

LINKS BETWEEN THE PILLARS OF SUSTAINABLE DEVELOPMENT

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Abstract: Sustainable development requires the integration of environmental objectives, maintaining natural resources and human health that serve as support of current and future growth. This article describes the relationship of interdependence between the pillars of sustainable development: environment-economy (economic costs of environmental protection), economy-environment (pressure on environmental resources, environmental investment) environment - social (human welfare, health care by maintaining pure environment), social - environmental (ecological responsibility, consumption patterns), economy – social (providing jobs, good living, income), social - economy (labor quantity and quality).

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1. INTRODUCTION

Sustainable development is a multidimensional concept aimed equally environmental component in sustainable consumption of natural resources, protection of environment factors, health care for population, the social side by equality, quality of life and stop poverty, economic by increasing sustainable. All these are equal parts of the new development, whose objectives were set out along time in documents on the topic sustainable development. This system consisted of three sides: economic, social, environmental, must be regarded as a whole, and any components should not be given more or less importance than others.

2. OBJECTIVES

Important in understanding the concept of sustainable development is the connection between environmental, economic and social components. Each component acts on the other whose impacts are emitted.

3. METHODOLOGY

I started with the OECD chart that illustrates reversible relations between segments of the entire system, called sustainable development. I conducted an analysis of Romania's hierarchy Global Competitiveness Index in terms pillars of health data, primary education, higher education and training.

4. THE INDISSOLUBLE RELATIONSHIP EXISTS WITHIN THE PILLARS OF SUSTAINABLE DEVELOPMENT

When the aims and achievements of new form of XXI century developing are analyzed, must be taken into account relationships between parts of the whole concept. For each of them, targets and policies to achieve these objectives have been developed over time, all having in common the human being, placed first in the Brundtland Report (1987) and the Rio Principles (1992).

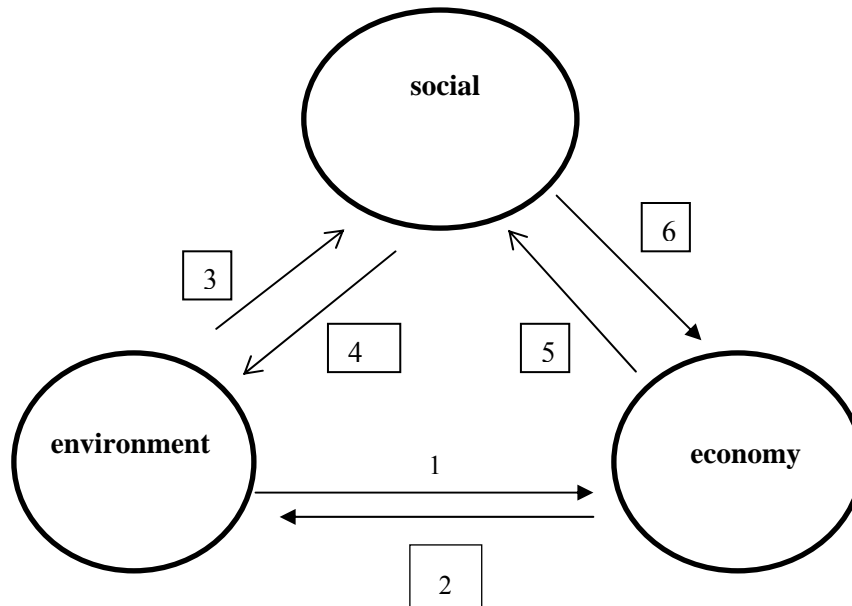


Figure no 1 Interaction between economic, social and environmental

Source: <http://www.oecd.org/greengrowth/35407580.pdf>

1. environment-economy: the economic costs of environmental
2. economy-environment: pressure on environmental resources, environmental investment
3. environment - social: human welfare, health care by maintaining pure environment
4. social - environment: environmental responsibility, consumption patterns
5. economy - social: providing jobs, at good living, income
6. social - economy: quantity and quality of labor

Economy-environment: Growing pressures on the environment of economic activities as a result of population growth have led over time to damage the natural environment. The need for food was ensured by intensive agriculture. Consumer requirements have led to increasing energy intake used in all areas of production of goods and services. Hub environment was affected by the issue of gas greenhouse we feel today, we are all inhabitants of Earth by global warming.

