop a sense of global community.

Studies have come out to show that inequality leads to poor outcomes in health and other social indicators of human well-being.

Some scientists argue that more unequal countries definitely do worse in terms of infant mortality, teenage births, educational performance, homicide and imprisonment, and also possibly in terms of life expectancy, mental illness and obesity.

The division of national wealth between earnings and profits is in part an issue of social balance. While excessive wages can threaten the future of firms, excessive profits mean unacceptable levels of inequality. Because the income that derives from profits (through executive pay, share dividends, capital gains, interest and rents) is much more unequally distributed than pay itself, benefiting rich and higher income groups more than those on middle and lower incomes, high profit shares mean more extreme levels of inequality. The key beneficiaries of the politically orchestrated boost to profit levels from the early 1980s were mostly a tiny group of society – those who already stood at the top of income and wealth leagues (Lansley, S.).

The salaries of top business executives are included in the official wage share figures used to construct the figure, yet such salaries are really part of profit incomes. Since top executive salaries have been rising much more rapidly than the average, the effect of such transfer would be even sharper reduction in the wage share for the great bulk of the workforce.

In the UK even below the tier top executives, earnings have become increasingly concentrated at the top in the last thirty years. As a result, the falling wage share has not been evenly distributed across the earnings range but has been borne almost entirely by middle and lower paid employees. Although more people are defined as middle class, many of those moving up a class rung have not progressed very far in income or opportunity terms. Many of those who have risen through the class hierarchy to swell the ranks of the “lower middle class” (clerical and administration workers, supervisors, lower-tier managers) have ended up in a

lower position in the income distribution than where they would have been as members of the skilled working class a generation earlier.

Some economists have emphasized that high inequality reduces social cohesion, increasing political instability. This, in turn, discourages investments. Reduced investments reduce growth.

Many economists have pointed out that rising inequality played an important role in the making of the 2008 global financial crisis. Especially in the case of the US, top incomes have soared while real wages have been stagnant for most people since the 1970s. Stagnant wages made people incur high level of debts to keep up with the ever-rising standard at the top. The increase in household debts made the economy more vulnerable to shocks.

Some economists have argued that high inequality reduces economic growth by creating barriers to social mobility. Expensive education that only a tiny minority can afford but you need in order to get a well-paid job, personal connections within a small privileged group can act as barriers to social mobility.

Reduced social mobility means that able people from poorer backgrounds are excluded from high-end jobs and their talents wasted from both an individual and a social point of view. It also means that some of the people filling the top jobs are not the best that the society could have, had it had higher social mobility. The result is reduced economic dynamism.

There are quite a few examples of more egalitarian societies growing much faster than comparable but more unequal societies. During their “miracle” years between the 1950s and 1980s, Japan, South Korea and Taiwan grew much faster than comparable countries despite having lower inequalities.

Despite being one of the most equal societies in the world, Finland has grown much faster than the US, one of the most unequal societies in the rich world.

These examples do not prove that higher inequality leads to lower growth. But they are enough to let us reject a simplistic “greater inequality is good for growth” story. The majority of statistical studies show a negative correlation between a country’s degree of inequality and its growth rate.



Analysis of the same society over time also lends support to the view that inequality has negative effects on growth. During the last three decades, despite the income shares of those at the top rising in most countries, investment and economic growth have slowed down in most of them.

All of this evidence does not mean that the lower the inequality the better it is. If there is too little income inequality, it can discourage people from working hard or creating new things to earn money.

To sum up, neither too little nor too much inequality is good. If it is excessively high or excessively low, inequality may hamper economic growth and create social problems.

## **Lesson 5. Poverty as a barrier to human development**

The poverty is usually defined as a shortage or inadequacy of income or other material means.

Absolute poverty is the failure to be in command over income to fulfill most basic human needs for survival – such as nutrition, clothing and shelter.

Today few people in the rich countries suffer from absolute poverty. But there is poverty in those countries because every society has certain standards of consumption which are considered necessary to maintain “decency”. This notion of poverty is known as that of relative poverty. Using this notion of poverty, today most countries have their own national poverty line, which usually set around some proportion (50-50 per cent) of median income. For example, in 2012, the US government set the poverty line at \$ 23050 for a family of four.

According to Sen, poverty must be seen as the deprivation of basic capabilities rather than merely as lowness of incomes.

