

## BENEFITS, COSTS AND LIMITS OF ECONOMIC INCREASE

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### **Abstract**

*The macroeconomic situation of a nation cannot be characterized just by the equilibrium conditions of its economy, but especially by the growth level and rate of the gross domestic product or the national, total income and per inhabitant. These are at the base to ensure the resources to raise the life standard of people, and for the overall progress of the country, for its honorable placement or framing in the national economy.*

*The oscillations of the economic activities and the long term trend interweaved along centuries. Looked in a millenary retrospective by “L’Histoire” known magazine, they appear like: “while the brutal, short-term crises are well sighted, and the tri-decennial cycles have been defined by the Russian economist Kondratieff and are admitted, the long term movements are less known, those trends which make the succession of “The beautiful of the XIV century”, “The gloomy of the XVII century” and the XIX century, considered “grey”, the extraordinary of the XX century, the economics and economic historians are far from agreeing on the reality of these long movements, and if they admit them, they separate on their profound causes.”*

**Cuvinte cheie:** *economic growth, economical development, durable development, benefits, limits*

### **1.Introduction**

In this chapter, the object of analysis is exactly represented by the causes and factors determining the long-term movement, called *economic growth*.

Despite the fact that the XX century knew the two world wars and confronted with the largest economic crisis known by the world economy, it is often equated with the “economic happiness” and considered as “the economic growth century”, in which “the scale of human activity encountered in a continuous expansion, reaching levels that could not be imagined in the previous centuries”.

The gross product per inhabitant increased with over 2% in average, per year, on all industrial countries, of which: 1,2% in the period 1913-1950; 3% from 1950 until 1973 and 1.8% from 1973 until now.

The most important among the neokeynesian models are: *the Harrod model*, where the essential role belongs to the investment and saving function; *the Solow model* based on what is called the flexibility of the accelerator or the coefficient of capital and *the Cambridge model* (J. Robinson, N. Kaldor), constructed by taking into account the extension possibilities for saving and investment in employees.

A different category is represented by *the optimal economic growth models*. The essential problem of their elaboration is represented by the adoption of an *optimization criterion*, which can be the utility function of the consumption and taking into consideration a restriction system. *The Ramsey model* is in this category, in which is optimized the utility function of consumption, *the I. Tinbergen model*, based on the consumption share function in time and *acad. Emilian Dobrescu model*, in whose center is the maximization of the fund of social welfare, containing both consumption and the investments with social-cultural destination.

Denise Flouzat mentioned, referring to the maximization of the consumption fund in a time, that in the neoclassical models, the saving cannot act on the growth rhythm of product, but because they act on the national income distribution between consumption and investments, it acts in the consumption and concludes: “Either, the consumption maximization per inhabitant may represent an optimal growth object, otherwise, the variable to maximize becoming the stock of capital. As a consequence, the last aim of production growth being the improvement of the populations’ standard of life, the objective of optimal growth consists in the consumption maximization *per capita*, establishing the conditions of an equilibrated and self-maintained increase”.

Finally, I also draw the attention on the *integrated economic growth models – structural type standards* – that also take into account the protection of the natural environment, which either introduce the regional development programs (Cumberland model), either which operates a separation between the human sector (economic) and the non-human sector (ecologic), or they introduce an antipollution industry in Leontief’s input-output table.

## 2. The economic growth

Types of economic growth with and without technical progress are outlined in these models or theories; models taking into consideration the demands on environmental protection (or the ecologic function); models of optimal economic growth, where an optimization criterion is satisfied together with the increase of the gross domestic product or the national income, which can be the maximization or minimization of a well-determined economic parameter.

From the point of view of *resources or factors on account of which is obtained the economic growth*, there are distinguished: *extensive economic growth*, in which the major contribution is for the quantitative growth of used production factors and the *intensive economic growth* mainly based on the quantitative factors and on the majority contribution of economic efficiency.

