



human
and
resources
economic
system

www.ecounit.org

*All our lives, we have been convinced
that the existing order and the way of life we live is the most
correct, most fair, that it is the top of the human thought and
the quintessence of all human achievements in the field of
self-knowledge and peace.*

Can it be true?

*Billions of talented and gifted people have
to get their piece of the bread, working for peanuts and facing
inhumane work conditions to enrich those in power; hundreds
of millions of people are living in extreme poverty;
children and old people are dying from thirst, hunger and
disease, violence and murder all over the world; and even
the dilapidated nature and decreased quality of air that our
generation has left our future generations; - is this what
humanity has really aspired to throughout our whole history?
Is this really our concept of happiness?*

*Are we really able to find pleasure only in the primitive
physiological needs of satisfaction?*

*Hasn't humanity evolved to the point where it's time to
change something, to change for the better?*

*For the sake of giving our children and the children of their
children an opportunity to realize their mission and to answer
the eternal questions of mankind, the answers to which we
are unable to give today, we all need to adopt a radically
different way of life and system of existence.*

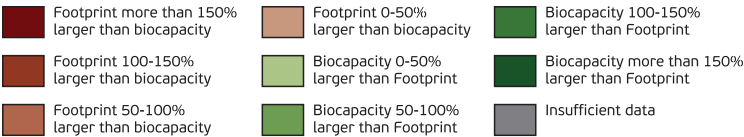
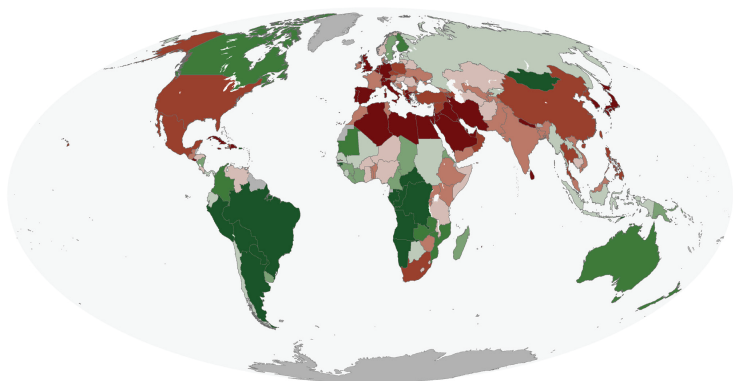
*We must significantly revise our attitude towards the concepts
of "Money" and "State".*

*The Human and Resource Economic System
is a normative socio-economic model that implies more
egalitarian and just society, stable resource usage and
improvement of environment – instead of its degradation. It is
based on principles of absolutely stable
currencies, backed by energy and water, balanced transactions
between economic agents and environment, and open-
governance and cooperative ethics.*