The claims in favor of the capability approach to poverty are following.

The approach concentrates on deprivations that are intrinsically important (unlike low income, which is only instrumentally significant).

There are influences on capability deprivation – and thus on real poverty – other than lowness of income (income is not only instrument in generating capabilities).

The instrumental relation between low income and low capability is variable between different communities and even between different families and different individuals (the impact of income on capabilities is contingent and conditional).

The relationship between income and capability would be strongly affected by the age of the person, by gender and social roles, by location and by other variations over which person may have no – or only limited – control.

There can be some “coupling” of disadvantages between income deprivation and adversity in converting income into functionings. Handicaps, such as age or disability or illness, reduce one’s ability to earn an income. But they also make it harder to convert income into capability, since an older, or more disabled, or more seriously ill person may need more income to achieve the same functionings. This entails that “real poverty” (in terms of capability deprivation) may be, in significant sense, more intense than what appears in the income space.

Distribution within the family raises further complications with the income approach to poverty. If the family income is used disproportionately in the interest of some family members and not others, then the extent of deprivation of the neglected members may not be adequately reflected in terms of family income. The deprivation of girls is more readily checked by looking at capability deprivation than can be found on the basis of income analysis.

Relative deprivation in terms of incomes can yield absolute deprivation in terms of capabilities. Being relatively poor in a rich country can be a great capability handicap, even when one’s absolute income is high in terms of world standards. For example, the need to take part in the life of a community may induce demands for modern equipment (televisions, automobiles and so on) in a country where such facilities are more or less universal, and this imposes a strain on a relatively poor person in a rich country even when that person is at a much higher level of income compared with people in less opulent countries.

While it is important to distinguish the notion of poverty as capability inadequacy from that of poverty as lowness of income, the two perspectives cannot but be related, since income is such important means to capabilities. We would expect a connecting going from capability improvement to greater earning power and not only the other way around.

The latter connection can be particularly important for the removal of income poverty. It is not only the case that better basic education and health care improve the quality of life directly. They also increase a person's ability to earn an income and be free of income-poverty as well.

While these connections between income poverty and capability poverty worth emphasizing, it is important not to lose sight of the basic fact that the reduction of income poverty alone cannot possibly be the ultimate motivation of antipoverty policy. There is a danger in seeing poverty in the narrow terms of income deprivation and then justifying investment in education, health care and so forth as a means of reducing income poverty. That would be a confounding of ends and means.

The instrumental connections cannot replace the need for a basic understanding of the nature and characteristic of poverty.

Individuals are in the end responsible for what they make out of their lives. There are, however, causes of poverty that they are beyond the control of the individual concerned.

Inadequate childhood nutrition, lack of learning stimulus restrict the development of poor children, diminishing their future prospects. Even when they overcome childhood deprivation, people from poorer backgrounds are likely to meet more obstacles.

One of the explanations of poverty origin was given by Malthus two centuries ago. Malthus anticipated that food output falling behind world population. However, since the time when he first published his famous "Essay on Population" in 1798, the world population has grown nearly six times, and yet food output and consumption per head are very considerably higher now than in

Malthus's time, and this has occurred along with unprecedented increase in general living standards. The largest per capita increases in food production have come in the more densely populated areas of the third world (in particular, China, India and the rest of Asia).

The African food output has declined. However, the problems are mainly a reflection of a general economic crisis – not specifically of a “food production crisis”.

Having established the poverty line, scientists can tell how many people fall below that line. This is known as the head count measure of poverty.

Some economists measure the poverty gap, by weighing each poor person by distance person falls short of the poverty line.

Poor people who are in poverty all or most of their lives are said to be in “chronic poverty”.

1.2 billion people live on 1.25 dollars a day or less.

But in the twenty years through 2010, the proportion of people living on \$1.25 a day or less in East Asia fell from over half of the population to about one-tenth. That's about 700 million people lifted up from indigence.

The global financial crisis of 2008-9 did not increase extreme poverty – it only slowed the downward trend that extreme poverty had been on.

Africa clocked almost twenty years of continuous decline in extreme poverty – from 60 percent in 1993 to 48 percent in 2010.

Helping the ex-middle class or the “new poor” is not easy. Most social assistance systems designed to help who have always been poor. The typical social program deals with things like basic health, primary education, and nutrition. That is of little use to educated, middle-aged adults who suddenly lose their income.