From the point of view of usage degree of possibilities, there is made a distinction between the potential economic growth, which has the *possible maximum* rate of national production growth with *available* means and factors, in terms of their full usage and the real economic growth, obtained based on the effective usage level of factors. These concepts are used to characterize the dimensions of losses resulted as a consequence of crisis and unemployment.

The development of the human society and especially the existence of the countries with modern economy highlight an idea with value of economic law: “*the economic growth is the unique and powerful motor generating growths on long term of the standard of living*”.

The economic growth finds its expression in the size of GDP or the national income in the most concentrated form, and through this, in the multiplication of the consumption and development possibilities of a nation.

The calculations from the table no. 1 are edifying, reproduced from the mentioned English economists.

**Table no. 1: The cumulative effect of growth**

Year	The growth rate per year				
	1 %	2%	3%	4%	5%
0	100	100	100	100	100
10	110	122	135	165	201
30	135	182	246	448	817
50	165	275	448	1.218	3.312
70	201	406	817	3.312	13.429
100	272	739	2.009	14.841	109.660

As it can be seen, the small growth rates (rhythms) can determine large and very large differences in the levels of the national income during some decades. So, starting from the 100 level, in a growth rate of 3% per year, the national income increases to 135 (so with 35%) in 10 years and of 4,48 times in 50 years. Even a growth rate of only 1% per year doubles the potential national income in a normal life of 70 years.

The growth of the national income is reflected in the working and life conditions of people by the repetition relations. With all the differences that appear by these relationships, in general, together with the economic growth increase both the individual incomes and the resources available for investments; simultaneously with the increase of material good and service mass.

Looked on a graphic of economic possibilities, the aggregate demand curve and the aggregate offer curve *will move to the right*, highlighting the increase of the possibilities or available resources. The resources increase in this frame, based on the economic growth, mobilized through the budget, at the disposal of the society.

For the countries that register great economic difference compared to those developed ones, the sustained and duration economic growth is a decisive factor of moving these differences. Based on the data from the above table, it can be established, for example, that if two countries, A and B, start from the same development level (the national income per inhabitant) and if in the country A, the annual growth rate is of 3%, and in the country B, is of 2%, per year, “the income *per capita* of the country A will be *double* compared to that of the country B in 732 years. You can believe that it does not matter too much if the economy increases with 2% per year, but your children and nephews will be affected”.

The economic evolutions on long term and especially from the last century highlight the essential role that the percentages of the rates of economic growth have, registered by the countries that consolidated a lot the platoon of the developed country. The data from Annex no. 4 of this volume highlight the much differentiated evolutions, on countries and in time, of the growth rhythms of GDP in the period 1960 – 2013. In the period 1960 – 1973, the rhythms were generally high, later reducing a lot, in some countries registering negative values. Those data show more how much the few percentage points (1, 2, 3) counted in the practical plan to the registered growth rates, especially in the period 1950-1973-1979 by Japan, Australia, Austria, Canada, Denmark, Finland, Norway, Portugal, Spain and Greece.

The economic dynamism of the industrialized countries based on few solid pilots: *respect for the great economic equilibriums; saving and great investments for the technical team and modernization; great investments in the human capital; intense and comprehensive innovations; wide opening towards the world market.*

The change of the classification in the world economy is also edifying for the economic progress, as a consequence of the rapid evolutions from the South-East Asia. The success of these countries based on the depreciation

of the leverages and mechanisms of economy on the market with the state interventions and, especially, on consequently respecting and promoting some fundamental principles, where on the first place are situated: maintain the “great equilibriums”, reduced inflation, high saving and moderate consumption, healthy public finances; great investments in the workforce training; consequent and ample promotion of technical innovations; active opening on the world market; free prices to adjust in the property right protected by the law; stable political system.

The performance of a *real, sustained and healthy economic growth on long term* is the only solution for the approach to the developed countries, especially for more active affirmation in the world economy more and more independent and global for the less developed countries. The actual conclusion formulated by the theoretician of the economic growth, the American Lester Thurow, professor at M.I.T., is and remains actual: “the history of the richest countries of the world reflects an iron law of the economic development. No country can become rich without a century of good economic performance and without a slow increase of population”.

