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Human Resources Planning Sustainable Development Nations Productivity, GDP, and Per Capita Income

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Abstract: Starting with the concept of sustainable development the study suggests analyzing the role of the human resources in calculating sustainable development indicators. The objective pursued was the analysis ofthe human resources for different entity types and their calculated indicators to ensure the need for data at national economy level.

Keywords: sustainable development, human resources, indicators; accountability, management controlling.

I. Introduction

The concept of sustainable development was formalized in 1987 at the same time with the publishing of the Brundtland Report by the World Commission on Development and Environment as follows: “Humanity has the ability for sustainable development – to ensure the needs of the present without compromising the ability for future generations to satisfy their needs”.

The definition of sustainable development is based on 2 concepts, namely: the concept of needs and the idea of confinement of the environment capacity to respond to current and future needs.

The 1992 Rio Declaration issued 27 principles that guide the actions of various actors in favor of sustainable development. Some principles were defined and interpreted differently, fact that induced a series of debates and controversies.

In Romania, the Law of Environment Protection, no. 137 since December, 29th, 1995, republished in February, 17th, 2000, underlines strategic principles and elements that ensure sustainable development.

Even if the meetings in Rio 1992 and Johannesburg 2002 have created a conceptual framework for sustainable development, they were not able to ensure international convergence and harmonization, nor a comparative approach between states concerning the indicators of the sustainable development. However, concepts such as sustainable development, social responsibility of enterprises, environment and social-economic performance were clarified once the Johanner burg Summit took place in 2002.

Sustainable development represents a fundamental strategic axis for the policy of the European Union, and the Amsterdam treaty places this concept among the main objectives of the EU.

The sustainable development strategy was legitimized on the occasion of the Gotegorg Summit in 2001 and at that time 4 domains were considered as representing priority objectives for the community, namely: climate changes, transportation, public health and natural resources.

The concept of social responsibility of enterprises endorses not only the coverage of the legal liabilities but also the most important priority which is represented by the investments in environment capital and human capital.

Socially responsible investments integrate social and environmental criteria, ensuring the economic capitalization (ARSCD – Enterprise Social and Environment Rating Agency, France).

Socially responsible investments have evolved immensely, so in the USA one dollar in eight is placed in ethical funds, the total amount exceeding 2.200 billion dollars, representing more than 10% from the invested amounts, whereas in France it represents only 1%.

Thus we can observe a special attention paid to the human capital, especially if we consider the sustainable development as a way to support human development articulated to the welfare motivation. In this particular sense, the British project SIGMA (Sustainability Integrated Guidelines for Management) tried to develop a framework that could allow all organizations to use the normative and best practices for research and development. SIGMA aims at the growth of all 5 types of capital: natural, human, social, manufacture and financial.

The importance given to the capital was the basis for the concept of sustainable development indicator estimate. Why? The answer is based onthe un-fulfillment of sustainable development implementation, namely the failure of the harmonization and comparability.

The concept of capital answers: harmonization, solid theoretical basis, comparability, cooperation, and weaker political manipulation. States such as USA, UK, Belgium or Switzerland plead for estimating the sustainable development indicators based on capital. The types of capital used in estimating the sustainable development indicators are: economic, natural, human and social.

II. Human Capital and sustainable Development Indicators

The notion of human capital was introduced in literature by Becker and Schultze in1960. Later, in Romer's studies on economic growth (1987, 1990, 1994), human capital was seen as an important element in understanding development. Also an OECD Study[2]stresses the importance of education and human capital for the economic growth.

The identification, presentation and detailing of the human capital by theoreticians and practitioners also involved defining this concept, considered as being a key element in development. So, the concept of human resources is defined as the entire amount of knowledge, competences and motivations put across by individuals, that facilitates the creation of personal, social and economic welfare (OECD, 2001).

Gary Becker, one of the first users of the term "human capital", considers that education, continuous training and health represent components of human capital with consequences over the earnings and the economic productivity[3].