**HOW MUCH
KILOWATT-HOURS
DOES IT COST TO
PRODUCE A
KILOWATT-HOUR?**

THE PROBLEMS OF HUMANITY DRIVEN BY THE FLAWS OF CONTEMPORARY ECONOMY

Percent of Earth's Biocapacity Used: 151%

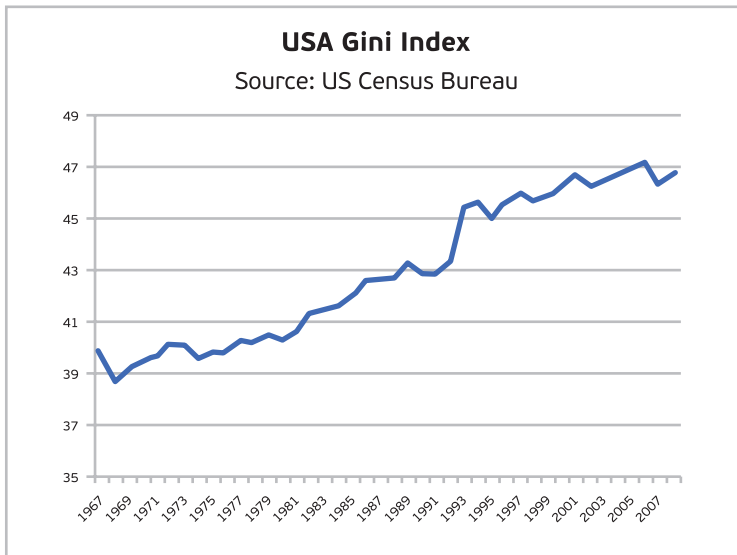


2007

Source: WWF

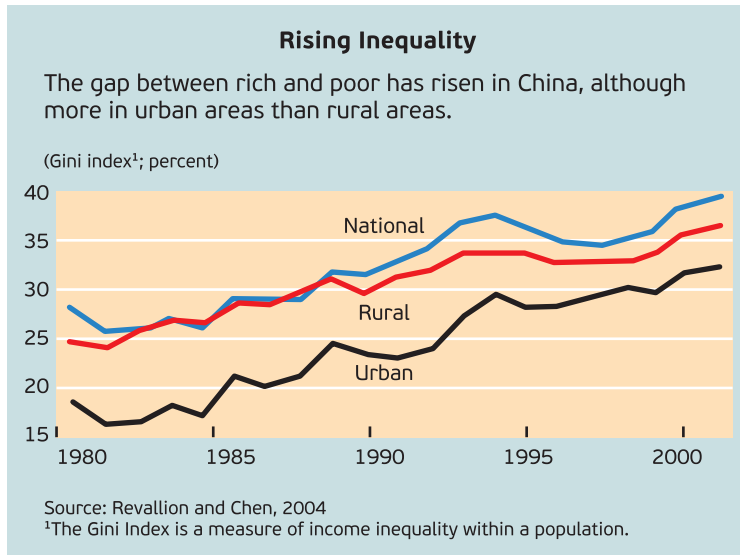
There are four major adverse global tendencies, which critically undermine the virtues of current neo-liberal economic model which are both commonly recognized and sufficiently severe to make their solution the principal task of the humanity:

- **Deepening of economic inequality**
- **Environmental degradation**
- **Depletion of natural resources**
- **Systemic crises**



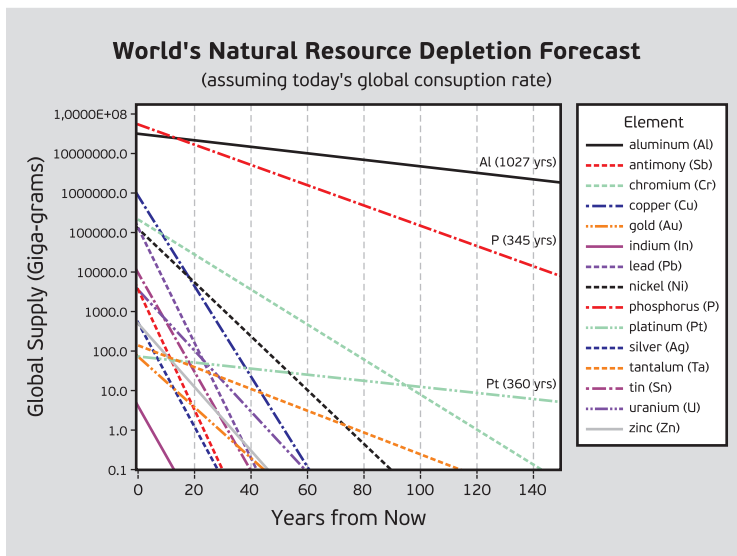
The first point is associated with the idea of justice, the next two with the idea of sustainable development, and the last one describes simultaneously the conditions for and the consequences of the first three. Both these notions are insufficiently addressed by the today's global community and this fact is considered to be one of the reasons why the four problems above become more and more acute.

The possible solutions of these problems are complicated by the failures of modern markets, strengthened by the principles of neo-liberalism. The flaws can be attributed to the financial and goods markets.



The rational value scale of a regular consumer of goods is distorted by the imperfect information and is also under the influence of marketing induced consumerism. In turn, the financial markets' instability raises human uncertainty about the future, creates a significant scale of path-dependencies that provide further economic misbalances thus forming a vicious spiral that leads to a large number of adverse social phenomena such as social unrest and crime. In general the set of markets' problems is resulted in a distortion of the principal function of market system – the informational function.

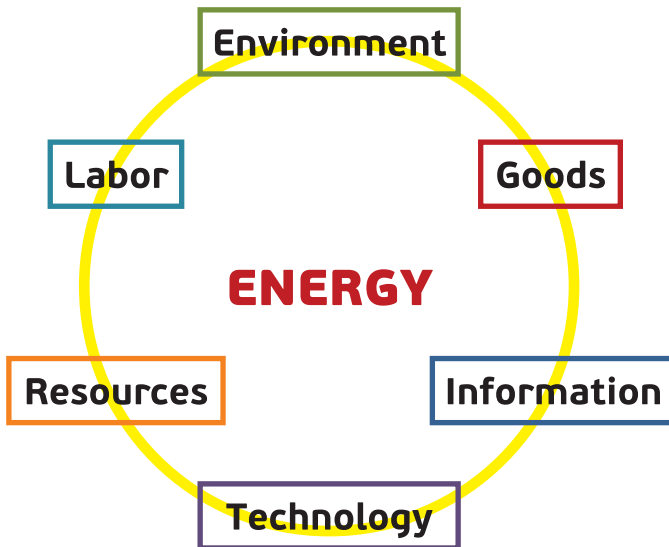
This function lies in expressing all the multitude of information on the status of supply and demand through a single indicator – the price, which is determined from the supply side by the production costs, and from the demand side – by the value (utility),



perceived by consumer, which determines the latter's willingness to pay. These three crucial informational indicators: *price*, *cost* and *value* are what today's economic model is unable to set adequately. In the short run the above mentioned flaws induce economic instability, lack of balance between supply and demand and distortion of value, while in the long run their effects lead to overproduction and are associated with systemic profound crises, last of which the world is experiencing today.

Only after the fundamental causes of these market failures are eliminated, will further evolution towards higher social justice and sustainable global economy become possible.

MONEY



1 Kilojoule = 1 Eco Unit

WHY ENERGY?

