FROM ECONOMIC DEVELOPMENT TO SUSTAINABLE ECONOMIC DEVELOPMENT

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Abstract:
The human being is the creator of resources, is the user technology, which enables us to place him on the axis of growth - economic development - sustainable economic development. This article presents definitions of sustainable economic development and the elements on which it is based: efficiency, progress, technology and innovation. Sustainable economic development is founded on eco-efficiency in production processes, aided innovation, technological developments, environmentally, exploitation account for regenerative capacity of nature. Thus, the term eco - efficiency merges ecological and economic efficiency. The limitation imposed by nature, aided by technology, urges companies to be resource efficient, consuming less in order to obtain quality goods and services. Innovation is the key for economic growth and development.

Keywords: *economic development, sustainable economic development, eco-efficiency, tehnology, innovation*
JEL Classification: O10, O31, O32

Introduction

The early 70s marked the creation of the "World Watch Institute" by Lester R. Brown, promoter of studies that reflect progress and the opportunity to structure a sustainable society. The term sustainable development started from the limitation of natural resources and increased awareness of pollution. The solution to stop economic development would be unthinkable (Limits to Growth Report solution), the new formula of economic development included care for the environment. Sustainable economic development is the economic development designed to satisfy present needs without compromising consumer or prejudice those of future generations.

Material and Methods

In achiveing this paper, the scientific literature materials were used.

Sustainable economic development

The term sustainable development is intended to ensure quality ascending detrimental increase in the quantity of goods produced and consumed (Pohoata, p.12). It is intended as a low resource consumption for a higher profit. From a macroeconomic perspective, the goal of sustainable development is reshaping economic growth, taking into account the conservation and enhancement of resources, reorienting technology, eradication of poverty, population growth at an acceptable level (Camasoiu, 1994, p.14). The intensive exploitation of resources must be avoided, aiming to replace non-renewable resources with substituents (Bejan, 2007, p.21).

The limitation imposed by nature urges companies, aided by technology, to be resource efficient, consuming less in order to obtain quality goods and services. The sustainable economy, as desired from Bruthland report, the new term "environmental technology" designed to remove harmful effects of early stages of technological innovation. Eco-technologies continue those stages of progress (but care for the environment prevails) represents innovation in support of the environment.

Environmental technologies include innovations in different sectors (air pollution control, waste management, water supply efficient, efficient lighting) which reduce raw material consumption and emissions. Reconciliation with the environmental

economic activities involving investments from eco-technologies that small and medium enterprises don't have. Therefore, the Commission encourages SMEs by establishing four organizational principles of environmental policy (Pirvu, 2007a, p.286): predictability - firms anticipate the actions to be able to adapt; integration - involves a combination of environmental policy with other policies; flexibility by economic agents to introduce the stringency of environmental policy in an effective manner; best cost-effect which supports the cheapest solution provided the principle of integration.

Small and Medium Enterprises that promote production and clean technology, renewable energy, technology water and energy saving demonstrates an approach to economic development that will last for generations (Teodorescu, 2013, p.3).

Innovation is key factor economic growth and development. Investing in technology is required in a knowledge-based economy, as provided Lisbon Agenda.

The research and development is beneficial both for the transfer of technology created in another country (foreign direct investment) and to develop their capacity for technological innovation. For indicator innovation research and innovation strength, number of patents, number of scientific articles are taken into account. In the context of globalization, characterized by the flow of information, foreign investors are required to direct capital stocks in production to R & D activities in parallel with the integration of IT and communication advanced techniques.

Economic sustainability indicator is the link between human sustainability and environmental sustainability. Economic sustainability indicators show that in terms of the health of the economy, future developments are favorable, but inconsistent, environmental sustainability indicators show an impairment of the health of the environment, resulting in negative effects on people's lives. To improve the development process, mankind must have access to the measures to counteract the negative and positive effects are superior potency. These measures include: creating a sustainable energy system, switch to recycling, waste reduction, reorganization of urban transport, a new approach to urbanization, regenerative operation of the foestier fund (Pirvu, 2007, p. 173b).

The combination of economic growth with social equity and environmental protection for present and future is the foundation of new forms of sustainable economic development, based on efficiency. It requires a sustained investment effort, high efficiency, high dynamics of total factor production. Achieving eco-efficiency criteria "to do more with less" (Zaman, Gherasim, 2007, p.140) consumption of natural resources, materials, energy and human resources is paramount.

To define an activity as efficient, the results must be analyzed. From the point of view of the consumer, the result is reflected by individual utility, and in terms of the manufacturer, the result is quantified by profit.

Generally, efficiency is measured by the ratio of the output results and the resources used. In the classical sense, economic efficiency takes into account only the profit, while eco-efficiency include benefits and costs that environmental incur.

Efficiency is expressed as a ratio of output (value of goods produced) and input (environmentalp ressures to produce such goods).

Indicators which quantifies eco-efficiency include GDP (a measure criticized, outdated, some believe that new indicators to be released); material usage rate (GDP / domestic consumption materials); energy utilization rate (GDP / final energy consumption); generation rate of greenhouse gas (GDP / emissions); waste generation rate (GDP / capita municipal waste collected). Unfortunately, people use resources provided by nature unconsciously. The repercussions were seen by damaging nature.