*The economic growth implies many efforts, as well as economic and social costs.*

*First of all*, it is about the *allocation of greater resources to sustain the economic growth, by investments in the fixed capital*, to replace the production and reengineering, in accordance with the technological progress.

These investments and modernizations lead to increasing labor productivity and on long term, to creating jobs.

*Second of all*, a dynamic economy amplifies the structural modifications, requiring raising skill and update level of professional development, as well as requalification and retraining of those that have to change the activity by reorganization.

Generally, the expenses with education and investments in human factor grow. Often, these investments do not determine an immediate benefit, under the form of goods and services for consumption, involving sacrifices for the actual generation of consumers.

Thus, the English professors Richard Lipsey and K. Alec Chrystal say: “the economy allowing more goods tomorrow is touched by the consumption of less goods today. This sacrifice from the actual consumption is a *primary cost of growth*, for the economy as a whole”.

In order to illustrate this idea, the authors start from the example of an (hypothetical) economy, having a full use of workforce and registering a growth rate of 2% per year, and the its citizens consume 85% from GDP and allocate 15% for investments. If the consumption reduces to 77% from GDP, allocating for investments the rest of 23%, it will grow the fixed capital and will increase the growth rate to 3% per year, leading both to total GDP growth, and to increase the population’s consumption; in the tenth year, the annual consumption performed in a rate of 3% starts to exceed the one performed to a rate of 2% and grows faster, the accumulated gain in consumption amplifying considerably, as it can be seen from the following table (no. 2).

**Table no. 2: The opportunity cost of growth**

Year	1 Consumption level in a growth rate of 2%	2 Consumption level in a growth rate of 3%	3 Accumulated gain (loss) in consumption
0	85,0	77,0	(8,0)
1	86,7	79,3	(15,4)
2	88,5	81,8	(22,1)
3	90,3	84,2	(28,2)
4	92,1	86,8	(33,5)
5	93,9	89,5	(37,9)
6	95,8	92,5	(40,8)
7	97,8	95,0	(43,6)
8	99,7	97,9	(45,4)
9	101,8	100,9	(46,3)
10	103,8	103,9	(46,2)
15	114,7	120,8	(28,6)
20	126,8	140,3	19,6
30	154,9	189,4	251,0
40	189,2	255,6	745,6

An essential conclusion depends on: the transferred resources from the consumption to investment goods reduce the actual income, but increase the future income.

Another conclusion that comes out from these data concerns the consumption possibilities and a characteristic of economy – generosity; it is much more simpler for an economy in sustained, durable and healthy growth, to be generous to its citizens, especially with the many and the few wealthy, than for a static economy and more for one encountered in rest or in crisis.

The dynamism of modern contemporary economies needed and needs great investments. The data referring to the rates of investments are edifying for the gross formation of fixed capital in GDP, registered in the developed

countries (members of O.C.D.E.), in the postwar period (1960-1992), when they requested between 34 and 31% in Japan, 25-20 and 23% in Germany (R.F.G.), 23 and 20% in France, 26,4 and 24,6% in Austria, 26 and 20% in Finland, 29 and 19% in Norway, 28 and 24,8% in Sweden, 25 and 20% in Australia.

In Romania, the gross rate of forming the fixed capital registered the following evolution: 29,9% in 1989; 19,8% in 1990; 14,4% in 1991; 19,2% in 1992; 17,9% in 1993; 20,3-21,4 and 23% in the next three years, 21,2% in 1997 and 18-19%, between the years 1988 and 2013.

The economic growth also confronts with certain limits, analyzed a lot in the theoretical and political, internal and international debates, and which are especially appealed by the opponents of economic growth. The most important are:

- 1) the limited and exhausted character of resources;
- 2) the tendencies and aspiration of many people for consumption that cannot be sustained with the existing technologies;
- 3) the resistance and difficulties met by the economic and organizational structures in exchange and renewal;
- 4) the inefficiency and losses from the economic system, limiting or reducing the growth rates;
- 5) the impact of economy on the environment and pollution.