Today the world faces a global economic crisis, which appears to be the deepest economic one humanity has ever seen.

At the highest intergovernmental level there are increasingly more conversations about the necessity of the international monetary system reform, as by many it is considered unable to meet the needs of today's global economy.

Yet, what should the new money be like, what purposes should it serve and what functions should it provide? Perhaps we should try to take a different look at money. We will not use the word "currency" in the everyday sense, where it is equivalent to the concept of "money", and will try to expand the meaning of the word, going deeper into its etymology. The English word "currency" takes its root from the Latin "currere", which means "to flee", "to rush", "to leak". In this broader sense, the currency is nothing more than a tool for operating on different flows. In classical economics, it is the movement of goods and services, transfer of values from one set of goods and services to another.

If we consider, in retrospect, any process of goods or values creation, and go deeper into its understanding to the level of physical processes, it becomes evident that any process of this kind is an overflow and conversion of energy. All our vital activity, in fact, can be simplified to the transformation of one kind of energy to another, because according to the current position of science, any substance is nothing but unreleased energy.

Thermal, mechanical, electrical, nuclear, metabolic, electromagnetic, vacuum energy, etc. – all these are tools and products of our activities. After all, if taking thought, nothing else on earth carries such a fundamental and objective value as energy does! The conclusion itself suggests that energy and the unit of its quantitative expression, the Joule, is the most correct, objective and fair content of the new currency.

Since joule is an absolute measurement unit, binding of money unit to a certain amount of energy will ensure the stability of the new currency, as well as transparency in the formation of its value.

COST, EFFICIENCY AND STANDARD

In the modern market economy, we often face the situation we have no idea what exactly we pay for when purchasing goods, and why we pay so much. How much did it cost the manufacturer, and how much advertising was used to convince the consumer that purchasing this product is a “want” or even a “need”? And the main question - whether all of the societal costs were included to the price of the product? What will shape the cost of goods, if money is clearly pegged to a unit of energy?

The estimated components for the cost of each good shown below in the Human and Resource Economic System cost formula:

$$\text{Cost} = \text{Resource} + \text{Water} + \text{Production} + \text{Utilization} + \text{Compensation}$$

where:

Resource - the energy cost of restoration of the spent renewable resource to the state of raw material;

Water - the cost of water resources spent on the creation of the good, expressed in units of energy by the interconnection through the so-called water-energy nexus; *

Production - energy spent on creation of the good;

Utilization - energy consumed for production waste disposal and consumption of the good;

Compensation - energy spent on compensation for adverse effects on the environment caused by production, consumption and waste disposal.

** Water must be distinguished from other renewable resources due to three reasons:*

- 1. The net amounts of water used for production of goods or provision of services are comparable and often surpass those of energy resources. Thus it plays the role no less significant in value creation;*
- 2. Water is a prerequisite of life and its use for industrial issues both directly and indirectly affects the well-being of every person in the world;*
- 3. Water and energy are interconnected from the technological point of view - through the so-called water-energy nexus.*

Thus, when we use the “spent energy” term for each cost calculation, we must consider not only the energy, which is necessary to “attach” to the raw material for the product, but all the expended energy on the energy cost basis of primary energy resources and energy conversion efficiency as well.

The accounting concepts here are close to those of “embodied energy” in Leontief’s input-output model, “virtual water” by John Alan and “cradle-to-grave” life cycle assessment (LCA) techniques which are already used by many governments worldwide and can be employed for cost calculation according to the proposed formula.

“The Resource Institute” – a global network of scientific institutes, departments, specialized institutions and individual professionals, united by common rules and working in accordance with the principle of Open Source or Commons-based peer production (where creative energy of a great number of people is directed to large significant projects without traditional hierarchical organizational structure) will work upon a comprehensive interactive database that would display the energetic cost of any goods, services, technologies or other different subjects or processes for everybody.

The database would be updated in real time to reflect the ongoing technological progress.

THREE DIFFERENT CURRENCIES FOR THREE DIFFERENT PURPOSES

In the Human and Resource Economic System people would use three separate currencies for different purposes. Within a single country there are three major different types of activities for which money is needed.

They are: consumption, production and international trade. If three currencies are managed and treated separately, it will bring more sustainability to the whole financial system and more importantly, will partly secure regular consumers from financial misbalances and speculative activities on the international currency market.

The currency for consumption is called the Life Unit, which is backed by water and used only for the acquisition of consumable goods and labour.

The currency for production is called the Eco Unit which is backed by energy and used for production purposes such as acquisition of raw materials, different machines and equipment or other production needs different from labour.

The currency for international trade is called the World Wide Currency Unit which itself represents itself a conversion coefficient to compare the prices of energetic currencies of different countries that is based on the following: the country's share in the global amount of greenhouse gas emissions, the share in the global amount of water spent for production, the share in the global amount of consumed energy (the value of the currency is reduced by the percent of the share) and the coefficient of each average unit of energy consumed divided by the average amount of energy spent for its production according to the embodied energy input-output calculations (the value of the currency is multiplied by the coefficient).