The ecological crisis can be interpreted as a complex phenomenon of incompatibility natural environment to meet the requirements of household consumption.

Investment plays a necessary role in the economy-environment relationship, environmental technologies should be applied to holds a clean, unpolluted environment.

Sustainable Development on light pine economy-environment relationship is not quantity, but quality, and seeks to impose environmental standards, removing waste, unwanted impact of human activities on the environment, waste management, achieve productivity, reduce emissions of particulate matter and greenhouse gas emissions, reforestation, transition to sustainable agriculture.

Essence *environment-economy* relationship is determined by applying one of the basic principles of environmental policy - the polluter pays.

Imposing economic instruments of environmental policy in the form of environmental taxes is to launch the positive aspects of economic development and the environment and overcome those negative.

Environment- social: The environment provides good quality of its factors - water, air, soil depending on the pressure it receives from human activities and natural. State of the environment is closely related to pressures on them, and actions to reduce the negative effects that come included in environmental policy. Human health, food security, thus using labor and economic growth are conditioned by keeping pure environment, biodiversity.

One of the few existing attempts, to systematize environmental-social interface was a study commissioned by the Dutch Ministry of the Environment in late 1990, in order to operationalize the link between the two pillars with concrete indicators. Model was to define four key concepts: environmental protection, social, environmental policy and social policy.

Objectives of sustainable development considered from the viewpoint environmental and social relationship are maintaining human health by reducing greenhouse gas responsible for global warming, access to potable water, waste management.

In April 2001, the ninth session of the Commission on Sustainable Development recognized the need for more sustainable patterns of production, distribution and use of energy. At the Earth Summit in 1992 it was recognized the important role of indicators to help countries make decisions on sustainable energy development indicators.

The link between social dimension of sustainable development and natural resources reflects people around the world need to have access to basic energy services as affordable commercial energy.

EU Energy Policy sets the priority energy needs, safety and security of energy supply.

Two issues are considered belonging to the social dimension - equity and health. Social equity is one of the cornerstones of sustainable development involving degree of equality with which energy is distributed, how power systems are available and how they are raised prices to ensure availability and accessibility.

Energy must be available to all at a fair price. Lack of or limited access to energy services marginalizes poor and limited their ability to improve their living conditions. Lack of electricity usually means, among other things, inadequate lighting, telecommunications limited. At the household level, accidents can happen in poor families caused by exposure to air pollution from the use of candles for lighting.

All sectors of the economy depend on safe and sufficient energy. Availability of jobs, industrial productivity, urban and rural development and all major economic activities are strongly affected by the energy consumption.

Social - environment: It is remarkable the two-dimensional character of revenue growth thus quality of life. As Keynes said⁴³, higher incomes lead to change consumer desires. If the consumption growth remains unsustainable nature, negative environmental impacts would be felt through the adverse effects on health and therefore quality of life. This is why sustainable desire to move to sustainable consumption should not be delayed and in terms of the relationship of the two pillars, social and environmental, human responsibility is essential.

Energy indicators of economic dimension includes two themes: the use and production of models and security of supply.

Energy use per capita reflects global energy intensity of a society. Energy use per unit of GDP is a marker of overall energy intensity of the economy. Addressing energy security is a key objective in the criteria of sustainable development of several countries.

Energy supply disruption may cause financial losses and economic difficulties. To support sustainable development objectives, the power must be reliable, sufficient and affordable. Net energy monitor trends, availability of fuel stocks are useful for evaluating energy security.

Regarding education, Tomas Torbjörnsson⁴⁴ in article *Attitudes to sustainable development among Swedish Pupils*, published in proceed Social and Behavioral Sciences, WCES 2011, that sustainable development is so important, but elusive, and the role of learning is extremely important for our future. As a starting point in the study, the author had the fundamental values stated in the United Nations Millennium Declaration: freedom, equality, solidarity, tolerance, respect for nature and shared responsibility. The author conducted a study with two groups of students who responded to questions about respect for nature, based on the Millennium Declaration: solidarity, equality. The results showed that girls have a greater sense to support nature. To the question: "Would you help to raise funds for nature protection?", 27 percent of girls responded yes and only 13 percent boys.

