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THE RELATION PRODUCTIVITY - ENVIRONMENT IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT – CASE STUDY ON THE ROMANIAN INDUSTRY

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The purpose of this paper is to enhance the understanding of the relation between productivity and environment in the context of sustainable development, with a case study on the Romanian industry. The approach of this subject became of utmost necessity in turbulent times such as the one Romania is facing nowadays.
Firstly, it provides a theoretical approach on sustainable development; secondly, it presents sustainable development as a key element in nations' growth and thirdly, it emphasis the aspects concerning the relation productivity - environment in the context of sustainable development, with a case study on the Romanian industry.

Key words: industry, sustainable development, economic dimension, productivity, Romania

INTRODUCTION

Even though it was used in the early 80's at the International Conference on Environmental Conservation and in the United Nations Development Programme (U.N.D.P.) texts, the term "*sustainable development*" was launched with the publication of the Brundtland Report published by the World Commission on Environment in 1987 entitled suggestively "Our Common Future". Advocating for the reconciliation between economy and environment, the report aims to find "*a way forward to support human progress not only in a few places for a few years, but for the entire planet and the distant future*" [1].

SUSTAINABLE DEVELOPMENT – A THEORETICAL APPROACH

The concept of "*sustainable development*" was accepted in this form and further analyzed at the conference on the same subject organized by the United Nations (U.N.) in Rio de Janeiro 1992 [2]. Then, for the first time, this notion achieved the desired connection between positive and normative, between science and policy; from that moment on scientists considering it a reality that cannot be ignored [3].

Sustainable development involves a different treatment concerning its level, its approach and its understanding. Thus, for developed countries [4], the issue of pollution remediation and the improvement of life quality implicate transformation, adaptation and modernization. Changing the type of growth in these countries represents a common effort: political, technological and at the resources level, which means that the chances of success are very high. For less developed countries [5], the real problem is survival and not modernization. In most cases, the key issue is not the quality of life but life itself, survival, so it is understandable why the priority order in dealing with sustainable development policy in these countries is far different than in developed countries. There is a vicious circle: the production structures arrears polluting negative, the consequences of soil degradation, the water problems, the financial situation and other aggravating factors. In this current conditions, the circle has no chance to break due to the reduced rate of growth which is responsible for the not released funds for investment in anti-pollution control equipment and technology, for technological restructuring, institutional and managerial action.

Jan S. Hagendorn believes that "*the idea of sustainable development is more convincing if interpreted as a specific growth rate can be difficult to sustain if the environment is degraded, or if increasing income inequality leads to revolution, or population growth escapes of control, or if agricultural land is fragmented and thus reduces productivity*" and "*unsustainable development is development in which environmental impacts affect growth*" [6].

SUSTAINABLE DEVELOPMENT – A KEY ELEMENT IN NATIONS' GROWTH

Achieving the sustainable development goal requires:

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a) Ensuring sustainability for economic growth for all countries, without exception;
b) Placing individuals, with their diverse needs, in the spotlight;
c) Creating a way to set general policy, sustainable development takes a practical garment via national specificities of each country;
d) Ensuring simultaneity on all dimensions of the process of sustainable development is based on the premise of inter-conditioning elements related to the technology law [7];
e) Technically speaking Brundtland report includes: basic requirement for the conservation of natural resources;

eliminating poverty and ensuring working conditions meeting basic needs, food, energy, water, housing and health; orientation growth process towards a new quality; providing a controlled population growth; conservation and enhancement of natural resources, monitoring the impact of economic development on the environment; restructuring of production technologies and maintaining control of their risks; ensuring an integrated approach to decisions on economic growth, the environment and energy resources.

Strategic management of sustainable development requires, in addition to long-term targets (15 - 20 years) made compatible with those on short and medium term, by applying a set of principles and criteria effectively and internationally validated, as follows:

- Integrated management approach [8] requires a consistent and holistic manner concerning the processes of production, processing, transportation, distribution, storage and use;
- Inter-generations fairness is a requirement;
- Caution in creating proper decision-making tool is needed;
- Addressing lifecycle of goods, services and technology evaluates the environmental consequences resulting from the economic effects related to different stages of processing and recovery market products;
- Prevention involves stabilization of damage to human health and natural capital for economic phenomena and processes that could be prevented through investment and modernization costs, repair, treatment or compensation [9];
- Substitution involves replacing inefficient products and services with more efficient and less environmental damaging ones [10];
- The principle the "polluter pays" or the internalization of external marginal costs (negative externalities) [11];
- Internalization of positive externalities (external marginal benefits) related to the use of a corrective subsidy scheme, incentives for marginal activities that benefit third parties, without their pay [12];
- Participation requires unrestricted access to environmental information and resources, with certain exceptions justified (e.g.: confidential business information);
- The principle of good governance requires that state authorities and institutions to operate transparently, efficiently and honestly, in terms of preventing and penalizing pollution and promote the environment protection [13];
- The private-public partnerships and public-private cooperation are based on direct inter and intra-institutional, stakeholders (stakeholders) represented by public authorities and institutions, NGOs, groups and industrial firms, networks and business people [14];
- The cooperation between states includes common but differentiated responsibilities according to the development level of the country [14, 15].

PERFECTING THE RELATION PRODUCTIVITY - ENVIRONMENT IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT – CASE STUDY ON THE ROMANIAN INDUSTRY

After analyzing the Romanian industry methods and modern techniques, with the accent on the metallurgy sector, it becomes clear that transformation is a must. The essence of this process lies in a multilateral dimension: if maybe 20 – 50 years ago it seemed enough to consider a small number of factors (such as labour, capital or innovations), in the contemporary world are necessary convergence and deeper correlations between the whole categories of factors that influence the development at a "sustainable" level.

Regarding the relationship productivity-environment, a wide range of factors are worthy of consideration and they vary according to each type of industry (industry – with the accent on the metallurgy sector, services, agriculture and so on, as well as to its extent organizational, regional, national, international). Nevertheless, conclusions and practical tests and analyzes in this domain shows that the link between the two is the economic component and the underlying cause of efficiency is how information is propagated from one level to another, conditional causal relevance and accuracy of the data collected to obtain accuracy, consistency.

In terms of quality, it can be said that the approach to development has transformed itself, being outlined by a process based on at least three major components: economic, social and environmental (the sustainable development concept). Similarly, the level of strategic management, policies and action plans provide a plenitude of new concepts, holistic, encompassing solutions and targets as well as the information society, increasing competitive, innovative and knowledge-based economy.

In this context, the productivity-environment relationship goes beyond simple labour analysis, productivity or economic development, with an emphasis on the metallurgy sector, using in practice a wide range of methods and techniques of complex analysis of the in-

terdependence of economic, social and more new environment, based on providing different scores and ranks based on excellence.

CONCLUSIONS

Concerning the future of Romania's industry, and especially its metallurgy sector, seen as a perspective of the year 2020, there are a number of aspects that should be taken into account: technology should become "green", "clean", more friendly to the environment and adapted to the climate change policies; productivity becomes important for effectiveness (demonstrated through the implementation of innovative technologies and modernization of operating, maintaining or adjusting the environmental components); the key factors are the air, the water and the soil, which should not be affected by productive activity.

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Note: The responsible for the English language translation is the lecturer from the Commercial Academy of Satu-Mare, Satu-Mare and Bucharest University of Economic Studies, Bucharest, Romania.