BahrmanandTaubmanfromtheWorldBank(2006, 89)statethat humancapitalrepresents "the stock of human economic productive capacities", also insisting on their market value.

In our conception human capital can be defined as an aggregate of knowledge obtained though education and continuous formation, of verified competences by practical implementation having a positive effect over the general results and welfare.

The human capital components are approached differently in the specialized literature. So, for some authors (Smith, 2006), human capital comprises: gross labor, education/qualification and social capital. Other authors consider human capital as covering education and qualificationeven if the social capital depends on human capital.

The creation of human capital represents consumption and investment at the same time which will prove its efficiency through the results achieved.

All economists unanimously agree that education has the greatest impact over the achieved earnings (5-50%, differing on the country). Education only is not enough, reason for which it must be correlated with better health, a lower rate for delinquency and crime, civic spirit, education promotion for future generations etc.

In conclusion, the human capital becomes a component without which the national wealth has no meaning, and investing in human capital can only have positive effects for both present and future.

National wealth includes all types of capital: financial, productive, human, and social capital, and as regards capitation it is considered the ideal sustainable development indicator (Dasgupta, 2001).

If in theory the indicator can be ideal, in reality it cannot be ideal because of the pricesregistered in the accountability, which for certain types of capital, are more difficult to identify.

The 28 indicators proposed by the United Nations panel of experts along with the Organization for Development and Economic Cooperation and the Office of Statistics of the CE, aim both at welfare as the foundation and at economic welfare. The estimate of the sustainable development indicators requires the existence of a quantifying framework, assured by the National Accounts System. On the estimate of sustainable development indicators based on the capital, the National Accounts System must also be filled in with physical indicators of the ecosystem, which is possible through the creation of an Integrated Accounts System for the Environment and for the Economy, system which was developed in 2003 by the United Nations and comprises *four account categories*:

1. *Accounts for pollution, energy and materials* that provide information in the physical units at industry level on the use of energy and materials, and on the loss and pollution;
2. *Accounts for environment protection and expense management* which identify the expenses made by the industry, government, office for environment protection or natural resources management;
3. *Asset accounts for natural resources*, both in the monetary institutions and in the physical units (forests, waters, land, ecosystems);
4. *Production accounts of the National Accounts Systems* adjusted so as to be able to take into consideration the depreciation and degradation of the natural capital. As a consequence it would be possible to estimate the *green gross domestic product.*

A problem in estimating the sustainable development indicators appears, as we referred before, in evaluating the capital which constitutes the National Asset. In fact, as it results from the integrated account system, physical and numeric data is needed in supporting the sustainable development indicators.

As regards the human capital, as in the case of the other capital components, a distinction must be made between the data gathered at economy level and at entity level. Sustainable development indicators are nationally calculated and internationally compared according to the same methodology.

At national level, the evaluation of human capital implies the existence of some information needed for this estimate which is based on the input method (expenses), or the output method (efficiency). The information obtained has a statistic character and refers to the average wage for a certain type of worker with a certain level of education; to the number of hours worked by an age group having a specific level of education; to the size of an age group having a specific level of education etc.; one must also consider the life expectancy probability factor.

III. Human Resources Indicators at Entity Level

Established indicators and written reports that function as a warning for the managers are in direct relation with the activities that have to be identified by MC. According to Naro, HRMC must be directed towards eight *activities*:

1. economical and financial indicators;
2. structural indicators;
3. planning and recruitment;
4. compensation;
5. training and development;
6. performance appraisal;
7. climate indicators;
8. professional risk indicators.

1. Economic and financial indicators

These can include productivity (turnover/number of employees, added value/number of employees or gross wages etc.),HR expenses (personnel expenses/number of employees, gross Wages / turnover), financial rates (human economic value added, Human Capital Value Added, Human Capital Return on Investment, Human Capital Market Value)

2. Structural indicators

These indicators can compute the structure of employees as follows: production, administration or distribution employees, women or men, distribution on ages, distribution on average wages etc.

