

Long-Lasting Development – Basic Principle of Economic Development of Romania

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Abstract

In order to have long-lasting economic and social development in any field, the economic and the other socio-human, cultural, ecologic, technological aspects must be compatible. Any economic and social development must take into account the complex nature of the system as well as its interdependency and correlation with other systems.

Keywords: long-lasting development, potential, technology, systems, research.

1. Introduction

The Brundtland report refers to a type of economic development which “*meets the needs of the present generations without compromising the next generations’ possibility to meet their own needs. Meeting the present needs is the major objective of this development concept. In order to be a long lasting development, it needs to meet society’s future basic needs*”.

The essential components of a strategy for long-lasting development are clearly defined. They foresee the stability in the growth of population, reduction of oil dependence, energy conservation, promotion of regenerated energy resources, soil preservation, protection of the Earth’s biologic systems, material recycling.

Great international debates took place regarding the definition of long-lasting development as well as the establishment of new operational principles and objectives. In this way, the classic economic theory has grown old and the global economic analysis has become the grounds for promoting long lasting development. The starting point and end point of economy is value as it is based on labour, use and actual existence of matter (substance, energy and information).

2. Economic reform and long-lasting development

Long-lasting development can be considered as genuine values generator if it can lead to social and economic development in harmony with nature. In other words, long-lasting development is a continuous process of social change a global, regional and local levels with the purpose to ensure any opportunity for the present and future generations for better living standards. The economic recovery cannot be done without a coherent approach of interdependencies

between economic reform and long-lasting development. By particularising this issue to our theme, we can highlight the fact that ecologic-lasting economic and social development means to adjust the economic growth within the nature's limits and economic growth, as a result of economic reform is possible only on sturdy economic foundation.

The alternative to long lasting ecologic protection equally regards the industrialised and the developing countries. Let us just remind of two elements of social and economic discomfort such as waste and poverty and we shall notice their universal and applicability to both groups of above-mentioned countries.

In the case of long-lasting development, the important approaches of economic reform are: development and use of a more ecologic reasonable technology change of consumption habits, values and life style.

Each process initiated with the help of economic reform must be correlated to long-lasting development in order not to compromise the economic recovery. For example, the process of uncontrolled population growth worldwide could cancel the positive effects of all these measures.

From an ecologic point of view, long-lasting development aims to reach and maintain the welfare material level, which is *long-lasting economic development*.

In conclusion, this concept defines a process of changes where factors such as human and material resources exploitation, investment use, technology development, change of institutions are consonant and raise the present and future potential to meet human needs and goals. There are numerous elements that avoid this way of long-lasting development but the main correlation that has to be observed is demographic harmonization with the changing reproductive ecosystem. This correlation is as much more important as on the one hand, the population exercises pressure on the ecosystem and on the other hand, the technologic potential – which depends on the characteristics of this population – differently influences the agreement between the society's desires and the possibilities offered by the ecosystem. There is a tight connection between the consumption standards for the population and the level of economic development. Long-lasting development means to promote the values which encourage the consumption standards without exceeding the limits of economic possibilities which all members of society can aspire to.

The Brundtland Report visions seven objectives of economic and social politics in order to fulfil long-lasting development, that is:

- redimension of economic growth by preserving natural resources;
- modification of economic growth processes;
- meeting the essential needs for labour, food, energy, water, housing and medical assistance for all inhabitants;
- ensure a level of controlled growth of population;
- preserve and growth the resource base;

- restructure and control of technology;
- integration of decisions regarding economy, energy and environmental protection in a unique process.

The concept of long-lasting development considers that ecologic problems must be solved by taking into account the possible markets, new products and techniques as well as production performance.

Long-lasting development considers that the development of new products, technology and production performance must be done by taking into account the aspects of carrying it on, laying the grounds of an active research-development sector and a marketing sector capable of valorising the new eco-products and eco-technologies.

In conclusion, long-lasting development remains a basic concept for the economic development, resource exploitation and environment quality.

As a long-lasting process, long –lasting development must take into account the establishment of certain objectives and premises which regard the following aspects:

- intensity of the pollution phenomena, as a consequence of economy structure, especially industry based on polluting technologies;
- the existing legislative framework as well as the degree of low ecologic education among the citizens;
- low degree of environment protection infrastructure use at national economic level;
- existence of a polluting structure of the industrial sector and especially the energetic sector due to the resources used; the existence of possible economic activities which generate benefits, regarding the environment protection.

In order for Romania to develop an economy based first of all on the use of non-polluting technologies, meant to maintain the level of international standards for a clean environment, it is necessary to take into account a series of favourable factors, capable to fulfil the desired objectives.

For this, we can count the following factors:

- Romania's political option to be part of the economic structures of the European Union.
- The need to integrate Romania in the world ecologic performances (eco-products and eco-services).
- The existence of a great number of unemployed who can orient towards the protection of the environment.
- Decrease of the unnatural reserves can be attenuated by means of growth and their efficient use, buying recovery, recycling, reconditioning and valorising of different used products in order to allow the possibility to preserve the existing natural resources to a greater extent.
- The existence of a national research-development potential in the environment protection field, specialised learning, and industry ability to build tools necessary for this field.

3. Long-lasting economic development entropy

The theoretical contributions with regard to the long-lasting development were also approached by the “third millennium economist”, Nicholas Georgescu-Roegen, who introduced the laws of thermodynamics second law to economic theory. While mainly using these concepts, the expert considers that in any process of economic and social development we have to deal with an irreversible degradation in the energy quality.

Thermodynamics is a branch of physics which mainly deals with the processes through which heat, a form of energy, as well as other energy forms (mechanical, chemical, electrical and so on) turn from one into another.