ABOLISHING CASH

Nowadays, with the development of informational-communicative technology and electronic banking, an individual's need for cash money is decreasing. Its existence, according to many, brings to the modern world more harm than convenience and profit.

Cash provides the possibility to exist for such adverse phenomena as corruption, drug trafficking, human trafficking, illegal arms trade, and not to mention the illegal circulation of legal activities. The abolition of cash flow will allow clearer conduct of the financial and production planning as well as operational management of public finances. In addition, colossal state spending for printing, collection, storage, accounting and disposal of cash money will abolish. Further, financial losses from counterfeiting and dealing with it will also cease.

With a POS-terminal and a payment card integrated in personal communication devices, everyone will be able to easily make and receive payments as well as automatically obtain all the available information about the acquired goods and verify its authenticity if necessary. It also gives consumers possibility to provide and inquire feedbacks within the global product and service database.

The development of information technology suggests the possibility to give the consumer full information about products consumed without significant costs, as well as the ability of manufacturers to declare the cost to the consumer.

ABOLISHING INTEREST RATE

In the present-day world, due to the high degree of concentration and consolidation of capital in the hands of a very small proportion of the population (according to different sources 1% of the population owns 50% of all productive capital, and 2% of the population owns 80% of capital), the existence and availability of interest rate loans meets the aims of the traditional economy in establishing productivity increase, but absolutely not in any way that appeals to such global problems as health, education and the protection of the environment.

None of the traditional economic paradigms show that the system of private property was originally designed for the diffusion of capital rather than for concentration of ownership in a few hands.

As it is known, the basic requirement of a free market concludes that it should not contain insurmountable barriers for entering it. In order to have competitive market efficiency, it should be open to everyone who wants to play by market rules, which involve voluntary participation, free exchange and respect for private property. However, most potential markets in any market economy of the present time are not actually open to everyone.

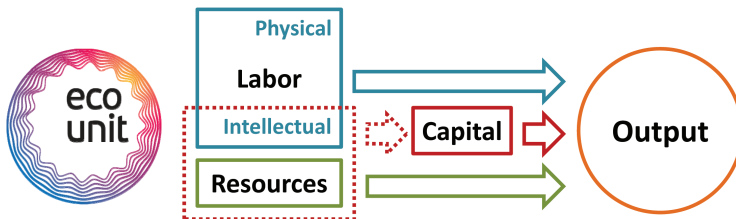
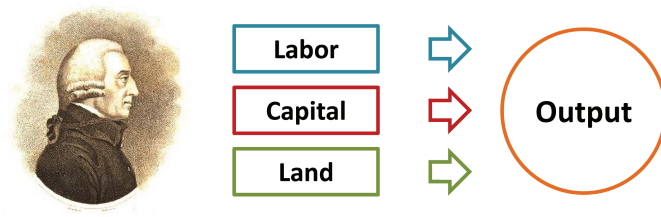
The current system of corporate finance in countries with developed market economies has led to the fact that effective participation in capital acquisition and corporation growth is closed for the majority of their populations. And, despite the fact that the traditional market theories are postulating formal right to acquire equity for everyone, real rights are available only for existing owners of capital assets.

Unequal capital access capabilities of existing producers and consumers (who could potentially become a producer) are associated with the existing system of interest rate cost for capital, as well as with the existing system of debt defaults risk assessment and the existing collateral rules.

Thereby, for an existing company with large operating assets, a major financial traffic and a well covered market share, it is much easier to attract a bank credit (particularly in terms of providing collateral and in general in terms of risks of the business project) than for the average consumer, who when applying for a loan can only offer a hypothetical business idea and a pledge of his private property, which, even if available, can seldom ensure receiving the necessary sum for business start.

Abolishing interest for loans purposing the non-consumer needs can provide a long-term increase in productive efficiency and a spread of productive capacity. Further eliminating strict collateral rules, we can balance the capital access capabilities for existing enterprises and ordinary people willing to start their own business and become a capital owner.

SUPPLY



TWO PRODUCTION FACTORS

Let's hypothetically consider production factors without money, nor economy, nor economical theory in a primitive society.

To produce any good, we need raw materials (certain natural resources or a combination of several of them) and labour, which is our own effort to transform available raw materials into a product. Our labour can be both physical and intellectual. While physical efforts are needed for direct processing of raw materials, intellectual efforts are necessary to determine or improve the way of such processing.

A well grounded economist will exclaim immediately that the modern economic theory distinguishes capital and entrepreneurship, while fresh trends of the informational era add information (whether they are technology or banal exchange bulletin). But how fair is this statement? Any capital, whether it is a spade, a millstone, a machine or a car, is the product of human labour applied to a certain combination of natural resources.

Any information is also the result of intellectual labour, as well as entrepreneurship, which is determined as the ability to combine different production factors, which is also intellectual activity! As we see from the stated above there are only two sources of wealth: *the labour and the natural resources*.

OPENNESS PRINCIPLES

Are all of the society costs included to the price of the product? As the experience of major corporations shows – it's no matter what the quality of goods is, it is important that the consumers consider them high-quality.