The first lifeline is typically life insurance. Second, you need to protect the human capital of newly poor families. This is the time to invest in government-subsidized employment centers (Giagale Marcelo M.)

There is a budding consensus on what reduces poverty: it is the combination of fast and sustained economic growth (more jobs), stable consumer prices (no inflation), and targeted redistribution (subsidies only to the poor). On those three fronts, developing countries are beginning to make real progress.

What matters to reduce poverty is not just jobs, but how productive that employment is. This highlights the need for a broad agenda of reforms to make an economy more competitive.

The technology to protect the middle class from slipping into poverty, and the poor from sinking even deeper, is still rudimentary in the developing world. Most developing countries have, over the last ten years, set up logistical mechanisms to send money directly to the poor – mainly through debit cards and cell phones. The value of these programs was to be found less in their conditions than in the fact that they forced government agencies to know the poor by name.

That kind of state-citizen relationship is transforming social policy. It is generating the massive amount of information – how much things actually cost, what people really prefer, what impact government is having, what remains to be done. This is helping improve the quality of expenditures, that is better targeting, design, efficiency, fairness, and, ultimately, results.

## **Lesson 6. Education, health and human development**

Human development is a process of enlarging people's choices. To be educated is one of the most critical of these wide-ranging choices.

Some economists believe a well-educated workforce is absolutely necessary for economic development. If education had been important for economic success in the days of industries, more and more people were becoming convinced, it would more important in the information age, when brains are the main source of wealth. The fact that poorer countries have a lower stock of educated people also proves the point.

But, according to Ha-Joon Chung, there are many more things than education that determine a country's economic growth performance. For example, the East Asian economies did not have unusually high educational achievements at the start of their economic miracles, while countries like the Philippines and Argentina did very poorly despite having significantly better-educated populations.

Not all education is even meant to raise productivity. There are many subjects that have no impact on most workers' productivity – literature, history, philosophy and music.

We teach our children those subjects because they will eventually enrich their lives and also make them good citizens.

The importance of apprenticeship and on-the-job training in many professions testifies to the limited relevance of school education for worker productivity. The amount of productivity -related knowledge that an average worker needs to possess has fallen for many jobs, especially in rich countries, because a greater proportion of the workforce in rich countries now works in low-skilled service jobs do not require much education.

Education is valuable, but its main value is its ability to help people develop their potentials and live a more fulfilling and independent life.

There are several levels of education: below upper secondary corresponds to ISCED levels 0, 1, 2 and 3C short programmes; upper secondary or post-secondary non-tertiary correspond to ISCED levels 3A, 3B, 3C long programmes, and 4; and tertiary corresponds to ISCED levels 5A, 5B.

Educational attainment is frequently used as a measure of human capital and the level of an individual's skills, in other words, a measure of the skills available in the population and the labour force. The level of educational attainment is the percentage of a population that has reached a certain level of education. Higher levels of educational attainment are strongly associated with higher employment rates and are perceived as a gateway to better labour opportunities and earnings premiums. Individuals have strong incentives to pursue more education, and governments have incentives to build on the skills of the population through

education, particularly as national economies continue to shift from mass production to knowledge economies.

Over the past decades, almost all OECD countries have seen significant increases in the educational attainment of their populations. Tertiary education has expanded markedly, and in most OECD countries, an upper secondary qualification (ISCED 3) has become the most common education level attained by young people. Some countries have introduced policy initiatives to more closely align the development of particular skills with the needs of the labour market through vocational education and training (VET) programmes. These policies seem to have had a major impact on educational attainment in several OECD countries where upper secondary VET qualifications are the most common qualifications held among adults.

In some countries, such as Austria, Germany, Luxembourg and Switzerland, public-private partnerships in vocational education and training (VET) are a longstanding tradition and play an important role in preparing students for the labour market. Their importance is reflected in the high levels of upper secondary attainment, graduation and enrolment in these countries.

Also known as “dual” or “co-operative” systems of vocational education and training, these partnerships are characterized by:

- their links between work- and school-based learning to prepare apprentices for a successful transition to full-time employment;
- the high degree of engagement on the part of employers and other social partners;
- the opportunity for governments to share education costs with the private sector;
- the opportunity for enterprises to acquire a young, employable workforce and reduce advertising, hiring and induction costs;
- the opportunity for trainees to benefit from highly motivating earning and learning situations, to take responsibility, and to develop personally and professionally.