Economy-social: One of the objectives of sustainable development documents is clearly providing jobs. Employment rate of labor is the barometer of a country's economy and living standards.

Social-Economy: Human factors contributes to growth through its productivity depending on job satisfaction, health status, investment in human resources which starts from the time of enrollment in the school system.

In Romania, public expenditure on education as percentage of GDP slightly increases from year to year, starting in 2000 from 3.2 percent and reaching the percentage of 4.3 in 2009.⁴⁵

Global Competitiveness Index (a measure of competitiveness in the context of sustainable development together with Competitiveness under the Lisbon Strategy Index) is calculated from data on pillars: basic requirements (institutions, infrastructure,

⁴³ Pohoățã Ion, *Strategies and european policies for sustainable development*, Ioan Cuza University of Iasi, Center for European Studies, p.76

⁴⁴ Torbjörnsson Tomas, *Attitudes to sustainable development among Swedish Pupils*, Procedia Social and Behavioral Sciences, WCES 2011, p.205

⁴⁵ www.insse.ro

macroeconomy, health and education), factors to increase efficiency (higher education and training of human resources, market efficiency, receptivity to new technologies), factors of innovation (business environment quality and innovation). Romania dropped in ranking from 68th place occupied in 2008 to 77th in 2011, the score remained 4.1.

Table no 1 – Romania Global Competitiveness Index

Years	Rank (of 139 countries)	Score (1-7)	Rank pillar 4- Health and primary education	Rank pillar 5 - Higher education and training
2008-2009	68	4,1	66	52
2009-2010	64	4,1	63	52
2010-2011	67	4,2	63	54
2011-2012	77	4,1	66	55

Source: *Global Competitiveness Index Annual Reports, www.weforum.org*

Regarding specific health indicators, infant mortality fell from 64th place in 2008 and was ranked 55 in 2011, life expectancy was ranked 55 for 2008 and for 2011 climbed to position 66. Enrollment rate in primary education has occupied the lowest place for 2008-2011, in 2008 when she placed at number 67, climbing then on 88. The most competitive period for Romania was 2008-2009, when enrollment rate ranked 34, and Internet access in schools was ranked 48, local services research ranked 63 and went down the 95th place in 2010-2011.

Concern for human health is part of the sustainable development strategy. A healthy nation in which prevails the wellbeing is the base of a props economy. That is why it is difficult to define separate the economic from the social, economy depends on the social relations and it is constant interaction with the environment.

Sachs (1999, Social Sustainability and Whole Development: Exploring the dimensions of sustainable development) argues that development itself is basically multidimensional, and therefore talking about developing "social" refers to a single element of the development of all other dimensions possible⁴⁶.

Hence (2003) defines social sustainability as a guarantee both for present and for future improvement of welfare (social, economic, environmental) both between generations, on the one hand, and within the same generation, on the other hand.⁴⁷ Therefore, this approach offers focus on improving social conditions from one generation to another, and the interactions between the three spheres of development-social, environmental and economic.

Social quality can be conceived as aspects such as assessing housing, health, education, income population.

Depending on the specialty, each of us is concerned about sustainable development from a different perspective⁴⁸: environmental biologists and ecologists consider primary side, economists put the forefront costs and prices, sociologists are more interested in income distribution.

⁴⁶Markku Lehtonen, *The environmental–social interface of sustainable development: capabilities, social capital, institutions*, Ecological Economics 49 (2004), www.sciencedirect.com, p. 202

⁴⁷ Markku Lehtonen, op.cit., p.203

⁴⁸ Pohoată I., op cit., p. 13

5. CONCLUSIONS

Ensuring sustainable development involves the implementation of economic, social and environment alike. How human being is the central element of the concept, should be considered positive effects on welfare.

The human factor contributes to economic growth through its participation in the processes of creating goods and services, so increased attention on human is essential. Negative aspect of social-environment relationship through lack of care for nature must be removed in the context of sustainable development.

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