Absurd from the economy's standpoint, components of the price concealment principle for many centuries have become axiomatic "pacto tacito" (tacit agreement) between all companies and to any and every market without exceptions.

The principle of commercial confidentiality in the traditional economy, ostensibly designed to protect free competition, is more often used by large manufacturers either to hide their unfair industrial policy, or to conceal from the consumer the real cost of goods and the level of sellers' profits. Usually the average consumer sees only an abstract value in the price list, which is expressed in a certain amount of monetary units with the mechanism of valuating which the majority of the population has a fairly vague idea of.

Thanks to increase in state expenditures for information together with compulsory implementation of maximum transparency principles for manufacturers and declaration of a full production cost chain in order to ensure the honesty of pricing and production policy, a consumer becomes not only sufficiently informed on characteristics of goods consumed, but also more capable of making an adequate analysis of such information, which, of course, will contribute to general increase in effective consumption.

Full transition to cashless transactions, using the principle of maximum openness of the manufacturer and a maximum reduction of adverse marketing influence are the key factors in reaching the sustainable consumption.

SUSTAINABLE ECONOMIC ACCOUNTING - NEW HORIZONS FOR EFFICIENCY

Nowadays the raw materials and fossil energy resources usually belong to those who bought from the government the right to exploit them. What is the price of this right?

It is difficult to answer definitively – it varies depending on every separate case. But certainly the price almost never reflects the value of resources being exhausted by the renters, and by no means does it reflect the value of accompanied environmental degradation. The modern economic paradigm in the most countries of the world very seldom considers the fact of the finiteness of mineral and fossil energy resources and the fragility of ecosystems.

Because ecosystem services are not fully 'captured' in commercial markets or adequately quantified in terms comparable with economic services and manufactured capital, they are often given too little weight in policy decisions. Researches in Ecological economics have estimated the current economic value of 17 ecosystem services for 16 biomes, based on published studies and a few original calculations.

For the entire biosphere, the value (most of which is outside the market) is estimated to be in the range of US \$ 16–54 trillion per year, with an average of US \$ 33 trillion per year. Because of the nature of the uncertainties, this must be considered a minimum estimate. Global gross national product total is around US \$ 74 trillion per year.

When we talk about the overexploitation of such natural resources as clean air, fresh water and different ecosystems, we mean what economists use to call negative externalities. The contemporary economic approach usually sounds like "Internalize externalities and the problem is going to be solved".

This means – create a market, define the property rights, assume that people act rationally and minimize the transaction

costs. But how can one imagine for example the market of fresh air, not mentioning the improbability of people acting rationally and a vague possibility in this particular case to minimize the transaction costs and define the property rights! This approach is hardly a sustainable one.

The Human and Resource Economic System offers a clear principle of sustainable economic accounting:

**Every economic transaction is a trade between
the human and the nature.**

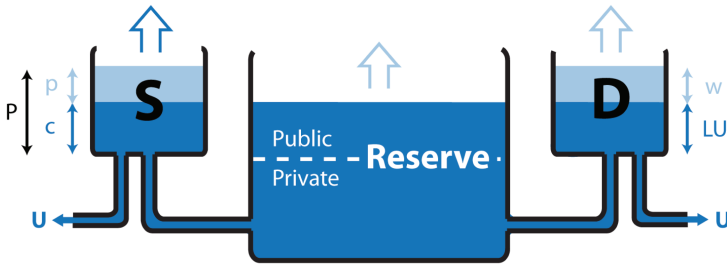
What we take from nature – should be given back.

This principle is outlined in the Human and Resource Economic System cost formula mentioned above. It should be provided by using the input-output analysis further developed to describe ecosystem energy flows. Considering any economic activity as handling of energy flows, two opposite processes become obvious—notably energy storage and energy wasting.

The use of alternative energy sources, compulsory increases of wealth by producers, restriction of marketing and advertisement tools, fixation of fair price of the resources and appearance of ecological component of each wealth price will make it possible to form new principles for objective determination of economic efficiency, which will be based not on the volume of earned money, but on the quantity of accumulated, stored, transformed and wasted energy.

DEMAND

Balance of financial resources between supply and demand



Reserve - energy capital reserve. Initially formed from the energy inventory of national wealth.
 $\text{Reserve} + S + D = \text{total size of economy}$.
 Grows together with economy.

S - Supply

D - Demand

P - market price

c - self-cost

p - markup

LU - Life Unit

w - wage

U - irreplaceable energy losses

SOCIAL SECURITY AND LIFE UNIT

The reduction of employers' roles for a producer's economic welfare results from increasing the scale of mechanization and automation of production.

Thus, in the final cost of goods, the share of a person's labour cost periodically decreases and the share of energy costs and amortization of fixed assets increases. This process leads to the systematic decrease in demand for human labour, and therefore, to the decrease of in value of such labour that further results in the decrease of the employee's role for economy of the state in a whole and for each separate production specifically.

This situation is a significant social problem, as for because for the absolute majority of people their wages are the major, if not sole source of income. A person normally tends to agree to worse work conditions and remuneration in order to meet primary life needs regardless of being employed or not.