The desire for profit draws ecological insecurity. This means raising living standards today, but negative consequences in the future.

Economic efficiency criteria must be compatible with the eco-efficiency criteria to ensure opportunities of future generations, thereby achieving economic growth strengthened. Sustainable economic development is founded on eco-efficiency. Production processes, aided by innovation, technological developments, are environmentally. Exploitation take into account the regenerative capacity of nature.

Thus, the term eco - efficiency merges the ecological efficiency with the economic efficiency. Less resources are consumed (requirement of sustainable consumption) to get as many products, which is the desire for sustainable development (low consumption, maximum profit).

In an era of globalization, different definitions have assigned for the term eco-efficiency:

- eco-efficiency is achieved by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life-cycle to a level at least in line with the earth s estimated carrying capacity (World Business Council for Sustainable Development, *Creating more value with less impact,* 2000, p. 9)

- efficiency with which ecological resources are used to meet human needs(OECD, *Eco-efiiciency,* 1998, p. 7)

- strategy to get decoupling resource use and pollutant emissions by economic activity (Agenţia Europeană de Mediu, *Making sustainability accountable,* p. 24)

Eco-efficiency is sustainable patterns of production and consumption quantification. It is the way that companies show their responsibility towards the environment and society. The first call to social responsibility of the company was made at the Lisbon European Council in March 2000. One year later the term was mentionated in communication Green Paper - *Promoting a European framework for corporativ responsibility*.(table no.1). Corporate social responsibility is a concept which integrated environmental and social concerns in enterprises actions. It is based on voluntary and contribute to achieving sustainable development targets. The impact of this concept practiced by Small and Medium Enterprises is essential to achieving sustainable development on job creation, economic growth, ensuring the objectives of the Millennium Declaration.

Table no. 1

New responsibilities of enterprises in the context of sustainable human development

Internal	**External**
Investment in human capital: training employees on permanent education; ensuring good training of staff; promoting harmonious relations between work, family and leisure	company integration in the local community: providing jobs, income, cooperation with other enterprises
Discriminatory practices in relation to ethnic minorities	Human rights: promoting extraordinary relationships morally, legally and politically at the local level
Safety and health protection of workers in the workplace	voluntary involvement compliance with global environment clean
Management of natural resources and environmental impact: reducing the consumption of natural resources, reducing pollution, reducing waste water, practicing win-win relationship opportunities (good for business and good for the environment)	

Source

Green Paper, Promoting a European framework for corporativ responsibility, European Commision, Luxemburg, 2001, p.8

Eco-efficiency is the characteristic of economic process resulting welfare of citizens by offering quality goods and environmental protection through the judicious use of natural resources and lowering emissions. Economic efficiency is the way to harmonize economic development with environmental protection resulting needs of present and future generations. World Business Council for Sustainable Development has identified the criteria that a company must satisfy in order to demonstrate eco-efficiency: the volume of materials, energy and dispersion of toxic substances will be required to declining values and quality of service, sustainability products, use of renewable resources, recycling should be increasing values. Analysis of these criteria show that eco-efficiency is based on three objectives: reduce resource consumption, reduce environmental impact and increase product value.

The human being is creator of material resources, the user of the technology, which enables us to place it on the axis of economic growth - economic development - sustainable economic development.

At the global level, knowledge is the decisive factor of the new knowledge economy - support increased competitiveness and sustainable economic development. For a country's development, scientific and technical progress is an important factor. Trained people have the ability to combine the factors of production efficiently. Qualified human resource uses his superior knowledge and training to improve economic performance. Human attitudes and behaviors should support economic growth where resources are self-managed. Traditional behavioral attitudes sometimes faulty, need to be rethought in order to achieve sustained economic development. Economic policy will give endorsement local cultural values that they are in full agreement with the decisions taken to preserve and protect the environment.

Technology is the source of the progress of human society. The evolution of society was based on technical discoveries. Sustainable economic growth is considering resource conservation and resource enhance through technological restructuring. This objective is very important because it has a control function; new technologies are checked properly, evaluated in terms of risk.

Technological innovations follow each other, as Joseph Schumpeter said, in a regular rhythm, each wave lasting 40-50 years. The first phase of the cycle, innovation, leads to economic growth, the second phase is routine of innovation, profits decrease. Each wave corresponds to the installation of a techno-economic paradigm in which there is a need to address a new set of technologies to relaunch economic progress(Freemna, perez, 1988, p.40).

Conclusions

The term sustainable development started from the limitation of natural resources and increased awareness of pollution.

Sustainable economic development involves combining efficiency and innovation in technological processes. The combination of economic growth with social equity and environmental protection for present and future is the foundation of new forms of sustainable economic development, based on efficiency. It requires a sustained investment effort, high efficiency, high dynamics of total factor production. Innovation is the key to economic growth and development. Investing in technology is required in a knowledge-based economy, as provided Lisbon Agenda. For the development of a country scientific and technical progress. is an important factor. Trained people have the ability to combine inputs efficiently. Qualified human resource uses his superior knowledge and training to improve economic performance.

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