These limits are not insurmountable, but their overcome implies efforts, dynamism and especially correct strategies and actions, as well as a corresponding climax from the social and political point of view.

### 3. The relation between the economic growth and its social-political finality

The relation between the economic growth and its social-political finality was and is debated a lot in the economic literature. It is very important to also take into account the people's access to the harvest of the economic growth and so the way in which the distribution of national income is made.

A much more debated problem in the literature was that of the causes and especially of the implications to reduce the growth rhythms or what it is called "weak growth" ("la croissance molle") – in many cases, it being even negative – which characterized many of the industrialized countries, in the first half of the 90s.

As it cannot be outbid the reality of the "Thirty glorious years", it cannot be extrapolated for the future the practice of the "Twenty mediocre" (from the last decades). Approaching this theme, Jean-Paul Fitoussi, professor in the Institute of political Studies of Paris and leader of the French Observer of economic circumstances, remarks in 1996 that the future of growth might be more casual as it can be believed or thought. "Provided that - he says - to understand the profound resorts (of those evolutions - n.a.) and *that it is going to be stopped the opposition between economic and social: their intersection represents the privileged place of democracy and necessarily outlines a third path*".

By "weak growth" it is understand *the situation in which the economic growth rate is sustainably inferior to the one that would unfold from a normal utilization of productive resources of the country*. No one can sustain in a credible way that the one percentage growth rate in the countries like France, Italy or others correspond to their actual potential, but the persistence of these rates in the 90s is the proof of installing the weak growth. The causes of this "tendentious" phenomenon are encountered in the changes especially appeared in the economic-social climax of economic growth. On the one hand, the main characteristic of the "current epoch" is represented by the dominance of employers, entrepreneurs on the labor market and of the creditors on the financial market. On the other hand, labor scarcity and the fragility of the situation of middle classes accentuates the structural weakness of consumption and equality of chances, and the budgetary, monetary rigors and the wage moderation – the "three pillars of weak growth" from the first half of 90s – make more difficult the struggle against the public deficits.

The factors of economic growth are the same: raising the average level of elasticity; increase of capital stock; technical progress; ceaseless search of some new cooperation and organization modalities of the society. It is necessary in the *author's vision a new philosophy of development that puts the economic growth in the center of theory and practice, before all, the imperatives of finality or the sense of economic growth and the preoccupation for reducing the imbalances from the social structure*, by politics reducing inequalities and encouraging the economic growth.

The third way presupposes that "at least two conditions to be met: on the one hand, that the macroeconomic politics never to give up to arbitrate between the fundamental objectives, especially watching on the force equilibrium of the labor market and, on the other hand, as structural politics not to be inspired by resignation, but, on the contrary, to be sustained by the ambition to reach a superior social contract form".

The debates on this theme became particularly active in the second half of 90s, stimulating the high and prestigious spirits. There are remarkable in this sense, John Kenneth Galbraith's considerations for which the responsibility for the economic and social welfare must be looked not only as a *primordial concept, but transnational*. "The perfect society" (whose main characteristic was mentioned in the first chapter of the present book) that the American teacher speaks about, cannot have as base but a *healthy economy*, between the base features of this necessarily entering the following: "all member of society have the possibility to work"; establishment and operation of the aggregated demand "is a vital factor"; the reduction of taxes and interest rates and the "direct and dynamic" intervention "of the state" to stimulate the demand, production and creation of jobs; combating and preventing

inflation, as well as the control on the budgetary deficit, an equitable distribution of income and power; combating poverty; the development of education and democracy; environmental protection.