This process leads to permanent decrease in the quality of life and to the increase in the cost of end products accumulated by the owners of the productive capital (production means). In the Human and Resource Economic System the question of minimal social security is solved principally: the quantity of vital welfare that an average human consumes every month in the course of life in energetic expression is called the "Life Unit social security".

It is not the state that should determine the basket of goods in the new system, but the so-called "Human Institute" – the global network of scientific institutes, departments, specialized institutions and individual professionals, united by common rules and working in accordance with the principle of Open Source or Commons-based peer production, in which creative energy of a great number of people is directed to large significant projects without traditional hierarchical organizational structure that will make it possible to exclude a corruption component.

Life Unit varies depending on age and country. Every person takes monthly support according to the Life Unit standard of a country. Due to the Life Unit system, every person will be able to receive from the state the size of social security that will clearly correspond to the minimum basket of goods calculated by “Human Institute”, which will make it possible for every person to choose the activity or job placement freely.

The main goal of providing every human with a social care in the form of “Life Unit social security” is not so much to guarantee the satisfactory existence for every human, as it is to provide each member of the society with the deliverance from the fear of tomorrow, the source of class exploitation.

IMPROVING CONSUMER'S AWARENESS

A lot has been said on the harm of marketing and fashion. Obviously, the industry's main destructive tactic is the creation of imaginary values for consumers that drive people to throw away the furniture, which still could be useful for more than a dozen of years, to change the car every two or three years, and to buy a new cell-phone every couple of months, for example.

And we often purchase things that we already have and are not always able to explain even to ourselves the difference from what we bought last year. This is a prime example of how seldom nature's resources are returned back. It is worth considering, that buying a particular product we often pay a significant portion of the price just for the fact that we were purposefully pushed to this purchase.

Full transition to cashless transactions and manufacturers cost transparency will easily show the objective value of the goods and give a possibility to verify its authenticity if necessary. The principle of maximum openness of the manufacturer is a key factor in reaching the sustainable consumption. Now, rather than viewing environmental change as a constraint, it can be viewed as an opportunity to redefine what we mean by quality.

Quality in our experience should mean that we know there is no 'hidden filth'. By this we mean that the hidden filth of the near or distant social or environmental impacts from products and services can be replaced by a sense of the deep beauty of thinking that is run through with consideration for sustainability, for people and the planet.

EQUAL OPPORTUNITIES OF ACCESS TO CAPITAL

Providing every human with a certain productive capital is absolutely necessary for ensuring social equality of all social groups with keeping market relations in the society. Broadly speaking, the goal of providing the population with non-interest bearing credits is making each consumer a producer as well.

Due to this, solidarity in allocation of the final value of goods will be reached, as every worker will gain income not only in the form of wages, but also in the form of amortization of business assets. On one hand, this will allow every person to ensure an increase in quantity of own business assets in the future, and also to strengthen flexibility of business assets in relation to scientific and technological progress in terms of increase in productivity, and the most important – effectiveness of these assets.

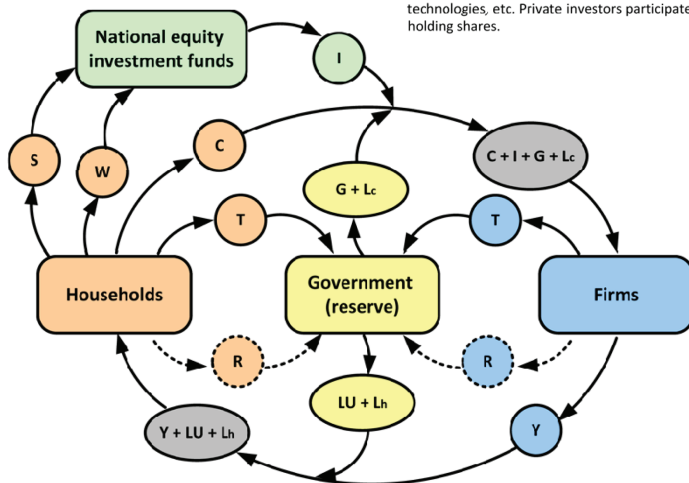
One more reason why every person should be provided with productive capital is to ensure a not diminishing level of life guaranteed while the importance of human labour for the economy is continuously reduced.

THE STATE

Circular flow model of the human and resource economic system

* National equity investment funds

Provide financing for development-biased projects: R&D, renewable energy sources, informational technologies, etc. Private investors participate by holding shares.



C - consumption

G - government expenses

I - equity investment

L_c, L_h - zero-interest government loans

LU - Life Unit - social security transfers

R - increase of reserve resulting from economy growth

S - savings

T - progressive income tax

Y - yield: wage + capital incomes

W - wealth: initial energy capital, value of the household's assets

THROUGH DIRECT ELECTRONIC DEMOCRACY TO GOVERNANCE OF KNOWLEDGE

In the course of many centuries, philosophers tried to find the factor that happened to be the most significant, that gives rise to the social dynamic and drives it. It was found that none of the factors of social and historical development were single-handedly responsible.