3. Planning and recruitment

HR planning is a process for developing alignment of the organization's strategy with the people it employs to apply the strategy.

Recruitment is a process of attracting the best qualified people to apply for the job and also to motivate people to fulfill the mission of the organization. The candidates have to be recruited quickly and with a minimum cost. The recruitment terms have to be minimal representing the number of days between the recruitment request and the job distribution. The recruitment costs also have to be minimal and they include the cost with the recruitment advertising, the costswith the resumes analysis, and the costs of the recruitment department. In order to succeed, the recruitment has to end with the employment of a person that has the requested qualities.

We think that planning as the first part of this activity must be under control in order to identify and explain differences between forecast figures and real figures.

A report may be presented based on available information about planning and recruitment divided into two categories: indicators about jobs and employees' need for those jobs (total number of jobs, total number of employees, the need for personnel, average salary etc.) and indicators about activity (activity total cost, number of employees, employees salaries, number of interviews, number of recruitments, average cost for recruitment, the degree of the coverage of the necessary personnel, the number of persons which were unsuitable (that were inappropriately chosen for the job), the degree of the non-coverage of the personnel scheme and the costs for their substitution, time between job proposal and employment of the person, candidates rejection rate, recruitment's quality).

4. HR compensation

Compensation is considered as payment from the organization to the employees for their services based on wages and other benefits. Rewards are also considered as another form of compensation to reward the employees for their contribution to the company's performance. The system of remuneration is an important system of the company's culture, with its rules and standards. The organization of the work and decentralization of the power within the teams requests remuneration politics that need the development of the cooperation and collective competences.

From the manager's point of view to analyze this activity means to have information about compensation's total value and components and information about this specific activity. The remuneration system chosen has to be simple and easy to understand in order to be accepted by the employees searching for equity and security, to be adapted to change and to incite the personnel for the change. Indicators about HR compensation may be as following: total employees number, employees salaries, average salary, the degree of the increase in remuneration, the rate of the increase of the purchase power, wages hierarchy, promotion rate, structure effect, average cost per hour, indicators concerning the activity of Wages department of the entity, total productive workers expenses, total administrative employees expenses, total distribution employees expenses, % of salaries in production sector , costs with the change of the personnel (unsuccessful recruitment and restarted), time ratio, degree of the yield/work productivity, structure of the working places, supplementary hours/medium cost per supplementary hour, increases in gross wages etc.

5. Training and development (T&D)

Training helps employees to gain particular job skills and development involves on-going education to help prepare employees for future jobs. In the short term, the training has to facilitate the change: the evolution of the jobs, the development of the potential, the management of the careers. In the long run, the training accompanies the culture change and helps the adaptability of employees. Development involves more than learning a skill such as problem analysis, creativity, team-building and leadership. Training and development is important for accomplishing the mission and vision that managers chose for an organization.

To realize training and development's targets companies often devote ample resources presented in budgets. These resources are allocated to the employees that have the motivation to stay within the organization. This is why, in the first part of the report, we will present *indicators* that show the maintenance and motivation of the employees:

- Fluctuation rate /fluctuation costs;
- Accidents frequency/unused time/work accidents costs;
- Sickness frequency/unused time/sickness costs;
- Wages structure/bonuses etc.;
- cost-benefit-motivation analysis;
- The report between the personnel training (costs for training) and their stability within the company;
- Employees participation to profit;
- Supplementary social services costs;
- The degree of personnel satisfaction;
- The time spent by the employees within the organization;
- The employees' reasons for leaving the company.

Budgets contain information about total resources (T & D), number of employees involved in this process, T & D cost per employees. Thus, a report for management will contain the following indicators:

- total amount of resources;
- T&D effort: total amount of resources/ number of employees;
- Accomplished budget/foreseen budget;
- Total number of T&D actions;
- Total cost of each T& D action;
- Total number of employees implicated in T &D process;
- Average cost per trained employee;
- Days for training per employee;
- The number of employees that change the function within the organization;
- The time for T& D per employee per year;
- The impact of the T&D in saving the resources within the company;
- Coverage rate of the posts and of the strategic competences:
- Number of employees that should have strategic competences/ number of employees that actually have strategic competences;
- Trained employees rate or participation to training rate:
- Number of employees trained/total number of employees;
- Number of participants/number of people registered
- The structure of the employees involved in the T & D process according to different criteria (sex, qualification, age, nature of T & D actions etc.).

