

A Holistic approach to the management of human consumption towards an economics of well-being.

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Abstract: - The goal of this conceptual paper is to draw attention to the problems caused by the rapid growth of the global economy, coupled with high population growth and excessive exploitation of natural resources. It is necessary to be aware that the global economy will not be able to grow at the actual speed in the long term. A paradigm shift in production and consumption is therefore necessary to avoid the collapse of ecosystems and the concurrent reduction of stocks of natural resources. This is the reason why capitalism has to take a new direction towards a sustainable and naturally harmonized development model.

Key-Words: - Consumption; Economic development; Natural resources; Sustainable development; Welfare

1 Introduction

The goal of this conceptual paper is to draw attention to the problems of sustainable growth over the capacity of natural ecosystems caused by the rapid growth of the global production, coupled with high population growth and excessive exploitation of natural resources.

The increased use of natural resources is strongly influenced by human activity and the economic policies aiming to increase the actual economic indicators (e.g. GDP, level of employability, consumption per capita), which is resulting in a higher demand for natural resources [6], [28].

Due to the rapid growth of production on a global scale in the 21st century we arrived at the turning point when earth's natural resources are becoming no longer able to absorb the levels of pollution and regeneration of natural resources required by human economy [18].

World economic growth is based on quantitative accelerated consumption of resource supply, while the global ecosystem of which it is a material and energy dependent decline. This leads the global economy in less balanced condition [10]. In other words, the global indicators of consumption of key natural resources (land footprint, water footprint, carbon footprint and overall material use) are increasing and significantly exceeding the biological capacity of the planet [14].

The reasons must be sought in the 1980s, when the human pressures on the utilization of natural resources for the first time exceeded their level of global recovery [30].

A wider adoption of the sustainable operations techniques by businesses would significantly advance the holistic approach with connected knowledge activities [34], [35]. Such holistic models include the promotion of sustainable development and are applying the sustainable

paradigm beyond the environmental dimensions [40]. Consequently, a valid sustainable strategy should include not only an economic and environmental perspective, but also the development of the social-political and cultural aspects of development [17].

2 Welfare and sustainable development

The connection between the concept of consumption and that of sustainable development can be traced in the report of the Brundtland Commission [46].

The Commission defined sustainable development as a form of: “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*” This definition is based on two concepts that explain the connection between sustainable development, the growth of a country's welfare, and, consequently the human consumption:

1. The concept of ‘needs’: in particular the essential needs of the world's poor, to which overriding priority should be given;

2. The idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs [46].

A more holistic country's welfare approach should include not only the perspective of the social and economic development, but also health and environmental development indicators (Table 1).

According to the perspective of sustainable development, the progress of welfare through generations can be observed, studied and measured in the same manner as country's social, economic and environmental development [32].

Development indicators from the table 1 help us to understand how human impacts on the condition of his environment due to the need for economic growth and consumption.

According to Hillman [23], in the past five decades, global pressures on the environment of the planet increased more than five times. Comparison of the size of the ecological footprints and per capita income indicates a high degree of interdependence. Moreover indicators show that the growth of the GDP is also in generally correlated with increasing environmental pressures [29], [33].

The traditional development model is material and energetical very complex and is based on fossil fuels, mass consumption and disposal of various wastes [15], [38]. The model is almost entirely focused on quantitative economic growth. In

economically developed countries, indicators of income and population growth in GDP are no longer sufficient as a measure of overall progress, quality of life and people satisfaction [1].

Table 1, Social, economic, health and environmental indicators for determining countries welfare

Group of Indicators	Indicators
Economic Indicators	<ul style="list-style-type: none"> • Per capita GDP • GDP of the population employed in agriculture • Exports of manufactured goods • Share of manufacturing industries in the GDP • Per capita energy consumption
Social Indicators	<ul style="list-style-type: none"> • Rate of schools' enrollment • Internet connectedness rate • IT literacy rate
Health Indicators	<ul style="list-style-type: none"> • Number of nurses per 1000 people • Number of pharmacists per 1000 people • Number of dentists per 1000 people • Number of physicians per 1000 people • Life expectancy at birth
Environmental Indicator	<ul style="list-style-type: none"> • Ecological carrying capacity • Ecological footprint • Carbon footprint

Source: [9], [11], [47].