One of the strengths of dual VET systems is that several stakeholders, including experts from workplace practice and from VET schools, employers and

trade unions, are involved in developing vocational training regulations and curricular frameworks. While the private sector generally assumes responsibility for practical training, the vocational school inculcates the theoretical knowledge necessary for practicing a profession. This partnership ensures that the needs of both companies and employees are met. The binding requirements of the training regulations and the curricular framework guarantee a national standard while giving companies the flexibility to agree a training plan with trainees. This is largely why the transition from education to first employment is notably smooth.

Since 2000, tertiary attainment rates have been increasing in both OECD and non-OECD G20 countries; upper secondary and post-secondary non-tertiary attainment levels have remained stable; and the proportion of people with below upper secondary education decreased in most OECD countries. Between 2000 and 2011 the proportion of adults with below upper secondary education shrank by almost 10 percentage points while tertiary attainment increased by about the same degree. However, changes in attainment rates vary greatly between age groups. The differences in tertiary attainment rates between 25-34 year-olds and 55-64 year-olds can range from over 50 percentage points in Korea to the inverse (i.e. fewer younger adults than older adults with tertiary attainment) in Israel.

Nowadays there are more people participating in education than ever before. Differences between generations in educational attainment and growth in tertiary and secondary attainment are reflected in the trends in attainment rates. On average, since 2000 the proportion of people with no upper secondary education decreased and the proportion of people with tertiary education grew in most OECD countries. Upper secondary and postsecondary non-tertiary attainment levels have remained stable in most OECD countries during the same period. Australia, Canada, Ireland, Japan, Korea, Luxembourg, Poland, Switzerland and the United Kingdom have reported a growth in tertiary attainment rates of more than 10 percentage points between 2000 and 2011.

The distribution of graduates by field of education is driven by the relative popularity of these fields among students, the relative number of positions offered



in universities and equivalent institutions, and the degree structure of the various disciplines in a particular country.

Women predominate among graduates in the field of education: they represent 70% or more of tertiary students (tertiary-type A and advanced research programs) in this field in all countries except Japan (60%), Saudi Arabia (66%) and Turkey (57%). They also dominate in the fields of health and welfare, accounting for 75% of all degrees awarded in this field, on average. In contrast, in all countries except Argentina, Estonia, Iceland, Italy, Poland and Slovenia, one-third or fewer of all graduates in the fields of engineering, manufacturing and construction are women. This situation has changed only slightly since 2000, despite many initiatives to promote gender equality in OECD countries and at the EU level. For example, in 2000, the European Union established a goal to increase the number of tertiary-type A graduates in mathematics, science and technology by at least 15% by 2010, and to reduce the gender imbalance in these subjects. So far, however, progress towards this goal has been marginal. The Czech Republic, Germany, the Slovak Republic and Switzerland are the only four countries in which the proportion of women in science grew by at least 10 percentage points between 2000 and 2011. As a result, these countries are now closer to the OECD average in this respect. Among OECD countries, the proportion of women in these fields has grown slightly from 40% in 2000 to 41% in 2011 – even as the proportion of women graduates in all fields grew from 54% to 58% during that period. The proportion of women in engineering, manufacturing and construction is also low, though it increased slightly (from 23% to 27%) over the past decade.

At the primary and secondary levels there is a strong positive relationship between spending per student by educational institutions and GDP per capita. The relationship is weaker at the tertiary level, mainly because financing mechanisms and enrolment patterns differ more at this level.

Across OECD countries, a man who invests in upper secondary or post-secondary non-tertiary education can expect a net gain of around USD 100 000 during his working life compared to a man who has attained below upper

secondary education. However, the amount varies significantly among countries: in Austria, Korea, Norway and the United States, this level of education generates USD 200 000 or more over a working life.

Benefits for an individual are generally based on gross earnings and reduced risk of unemployment. In most countries, men with an upper secondary or post-secondary non-tertiary education enjoy a significant earnings premium over those who have not attained that level of education. The value of reduced risk of unemployment can also be large. In the Czech Republic, Germany and the Slovak Republic, the better labour market prospects for a man with this level of education are valued at USD 85 000 or more.