The economic growth is in close relation with the structure of the national economy. On the one hand, the dimensions and the intensity of the economic growth is in direct relation with the way the existing structure of the economy operates, conditioning the amplitude and especially the efficiency of the use process of production resources and factors. On the other hand, the amplification of wealth and resources, and the different economic growth rhythms favor and involve the structural transformations, the dynamism of structure, also encountered under the action of new technologies and of trends of globalization of world economy.

It is said that in the economic literature, at origin, the concept of structure belongs to the vocabulary of architecture. Today it speaks of geographical, economical, productive, social, political, mental structures by extension. It is mentioned that there were inventoried over 40 senses attributed to the concept of structure still from the 70s.

The structure is a permanent component of a system and it represents *all the dissociations that theory and analysis performs in the system*.

If we start from the national product (income), as a result of the activities developed in the national economy, there can distinguished many levels of analysis:

1) economic-legal structure, determined after the property form of companies where are developed economic activities;

2) functional structure, established based on the final destination that the national product (consumption, investments, export) receives;

3) economic-productive structure, grouping the activities on economic production sectors and branches of GDP;

4) physical structure where the detailing or dissociation of activities is based in types of products and services;

5) geographic structure, where the classification criterion is represented by the regional (territorial) placement of good and service production.

*The economic structure is represented by all components, relationships and established proportions, characterizing an economic system.* Even if it is used in different levels, mostly the concept of economic structure refers to the main branches of national economy, to the reciprocal proportions and relations among them.

The structure of the national economy is more than the amount of constitutive branches and sectors, just as a company is more than the amount of production factors and productive and functional departments that it is composed of.

It is characterized by a *morphological organization* – a certain level of functional correlations between branches, sub-branches and the economic functions – by a *need-resource system* and production factors, and also by a *type of dynamic* determined as a unit of the interior and exterior connections of the economic system.

The economic-productive structure was created as a consequence of a historic process of development performed in the nation's economy, as a result of the work of different generations.

The analysis of the world and national experience shows that between the economic structure and the growth process there is a tight connection – idea analyzed at large in the economic literature.

Thus, defining the structure of an economic system by all the connections that bind the simple and complex units and by all proportions between flows and between stocks of the base units and the objective-significant combinations of these units, Fr. Perroux underlined that the development and growth take place *in and by* structure changes. Starting from the idea that the different industrial branches have variable proportions in the flow of global industrial product and different growth rates, he detaches the conclusion that the economic development does not appear simultaneously in all branches, manifesting in certain points or development *poles with a variable intensity* and spreading by different channels and with variable effects for the whole national economy.

*J.A. Kerman* said that the changes of structures are facts of main importance, and the variations of production, prices and the use of workforce mean the result of these transformations. For *H. Chenery*, who was occupied more with the report between the internal and external aspects of structural changes, the development is a transition process from the traditional forms of economic organization to the modern ones, this being seen as a set of interdependent changes of the economic structure. *Only taken together, the structural changes of demand, production, use of workforce, and the structure of exterior commerce and the capital flows define the transformation of a traditional economic system in a modern one.*

W. Leontief, author of the famous “input-output” method of economic analysis, emphasizes that the process of development imposes in time a similar structure of national economies: “the model of transitions between branches and other main sectors of the system – underlines the author- shows that, more developed an economy is, more its internal structure resembles to that of other developed economies”.

Synthesizing, it can be said: 1) the transformation of the economic structures is an essential side of the development process and economic-social progress, 2) expressing in different rhythms that the growth takes place in different sectors and branches of economy, 3) and favoring, in its turn, the intensity of the national economic development.

*The main development criterion of economic structures is the report between the basic branches of national economy, especially characterized based in the contribution of industry and agriculture, in forming the social product or the national income and their share in the structure of the occupied population.*

There are the following types of economic structures based on this criterion: agrarian economy (structure); agrarian-industrial economy; industrial-agrarian economy; developed industrial economy; technological economy.

Some economists assign an essential role to a single indicator – the population’s share occupied in industry and agriculture – as expression of the social productivity of work, while for others it is necessary the analysis of a great number of parameters, among which the most important are: the structure of the occupied population, the contribution of the branches in forming the national income, the base structure of the main branches of economy, the technical level of the material production, the internal integration degree of the branches of economy.