New indicators such as the indicators of the happiness (e.g. Life satisfaction approach, Aggregate happiness indicators, Human development index) are gradually being introduced to measure the wealth of an economy or a nation. Research [13], [12] shows that in 1957 the 35% of the US population very happy while in the mid-1990s the data was only 33%, although in that period, their income had doubled.

Since the early 1990s, the emergence of the Internet new economy influenced the rise of the third wave of capitalism [37] as forecasted one decade before by Alvin Toffler [43]. Rapid technological developments, cheaper computer equipment, as well as increased availability of broadband internet, have been the factors that influenced the change of life and work style [26].

Technology and economic growth have become inseparable during the period of transition to new innovation economy [2], [27]. Digital literacy has become one of the key indicators of the development in the field of the society informatisation [44].

At the same time, the "malthusian" concept of ecological carrying capacity has been gradually introduced in organizations' management. Ecological carrying capacity can be defined as the maximum density of individuals of a species that an ecosystem can withstand [24]. By using the indicator of ecological carrying capacity we may establish measures to protect certain habitat depending on what kind and how many species live there, taking into account the upper and lower limits of the population (the minimum number of specimens is necessary for the survival of the species) [19]. This indicator has sometimes being used to support decision-making on the protection of endangered species, which is a test related to biodiversity.

This malthusian approach can be dangerous if used to evaluate the carrying capacity for the human population, justifying policies that aim to forcibly suspend the human rights of reproduction. On the other hand, the same indicator can also be effectively used for the oversight of spending and demand for resources and total human impact of consumption and production on the environment. Per capita ecological footprint (EF), or ecological footprint analysis (EFA), are other means for evaluating production policies and consumption uses, and proving these against earth's capacity to sustain them. This brings us to another important indicator that is the "ecological footprint" as a measure of human demand on the Earth's ecosystems. This implies that the surface of land

and water (including natural resources) must be considered in the measure of production outcomes [20]. It is interesting to compare the information about the ecological footprint of global production and consumption. Wackernagel et al., [45] highlighted that while, in 1961, we needed 0.7 of the Earth for our production and consumption needs - ecological footprint was therefore 0.7. hectares per person - in 2007, this figure was already 2.7. This means that we have already exceeded, the organic load carrying capacity of our planet and our lifestyle is no longer naturally harmonized [20].

Carbon footprints is a concept that is closely linked to the ecological footprint. For each product shall be determined how much of the GHG emissions are created in its total production, consumption and disposal [48].

The Kyoto Protocol defined carbon footprint as an indicator or measure of the impact of human activities on the environment. Therefore, can play an important role in shaping individual actions of different policies [21]. The carbon footprint approach is gaining ground, especially with the increasing environmental awareness is becoming a benchmark for consumers.

Carbon footprint can also be used as a basis for sustainable policies. Nevertheless this approach is not without limitations. The first problem is the data availability. Therefore, it is extremely difficult to collect all the necessary information since it appears that only 128 of the 4,609 largest companies listed on the world's stock exchanges disclose the most basic information on how they meet their social and ecological responsibilities. More than 60% of the world's largest listed companies currently fail to disclose their GHGs, three quarters are not transparent about their water consumption. The slowing down of disclosure is illustrated by the fact that while the number of large listed companies disclosing their energy use increased by 88% from 2008 to 2012, there was only a 5% rise from 2011 to 2012. A similar reporting slowdown is occurring on the other first-generation indicators [7].

The reason these figures are so important is because there is a direct correlation between transparency and companies taking substantive action to improve their performance. This is also referred to the time calculations, as here the values must be discounted. All the evaluated monetary assets include assumptions and limitations that are specific to the method of valuation of the environment and natural resources. In addition, these calculations neglect to consider the impact of technology and development [15].