Individuals who hold a tertiary degree can generally expect the highest net returns. On average across OECD countries, the return for tertiary-educated people is around 60% higher than for those with an upper secondary or post-secondary non-tertiary education. With few exceptions, the net private returns related to a tertiary education exceed those of upper secondary or post-secondary non-tertiary education. The net returns for investing in tertiary education are typically higher for men than for women. Only in Portugal are average returns nearly identical for men and women; in Greece, Spain and Turkey, the returns are higher for women. The value of the gross earnings benefits for men and women with tertiary education is substantial: on average, USD 330 000 for men and USD 240 000 for women.

There are other social outcomes of education. For example, on average across 24 OECD countries, adults with a tertiary education are half as likely to be obese compared to those with only a below upper secondary education. Adults in 23 OECD countries with a tertiary education are 16 percentage points less likely to smoke, on average, than those with below upper secondary education only.

To live a long and healthy life is one of the most important people's choices.

Life expectancy at birth in EU member states has increased by over 6 years between 1980 and 2010. On average across the European Union, life expectancy at birth for the three-year period 2008-10 was 75.3 years for men and 81.7 years for

women. France had the highest life expectancy for women (85.0 years), and Sweden for men (79.4 years). Life expectancy at birth in the EU was lowest in Bulgaria and Romania for women (77.3 years) and Lithuania for men (67.3 years). The gap between EU member states with the highest and lowest life expectancies at birth is around 8 years for women and 12 years for men.

On average across the European Union, healthy life years (HLY) at birth, defined as the number of years of life free of activity limitation, was 62.2 years for women and 61.0 years for men in 2008-10. The gender gap is much smaller than for life expectancy, reflecting the fact that a higher proportion of the life of women is spent with some activity limitations. HLY at birth in 2008-10 was greatest in Malta for women and Sweden for men, and shortest in the Slovak Republic for both women and men.

Large inequalities in life expectancy persist between socio-economic groups. For both men and women, highly educated persons are likely to live longer; in the Czech Republic for example, 65-year-old men with a high level of education can expect to live seven years longer than men of the same age with a low education level.

Most European countries have reduced tobacco consumption via public awareness campaigns, advertising bans and increased taxation. The percentage of adults who smoke daily is below 15% in Sweden and Iceland, from over 30% in 1980. At the other end of the scale, over 30% of adults in Greece smoke daily. Smoking rates continue to be high in Bulgaria, Ireland and Latvia.

Alcohol consumption has also fallen in many European countries. Curbs on advertising, sales restrictions and taxation have all proven to be effective measures. Traditional wine-producing countries, such as France, Italy and Spain, have seen consumption per capita fall substantially since 1980. Alcohol consumption per adult rose significantly in a number of countries, including Cyprus, Finland and Ireland .

In the European Union, 52% of the adult population is now overweight, of which 17% is obese. At the country level, the prevalence of overweight and obesity

exceeds 50% in 18 of the 27 EU member states. Rates are much lower in France, Italy and Switzerland, although increasing there as well. The prevalence of obesity – which presents greater health risks than overweight – ranges from 8% in Romania and Switzerland to over 25% in Hungary and the United Kingdom. Rising obesity has affected all population groups, to varying extents. Obesity tends to be more common among disadvantaged social groups, and especially women.

Ensuring proper access to health care is a fundamental policy objective in all EU member states. It requires, among other things, having the right number of health care providers in the right places to respond to the population's needs. There are concerns in many European countries about shortages of doctors and nurses, although recent public spending cuts on health in some countries may have led to at least a temporary reduction in demand.

The public sector is the main source of health care financing in all European countries, except Cyprus. In 2010, nearly three-quarter (73%) of all health spending was publicly financed on average in EU member states. Public financing accounted for over 80% in the Netherlands, the Nordic countries (except Finland), Luxembourg, the Czech Republic, the United Kingdom and Romania. The share was the lowest in Cyprus (43%), and Bulgaria, Greece and Latvia (55-60%).

## **Lesson 7. Measurement of human development**

People do not isolate the different aspects of their lives. Instead, they have an overall sense of well-being. There thus is merit in trying to construct a composite index of human development. Experts suggested an index that captures the three essential components of human life -longevity, knowledge and basic income for a decent living standard. Longevity and knowledge refer to the formation of human capabilities, and income is a proxy measure for the choices people have in putting their capabilities to use.