**a)** *The agrarian economy* is characterized by: the overwhelming preponderance of agriculture in the occupied population and in producing the national income; the preponderance of extensive culture and raise of animals in natural regime; craft type activities of primary processing; low technical level, internal market with low integration degree; agricultural products have a very large share in the export of the country.

**b)** *The agrarian-industrial economy*: the contribution of industry to employment is about 25%, with growth tendency; the agrarian population is however preponderant; the approximately equal contribution of industry and agriculture in producing the national income; changes take place in the structure of branches; mechanization extends and grows the share of skilled work, etc.

**c)** *The industrial-agrarian economy*: industry brings a major contribution in forming the national income and holds a great share than agriculture in the structure of the occupied population; the scientific research develops and brings a great contribution to the development of economy; in industry, the share of the processing branches is preponderant; it is accentuated the promotion of the technical progress; the growth of labor productivity has a determinant contribution in increasing the national income; in export are preponderant the products of the processing industry, etc.

**d)** *The developed industrial economy*: the industrial branches and generally, non-agrarian, have a much more share in relation to agriculture in the occupied population (report of at least 5-6:1) and in the national income; in industry, the main share is hold by the branches of advanced processing of raw materials; labor productivity is high and performs an equalization of its level in the two base branches – industry and agriculture; a big share is hold by the technical good of prolonged use in the population’s consumption; high level of general training in population.

**e)** *The technological and computerized economy*: together with the above features, there is observed an essential role of the scientific research and technological development sectors, as base fields of economy; it is applied on large electronic, cybernetic and informatics scale. The information becomes a base, strategic resource in this type of structure.

Another important criterion in classifying the economic structures is represented by the *development stages of technique* – instrumentalization, mechanization, automation; this leads to outlining *three fundamental types* of production structures, based on *manual work, mechanization* and *artificial intelligence*; the last type corresponds to the structures that form and develop under the influence of contemporary technologies.

*The theory of the “three waves”* must be mentioned. The author Alvin Toffler said that in his vision after the first wave in history of human civilization, of *agricultural civilization*, which lasted approximately 10.000 years (around the year 8000 b.C., until the year 1700 a.C.) followed a second one, the one of *industrial civilization*, which lasted about 300 years, from the industrial revolution from England until our present, when appeared the signs of a *“third wave”*. “This new civilization is so revolutionary that it defies all our previous presumptions [...]. This nascent civilization mainly contradicts the old traditional industrial civilization [...]. The third wave brings with itself a truly new way of life, based on renewable and diversified energy sources, on production methods which make most of the assembly lines from industry to be aged [...]”.

The passage from the industrial society to an *computerized society* represent the content of present and perspective structural transformation, in the developed countries are formed many considerations and *stages of technology*, in many specialists’ opinion. There are mentioned among them: the reorganization from an industrial society to a computerized society is as profound as the passage from an agrarian society to an industrial society, with the difference that the transition period is shorter; the innovations in the communication system and the technology of computers accelerates the rhythm of changes, removing the information privilege; the information technologies will be applied first of all in the old industrial tasks, then, repeatedly, they will give birth to certain new activities, processes and products; in this society presupposing an intense training, the role of the educational system grows; the technology of the new information era is not absolute, it will be successful or it will fail according to the principle “high technology – high reactions”; the transitions epochs, from one type of economy to another, are epochs in which the entrepreneurial spirit flourishes; the economy based on information is real, but to be eloquent it is necessary a system of indicators and researches characterizing the dimensions and contribution to the economic growth.