Based on two postulates and three principles which make up its axiomatic basis, thermodynamics is used to explain certain phenomena and processes which exceed the classic aspects. In this way, the need to explain the economics of biological processes determined Nicholas Georgescu-Roegen to formulate the fourth thermodynamics law.

This law was necessary in order to generalize matter’s entropic transfers. Nicholas Georgescu-Roegen’s fourth law of thermodynamics is defined by two alternative expressions:

- The indispensable matter cannot be recycled;
- A close system (that is a system which cannot exchange matter with the surroundings) cannot continually work in a constant pace.

By starting from the definition of entropy as a measure of energy quantity which cannot be converted to mechanical work, Nicholas Georgescu-Roegen considers that an entropic system can be extended but never reversed. The extension of an entropic system is done with the help of technology which provides low entropy necessary in the production processes (matter transformations and adaptation).

The economic process continually needs a support source and remake of the entropy flux. The economic system just like the biologic system changes its high entropy inputs with low entropy outputs with the environment.

In other words, entropy represents the turning of order into disorder. Economics’ shortage originates in the limited nature of resources and entropy irreversible degradation. The continuous flux o flow entropy is the support of all physiological activities of living structures and economic processes¹.

The expert considers that the production processes generate social misunderstandings and energy loss (for example, military expenses are on the top in this kind of activities) due to the “dislocation” of order with top of the art tools by people who are daily under the pressure of

¹ Georgescu, N.R. (1979). *Entropy law and the economic process*, POLITICĂ Printing House, Bucharest.

ensuring their living. Thus, we can see how man through different technologies, becomes his own enemy. In this way, man can be considered a destroyer of his environment and a destroyer of his own existence.

All these aspects where human activity transforms low entropy into high entropy are meant to project a dark future lacking any ecologic perspective. The present market mechanisms are not able to attenuate future ecologic crises and even less to best allot resources between generations. For this reason, high technology as well as the politics of technology transfer is solutions which can ensure a “clean” economic development or long-lasting development.

In a technologically unprepared community, any attempt to introduce high technology fails. Also, for the emigrants whose professional training does not meet these technologic standards, the end is the same. For this reason, economic growth is a global phenomenon where economic and non-economic factors are interdependent. In other words, the economic process is a process which at the same time produces and receives entropy and information and whose economic and social result is governed by the laws of entropy and information. As a result of this exchange, an entropic deterioration of the environment takes place.

The entropy law shows us that both energy and matter cannot be used but once and time, as a factor of measurement for irreversible, non- stationary effects shows the change in entropy from core to dissipation from order to a growing disorder. At the same time, *labour* represents energy expense and the progress made with the help of new technologies makes labour more effective. In this way, the energy flux is obtained easier. For example, within certain metallurgies and ferrous metallurgy in the U.S.A. 20% of total investments must be spent on equipment for pollution control.

Shortage, price high and fast rise, growing pollution and waste are phenomena of worldwide energy crisis which show how much has entropy grown within non- renewable energy. For this reason, the economic development model previously presented has led to *acceleration of entropic processes due to mobilization of renewable resources to a point where they themselves have become non - renewable resources.*

4. Global efficiency and long-lasting economic and social development

In Romania, the approach of economic and social efficiency within the context of long-lasting development has led to reorientation of the economic theories starting from the following limits²:

- The economy has neither dealt with nor built analysis nor decision indices for natural and ecologic resources.

² Gifillan, S.C. (1952). *The Prediction of Technical Change*, in the *Reviews of Economics and Statistics*, vol. 34, pp. 368-385.

- The economy was influenced by a static vision on resources by not taking into the economic account the variables related to resources dynamics (thus, lacking the vision of preservation of human and material resources in the long-run).
- The interests system generated by the form of private property has focused on financial profit of the invested capital and in the absence of the state's firm and effective intervention it neglected ecologic equilibrium, insurance of resource reserves for a longer extent of time and observation of regeneration cycles of certain resources (such as the woods).
- The economic theories which so far ignored the report between the resources' exhaustible nature and the demographic movement; thus people operated with a false principle regarding the eternity of the natural resources, which in present has led to aggravation of the energetic resources, raw materials and deterioration of ecologic equilibrium management.

In this way, a new theory of global economic effectiveness is necessary. It should be built at least on three fundamental principles:

- a) The systemic approach of the national macro space (with possibility of extension to the world space).
- b) Taking into the economic calculation of all types of resources either input or output in the economic circuit.
- c) Watching the efforts and effects in the nature-nature cycle.

5. Conclusion

The experience of the developed countries of the European Union, as well as the practice will ease the filling in of the necessary legislative framework and the necessary instruments for its observation.

Long-lasting (healthy) development represents a national economy's ability to have equilibrium of the social, economic, technical and environmental points in the development process. According to the way long-lasting development is understood, as well as the application of the concept, there can be a *"long-lasting development politics where consumption and production are done by preserving the resources and qualities of the environment"*.

In this way, it is absolutely necessary for the present stage that at national level to lay the grounds of a governing organism capable to create an equilibrium of the economic, social, technical and environment factors according to the provisions and sector burdens of Agenda 21 adopted at the UNCED conference from Rio de Janeiro in 1992; with this occasion it was decided to lay the grounds of a long-lasting development commission as a UNO organism in order to implement the measures comprised by Agenda 21.

In countries like Austria, Canada, China, Finland, Germany, Italy, Japan, Switzerland, France, Spain, Sweden, USA and so on, there are these kinds of organisations generically called National Council of Long-Lasting Development.

With the National Council of Long-lasting Development in Romania, there will be fulfilled an evaluation of the economic consequences, costs, effects on health of the population and environment as well as highlighting the possibilities of international cooperation related to Agenda 21³.

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