Most probably, the social dynamic is conditioned by many factors, which sometimes demonstrate their significance and sometimes withdraw into the shadows. Nowadays the spiritual and cultural sphere of the society is changing considerably. Information technology is becoming a powerful generator and sharp amplifier of cultural shifts and innovations.

Electronic tools allow a human to get necessary information quickly and easily. This is changing the nature of mass culture and the educational system, resulting in the broadening of the mind of each person. Democracy is one of the foundations that can provide realization of the declared goals via public elections of individuals, who are given power to manage the public authorities. In practice, democracy can often create only an outward appearance that only public authorities entirely serve the society.

Skillfully managing the public opinion and manipulating society using famous methods of a "crowd psychology", a person or a small group of people influencing the opinion of the masses, can lead to desired results in elections. Such a form of democracy is especially characteristic for a state with an insufficiently educated and/or a politically inactive population. Due to the ever-increasing role of information technologies in modern life, it becomes possible, in principle, to abolish the very idea of "power" that is expressed in technological possibility for every person to directly influence the outcome of national decisions. In our opinion, this is a natural process of evolution of representative "quasi-democracy" into democracy, which has a more exact meaning.

The possibility for humanity to transfer to direct electronic democracy via internet using personal communication means is just a matter of time. Based on adduced arguments in the course of open discussion, it will be possible to clearly determine competence of people in every separate sphere of life and to form national decisions based on competent expression of popular will.

The names of the authors of the best ideas for state decision-making must be open for everyone, this would make possible to find, to form and to cultivate the human's elite that will further lead to the governance of the cleverest people with the best knowledge of decision-making. Best contributors should be awarded with the Le Premier Award and the best achievements among Le Premier Laureates should be notified by the so called TESLA or "The Earth Supreme Level Award".

An example of the principle for the parliament formation in the Human and Resource Economic System could be its formation through a cell of five people, four of which delegate the fifth to the next governance level, five people elected in such way delegate one person above and so on.

Thus a pyramid of political hierarchy should be formed, where each elected by four lower-level people can be withdrawn by them at any time.

GOVERNMENT AS THE ONLY SOURCE OF DEBT CAPITAL

In connection with the systemic risks of the current market economy and its inefficiency in fair allocation and reallocation of financial resources, one of the ways of more effective redistribution of financial resources is accumulation of these functions under exclusive control of the state.

Alongside with abolition of interest rate, transferring functions of credit institutions to the government will make it possible on one hand to ensure capital diffusion necessary for achievement of economic equality and on the other hand to allow centralized direction of necessary funds to spheres of economy that are of the highest priority for the people.

Development of informational and computational technologies, which facilitate automatic processing and analysis of huge data arrays, principles of openness and maximum involvement of ordinary citizens in the process of allocation and reallocation of financial resources will allow to create an objective unified mechanism for evaluation of solvency and business project utility excluding subjectivity and “human factor” as well as it will provide equal capital access opportunities for all subjects of economic relations.

FUNDING EDUCATION

People and their spiritual, educational and professional potential are the most valuable resource that has an unlimited reserve of growth and a huge creative promise. It is the human capital, not the equipment or productive capital that appears to be the dominant factor for the increase in an enterprise's competitiveness, in particular, and for the increase in the overall economy's effectiveness.

The Human and Resource Economic System is intended to help people in getting the opportunity of using all their health and knowledge potential given by nature in to its fullest potential.

The quality of life depends on people's ability to adapt to a new economic environment: the higher the physical and intellectual abilities or educational level of a human *ceteris paribus* the more success will be gained. Education contributes to personal development and helps in developing such features as independence and self-confidence, flexibility and tolerance in interpersonal relationships, open-mindedness, respect of esthetic and cultural values and an increase in intellectual capacity.

Special attention of the state to matters of education funding and increase in literacy of the population has to play the fundamental role in transition to new economic principles. Investments into education will lead to the improvement of creativity, the formation of optimism, rational ideology, welfare growth, healthy lifestyles, an increase in labour effectiveness, and finally, an acceleration of the scientific-and-technological progress paces.

ETHICS

Evolution of ethics:



The worldview of a modern “western world” representative is shaped by many centuries of struggle with hostile factors of environment, combined with the individualism, typical in European civilization, the constant uncertainty of tomorrow, associated with frequent wars, revolutions and other social cataclysms, which the European history, beginning from the Roman Empire, was fairly rich of.

In the foundation of this worldview lays the profound subliminal fear of future. In modern economy this fear has found its expression in the four principles of economic behaviour: reserving,

insurance, privacy and security. The authors consider these principles undoubtedly useful to the real risk level. However as soon as they become fundamental guidelines for the economic agents, this is fraught with serious obstacles to markets' functioning. In particular, insufficient information, inefficient extra costs, idle financial capital, etc.

Authors believe that the implementation of Human and Resource Economic System will gradually change ethical principles of individuals' behaviour from being reserved to openness, from fear to confidence and from individual profit-maximizing competition to cooperation.

The first shift is induced by common unlimited access to information and unrestricted participation in state governance; the second – by sufficient level of social security as well as stability and predictability of economic circumstances; the third – by just income redistribution, explicit ideology of balanced exchange between individual and environment and the open governance system that encourages cooperation and understanding of the notions of common good and collective responsibility.