Another classification of the economic structures can be made by having as criterion *the report between the production process of material goods and science*. There can be detached (with a certain degree of abstraction and conventionalism) according to this criterion the following groups: **a)** independent economic structures of science:

hunting, pottery, traditional cultivation of land, grazing, crafts, transport with small boats; **b)** structures that appeared independently of the science but which are impelled and modernized today by this and is based on important connections between agriculture, extractive industry, metallurgical industry, shipping, road and rail transport, alimentary industry, textiles industry; **c)** activity structures which are necessarily followed by science and are based on the great scientific discoveries applied in the modern branches of contemporary industry: electronics, electrotecnics, optics, chemistry, fine mechanics, robotics. The last define the modern contemporary structures and the promotion of the technical progress and the whole national economy especially depends on it.

The economic structures are also defined in close relation to *the level on which it forms*. We distinguish in this way: the *macrostructure*, which is given by (and characterizes) the correlations between the main branches of the national economy – agriculture, industry, construction, transports, trade, etc.; *the internal structure*, from inside the above mentioned branches, between their branches – extractive and processing industry, industry and energetic and raw material base, etc.

Experience show that although there is the tendency to register an approach of the structure of different countries as getting closer to the economic-social development levels, the economic structures are also characterized by important differences between countries, differences that result from the *complexity and size of each economy, different endowment with resources, intensity and types of technical progress, engaging degree in international economic changes, amplitude of material, energetic and information connections established between the economic agents from all branches of economy, and the integration processes from world economy*.

David Pearce, teacher of ecologic economy in the University of London and director of the Center for Social and Economic Researches on Environment near this university, proposes a set of measures considered severe, but necessary, based on the following principles: **a)** the recognition of the fact that *establishing a regime based on economic instruments is just a part from a set of measures and actions*; **b)** realist appreciation of the other necessary measures as not being sufficiently known, investigated and applied until now. The recognition should include substantial changes in the political measures distorting the economic activity in favor of the environmental degradation, either it is about a community agrarian politics, or the presence of some important subsidies for energy or water practiced everywhere in the world; **c)** reinvesting the income obtained by applying the sanctions for pollution in the reconstruction and development of the “natural capital” and of the “human capital”, by actions of education and training, etc.

A special significance is presented by the practice of Sweden, following to perform a more direct connection between economy and ecology, through the introduction of a measurable parameter of the state of the environment from what the Swedish call “*environmental policy*”. It presents or characterized the *total cost* necessary to restore the environment where it was deteriorated and where the restoration is possible. A report of the Swedish Ministry of Environment and Resources shows that the national “environmental policy” is about 40 billion dollars, and the introduction of some tax on emissions of sulfur into the atmosphere or nitric oxides led to a powerful reduction of these substances; due to the fact that from 1993 the price difference in leaded gasoline and the unleaded one grew, there was reached the almost total elimination of the unleaded gasoline from the market.

The second important thinking trend characterizes the practice from Japan and Canada. It has in center the information, education and consultation of citizens in all that is related to the measures referring to the environment. Starting from 1968, the Japanese Ministry of Environment publishes a white book characterizing the environment and presenting the adopted measures. The information for this is supplied by a national monitoring system containing, for example over 1.600 stations only in the air field. Based on the law of nature conservation, since 1973, there is a program of national inventory of natural resources from five to five years, called the Green Census. The census includes the inspection of flora, fauna, geographical and geological characterizations, and that information are of public interest, being used in building up the national cadastre. It is desired to educate and form a behavior of consumers towards nature by different means encountered in continuous modernization.

In Japan was elaborated a program of over 100 years in the environment field, and 50 large companies created own programs of over 50 years; the Institute of Research and Technological Innovation for Earth was created in 1990.

The market is considered the main factor of spontaneous regulation of the relationships between economy and nature in this field. The imperfections and evolutions from the real economy highlighted the weaknesses and important limits, materialized both in too low reaction speed of the market and its “myopia”, in the absence of some adequate rules and norms, to highlight the changes that take place in the natural resources and environment field. The absolutization of the immediate efficiency criterion may act against nature. The market counts on the principle to change substitutable goods, which is not the case with natural goods and especially with nature, being just a perfectly substitutable production factor. Even if certain substances have been replaced, we must not forget that, on the one hand, the production of these substitutes consume the natural materials (nitrogen in the air, natural gas, petroleum), and on the other hand, issue so many pollutants in the environment. Even in the case of replacing the cleared forests with new plantations, there must be taken into account that the results in this way are not similar by composition and structure with the original ones, which are unique.