The construction of the human development index (HDI) starts with a deprivation measure. For life expectancy, the target is 78 years, the highest average

life expectancy attained by any country. The literacy target is 100%. The income target is the logarithm of the average poverty line income of the richer countries, expressed in purchasing-power-adjusted international dollars.

The indicators used to measure progress in education and income were modified in 2010.

In the knowledge dimension mean years of schooling replaces literacy, and gross enrolment is recast as expected years of schooling—the years of schooling that a child can expect to receive given current enrolment rates. Mean years of schooling is estimated more frequently for more countries and can discriminate better among countries, while expected years of schooling is consistent with the reframing of this dimension in terms of years. Ideally, measures of the knowledge dimension would go beyond estimating quantity to assessing quality, as several National and Regional Human Development Reports (HDRs) have done.

For example, the 2003 Arab States HDR constructed a measure that captures both the quantity and quality of education, adjusting mean years of schooling with average test scores and including indicators related to media, communication and scientists trained. But good measures of education quality do not exist for enough countries—cross-national assessments of science, mathematics and reading levels of young people are valuable but scarce in coverage and irregular in frequency.

Experts investigated alternative measures of the ability to enjoy a healthy life but found no viable and better alternative to life expectancy at birth.

To measure the standard of living, gross national income (GNI) per capita replaces gross domestic product (GDP) per capita. In a globalized world differences are often large between the income of a country's residents and its domestic production. Some of the income residents earn is sent abroad, some residents receive international remittances and some countries receive sizeable aid flows. For example, because of large remittances from abroad, GNI in the Philippines greatly exceeds GDP, and because of international aid, Timor-Leste's GNI is many times domestic output.

Scientists also reconsidered how to aggregate the three dimensions. A key change was to shift to a geometric mean (which measures the typical value of a set of numbers): thus in 2010 the HDI is the geometric mean of the three dimension indices. Poor performance in any dimension is now directly reflected in the HDI, and there is no longer perfect substitutability across dimensions. This method captures how well rounded a country's performance is across the three dimensions. As a basis for comparisons of achievement, this method is also more respectful of the intrinsic differences in the dimensions than a simple average is. It recognizes that health, education and income are all important, but also that it is hard to compare these different dimensions of well-being and that we should not let changes in any of them go unnoticed.

Experts maintain the practice of using the log of income: income is instrumental to human development but higher incomes have a declining contribution to human development. And they have shifted the maximum values in each dimension to the observed maximum, rather than a predefined cut-off beyond which achievements are ignored.

The first step in calculating HDI is to create subindices for each dimension. Minimum and maximum values (goalposts) need to be set in order to transform the indicators into indices between 0 and 1. Because the geometric mean is used for aggregation, the maximum value does not affect the relative comparison (in percentage terms) between any two countries or periods of time. The maximum values are set to the actual observed maximum values of the indicators from the countries in the time series, that is, 1980–2010. The minimum values will affect comparisons, so values that can be appropriately conceived of as subsistence values or “natural” zeros are used. Progress is thus measured against minimum levels that a society needs to survive over time. The minimum values are set at 20 years for life expectancy, at 0 years for both education variables and at \$163 for per capita gross national income (GNI).

Having defined the minimum and maximum values, the subindices are calculated as follows:

$$\text{Dimension index} = \frac{\text{Actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}} \quad (1)$$

For education, equation 1 is applied to each of the two subcomponents, then a geometric mean of the resulting indices is created and finally, equation 1 is reapplied to the geometric mean of the indices, using 0 as the minimum and the highest geometric mean of the resulting indices for the time period under consideration as the maximum. This is equivalent to applying equation 1 directly to the geometric mean of the two subcomponents. Because each dimension index is a proxy for capabilities in the corresponding dimension, the transformation function from income to capabilities is likely to be concave.

The HDI is the geometric mean of the three dimension indices:

$$I \text{ Life}^{\frac{1}{3}} \times I \text{ Education}^{\frac{1}{3}} \times I \text{ Income}^{\frac{1}{3}}$$

In 2013 the highest HDI was 0,944 (in Norway), the lowest one was 0,341 (in Central African Republic).

Александр Владимирович **Золотов**

## **Концепция человеческого развития**

*Учебно-методическое пособие,*

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