References

1. Blanchard, Olivier (2010). *Macroeconomics*. Prentice Hall. p. 541
2. Chenoweth, Jonathan (2008) "Looming water crisis simply a management problem", *New Scientist* 28 Aug., 2008, pp. 28-32.
3. Costanza, Robert (1998). "The value of the world's ecosystem services and natural capital". *Ecological Economics* 25 (1): 3-15.
4. Cutler J. Cleveland (2006), "Biophysical economics", *Encyclopedia of Earth*, September 14
5. Davidson, Paul (2009), *The Keynes Solution: The Path to Global Economic Prosperity*, New York: Palgrave Macmillan, p. 125
6. Edwards, Fred (1989). "What Is Humanism?". *American Humanist Association*. Retrieved 19 August 2009.
7. Frankel, Jeffrey (2003) "A Proposed Monetary Regime for Small Commodity-Exporters: Peg the Export Price ("PEP")", Blackwill Publishers
8. Georgescu-Roegen, Nicholas (1971). *The Entropy Law and the Economic Process*. Harvard University Press.
9. Glassman, Diana, Michele Wucker, Tanushree Isaacman and Corinne Champilou (2011), "THE WATER-ENERGY NEXUS. Adding Water to the Energy Agenda" March 2011. *World Policy Papers*
10. Hannon, Bruce (2010), "The role of input-output analysis of energy and ecologic systems". *Ecological Economics Reviews*. *Ann. N.Y. Acad. Sci.* 1185 (2010) 30-38 c_ 2010
11. Jennings, Lane (2004), "Hype, spin, puffery and lies: Should we be scared?", *The Futurist*, January-February 2004, pp. 84-92.
12. Keen, Steve (2011) "A dynamic monetary multi-sectoral model of production" web: www.debtdeflation.com/blogs
13. Kelso, Louis & Patricia Hetter Kelso (1986 & 1991) *Democracy and Economic Power - Extending the ESOP Revolution through Binary Economics*
14. Kirman, A. P. (1992). "Whom or What Does the Representative Individual Represent?" *The Journal of Economic Perspectives* 6(2): 117-136.
16. Kotler, Philip. Armstrong, Gary. Wong, Veronica. Saunders, John (2008).

Principles of Marketing. Fifth European edition. Financial Times/ Prentice Hall.
Pp. 67-84.

17. Kurland, Norman; Brohawn, Dawn & Michael Greaney (2004) *Capital Homesteading for Every Citizen: A Just Free Market Solution for Saving Social Security*.
18. Lebow, Victor (1955) "The Real Meaning of Consumer Demand" the Spring 1955 issue of *Journal of Retailing*
19. Leontief, Wasiliy (1966) *Input-Output Economics*, Oxford University Press, New York; p. 134
20. Levitt, Theodore (1970), ""The morality (?) of advertising", *Harward Business Review*, July-August 1970, pp. 84-92.
21. Mankiw, N. Gregory (2002), *Macroeconomics* (5th ed.), New York: Worth; p.p.335-338
22. Mankiw N. Gregory (2008) "Brief principles of macroeconomics" CENGAGE Learning p. 328
23. Marx, Karl (1887) *Capital. A Critique of Political Economy Volume I Book One: The Process of Production of Capital. Chpt VII*
24. Minsky, Hyman P. (1992), *The Financial Instability Hypothesis*, Working Paper No. 74, May 1992,
25. Podolinsky A.S. (1880). *Human Labour And Its Relevance To Energy Distribution*, scientific magazine "Slovo"
26. Russell, Thomas and Richard H. Thaler (1985), "The Relevance of Quasi Rationality in Competitive Markets." *American Economic Review* 75: 1071-1082.
27. Sahr, Robert (2008), *Inflation Conversion Factors for Years 1774 to estimated 2018*, Political Science Dept, Oregon State University
28. Saeed, Abdullah (1996), *Islamic Banking and Interest: A Study of Prohibition of Interest and its Contemporary Interpretation* Brill, Leiden 1996, pp.170
29. Shakespeare, Rodney & Peter Challen (2002) *Seven Steps to Justice*.
30. Shakespeare, Rodney (2007) op. cit.
31. Soddy, Frederick (1937), "The Role Of Money" George Routledge And Sons, Ltd. p.5 *The Journal of Economic Perspectives* 6(2): 117-136
32. The United Nations Research Institute for Social Development 2010. "In-

come Inequality and Structural Change."

33. US Environmental Protection Agency, "Defining Life Cycle Assessment (LCA)." 17 October 2010.

34. Vickers, John (1999), "PRICE STABILITY IN THE UK", Glasgow Trades House Lecture,
Strathclyde University, Bank of England, 26 May 1999, p. 2

35. Wilson, Woodrow and Elliott, Edward (1918), "The state: elements of historical and practical politics", D.C. Heath & Co., 1473-1513

36. Xiaochuan, Zhou (2009), "Reform the international monetary system" 23 March 2009