3 Towards a sustainable and naturally harmonized development model

The industrial model of capitalism, based on continuous quantitative growth and global population growth has led to the economic and environmental crisis [23]. It is now necessary to be aware that the global economy will not be able to grow in the long term at such a speed of the collapse of ecosystems and the simultaneous reduction of stocks of natural resources [3]. When searching for a solution for modelling the sustainable and naturally harmonized development model it is necessary to keep in mind that the global economy today is made of two completely different worlds: the developed and the developing countries.

If the world economy is now overgrown compared to the natural base, the fast development of developing countries represents a threat for the ecosystem. In the application of basic commodities such as wheat, red meat, fertilizers, steel and coal, China quantitatively overtook the United States and became the world's largest consumer [4], [3].

Consequently, it is evident that developing countries as economically developed countries, need a different development model.

We argue that actual capitalism should better take a new direction towards sustainable and naturally harmonized development model (Fig. 1) or it will soon collapse.

In the book *Capital in the 21st century*, Piketty's [38] points out the flaws of the actual capitalist model. According to Piketty, without a radical transformation of the financial system, working more and harder won't ensure prosperity. The neoliberal ideology that has imposed austerity around the planet is punishing everyone who is not an owner of capital. Policymakers and NGOs, at the macro level, as well as companies and investors at the micro level, need to conceive the value creation in a holistic sense when formulating strategy and allocating dwindling resources, particularly as they seek to build long-term value [8].

Even after the transition to the so called information society, the world economy remains dependent on natural resources. Nevertheless, politicians (mis)understand economic development as a statistical increase of the economic indicators, and they are not effectively focusing on the deteriorating health of the global ecosystem. Alternative measurements of well-being can contribute to the replacement of the present indicators of the growth to which policymakers are addicted [44].

Policymakers in developed countries should question the assumption that human progress is based on the number of cars, mobile phones and other consumer items. It is necessary to focus also on other factors of well-being that are not dependent on mere consumption.

A real paradigm shift would imply the considering that the progress of mankind entails a different conception of social activities, through a radical shift in the culture and in the hierarchy of values.

Innovative companies have started to promote services based on the sharing economy, creating a shift in the culture of possession of goods. The first applications of sharing economics have been on durable goods such as car and apartment rental. The latter is the case of the company Uber, established in 2009 and now operating in 45 countries. Uber is based on a through a web application that allows users to find a private car registered in the system, for his/her transportation needs. In September 2014 this service was the target of tough protests by existing taxi services in France, Germany and Great Britain. The taxi drivers were protesting against what, according to them is an unfair business practice, which would also be dangerous for the life of a passenger [10].

The former example is that of the web portal Airbnb designed to promote trust economy. Airbnb portal targets flat seekers and owners who wish to rent their free space (flat or just a room). Thus, individuals share their excess space with strangers and earn money.

According to Brown [4 and 5], the markets must recognize the environmental issues. The current the prices of goods do not include environmental costs. A new process of market creation is therefore necessary to include ecological costs thus considering the environmental constraints.

But is it actually possible to increase prosperity while ensuring higher quality of life without sustained economic (quantitative) growth?

One of the key challenges to the concept of prosperity without growth is therefore the development of a new macro-economics of sustainable development, Daly [8] emphasized the key role of environmental conditions in terms of unchanged stock of natural capital and the maintenance of low levels of material and energy flows within the regeneration and the assimilation capacity of the ecosystem.

Macro-economics for sustainability, should not be considered as just a model for maintaining economic stability by increasing environmental pressures. The required paradigm shift implies to dismiss the assumption of growth of material consumption.

To this aim the shift must be from quantitative to qualitative economic development. In other words an economic model that operates under the universal spatial and environmental constraints taking into account the regeneration and assimilation capacity of the environment thus allowing the survival and increase well-being in the long term [8].

A sustainable economy is based on the integration of social, human, physical and environmental capital. Therefore the engine of growth is not only greening the economy through new technologies that produce fewer emissions and consume less resources, but to focus on investments in knowledge for a better use of human capital. A sustainable society is not possible without a complete transformation of the global energy system, from centralized to decentralized, from non-renewable to renewable energy sources [25].

The policymakers should be aware that for the advanced economies prosperity without growth is not utopian dreaming, but financial and environmental necessity [25].

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