The protection of the environment and ensuring an ecologic equilibrium involves certain powers to the state, called to perform a legal frame, norms and institutions by which to act in order to change the economic agents’

behavior and the character of the development. ”One of the reasons which explains the ignorance of externalities by the companies – says Herve Kempf – is related to competition; because decontamination has a high cost, it is difficult for a company to impose it spontaneously if his competitors do not do it. The rule puts all the actors in the national representation, in decrees, circulars and ministerial instructions, without forgetting the legal capacity of local collectivity”.

The basic principle that must guide these measures is the *polluter-payer principle*, according to which the one that pollutes must bear the total cost of the reduction measures of his pollution, decided by the public authorities.

All these actions and orientation have a fundamental goal: *the actual generations must transmit to the future generations a stable natural capital stock, on the contrary the development not being sustainable or durable.*

#### 4. Conclusions

The protection of the environment also presents numerous advantages for companies and society. Some of these are direct, being characterized as the inverse of external costs and are materialized in the fact that a better environment diminished the burdens.’

The companies that recover waste also register benefits after the investments or expenses made for this. Other advantages are indirect. The studies of some national and international bodies appreciate that the size of the expenses to protect the environment improves the general state of the economy. By the expenses to protect the environment, and the environmental services – constructions, maintenance, exploitation, control, information, consultations, etc. – there appeared *the eco-industry and the market of the environment* as it is called in the speciality literature, in the developed countries, exercising an increasing role on the development and economic growth process.

We will synthetically characterize the most important components and moments of creating the two concepts and the implications that the processes have on economy.

1. The base of the activity to protect the environment and the eco-industry is represented by the current expenses and the investments destined for this. The appreciation of the Information and Economic Previsions Office was that the expenses on anti-pollution in France increased in the last years in a very high rhythm than the average rhythm of the growth of economy, and overall C.E.E. increased also from 300 billion francs to 610 billion in 1999.

The investments, the share of expenses destined for the environmental protection is about 17% in the whole of the countries of European Union, of which 20% in Belgium, 18% in Germany, 13% in France. It is appreciated that to 1 French franc invested under the form of equipment to protect the environment, there are necessary 3 francs spent for the operation of the pollutant treatment plants, appearing on the environmental market as demand-offer if services, except those included in the production costs.

2. It is appreciated that the world market of changes related to the environmental protection is situated at the level of 300-450 billion dollars in the O.C.D.E. countries.

3. In the countries of the European Union it was foreseen to perform wastewater treatment plants in all localities that exceed 15.000 inhabitants, until the year 2000, and until the year 2005 to generalize the wastewater treatment in the localities encountered under this number of inhabitants.

4. To perform the products, services and works involved in these expenses, special companies were created and profiled, whose number is growing. Thus, 6.500 companies work for the new market in the Western Europe: 45% of the companies established in Federal Germany in the 80s had eco-industry profile.

5. The production and services involved on the environmental market create jobs and generate new specializations. Thus, about 2 million persons work in 70.000 companies for the environmental market in U.S.A., and in France, there are 284 professions in the environmental field and 800 qualification possibilities after the calculation at national level. It is appreciated that for each billion dollar invested in the pollution control, 19.000 new jobs are created in the U.S.A.

6) The eco-industry and the market related to it means advantages in the companies’ level too. It is appreciated that the companies comply with the environmental quality norms to obtain profit with 15% higher compared to his competitors. “The eco-mark” or the name of “green product” that can be obtained after certain detailed tests (ecolabel) ensure the market advantages of those products that presuppose special performances from the environmental quality point of view.

7) The eco-industry can also stimulate the research-development, especially in the non-pollutant technologies, biotechnologies, energetic field, etc.

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