6. Performance appraisal

In social sciences the word performance knows two senses: *social performance* can be defined as the intensity with which a person chooses to cooperate for the objectives of the company, or, more general, the level of satisfaction attained by the persons that are part of company life. The social performance reflects the impact of social politics upon the employees' attitude towards the company they work for;

- *Human performance* is analyzed according to the results obtained by the employees as compared to their work. This result is expressed according to the achieved asset, produced added value, further value obtained by the company etc.

Thetwonotionsaredistinctbecause[7]:

- The social performance reflects the ability to raise the level of satisfaction of the personnel, to improve the social climate and living conditions; the human performance supposes the optimization of the social cost to obtain a certain result or to maximize this result.

The management of the human resources is an essential item for the financial performance of a company. A study organised by the American counseling cabinet Watson Ayatt shows that the most profitable companies in the management of the human resources create two times more value than others. There are five motivations for each person at their working place[8]:

remuneration;

- professional development;
- working place environment;
- respect and consideration;
- work interest.

Performance appraisal is a way to evaluate to what extent employees have met the expected levels of accomplishment as compared to some standards or goals. Performance appraisal influences HR decisions on such issues as payment, promotion, training and development. The appraisal may focus on outcome measures such as levels of quality, productivity or financial performance.

Values and methods in performance appraisal may be reported as:

- direct presentation to individuals or to the work force administration;
- control of people and processes;
- feedback used for ratings, rewards and sanctions;
- feedback useful for improvement;
- motivating or de-motivating employees(source: adapted from Scholtes).

As regards this activity, management controller must prepare a report where indicators about types of appraisal actions are presented and also the activity cost per each type of action.

We consider that a company that wants to be profitable has to focus the management of its human resources on achieving the following objectives:

- to integrate the new employees progressively;
- to actively participate in integrating and training the young individuals;
- to participate in the integration of the disabled;
- to practice a responsible and equitable management of the jobs;
- to prove flexibility in work organization;
- to take in to account the individual aspirations;
- to assure the person’s security;
- to support the employees to deal with their problems;
- to value individual richness;
- to recognize the individual and collective work;
- to practice a correct remuneration of the employees;
- to fairly protect the results;
- to manage the resignations;

- to invest in the personnel, by continuous training and development;
- to support the possibilities for the employees' reconversion that are found on the labour market at a certain moment;
- personnel leasing.

The remuneration service performance can be evaluated by means of the following indicators:

- payment errors' rate: payment errors number/remuneration flyer snumber;
- delays: average number of monthly delays;
- average cost of the remuneration flyers: cost of payment services/ listed flyers number.

7. Climate indicators

We have considered important for this category the following:

Rotation:

- Number of persons leaving the company during the year/number of employees;
- Number of persons leaving the company for a specific reason/number of employees;
- Resignation: total resignation number/total persons leaving the company;

Stability rates:

- Number of persons employed after N months/number of persons recruited N months ago;
- Time spent by the employees in the company;

Absenteeism:

- Hours of absence/Theoretical hours;
- Hours of absence/Number of employees*Theoretical hours;
- (Hours of absence – Long duration absenteeism)/Number of employees*Theoretical hours;
- Total duration of absence/Number of employees;
- Average duration of an absence: Hours of absents/Number of absents;
- Hours of absence/Number of employees;
- Hours of absent persons/Number of employees;

Conflicts:

- Frequency: number of clear conflict displays;
- Range: number of persons adopting an attitude;
- Intensity: number of hours or days of work lost;

For strikes:

- Intensity: number of hours or days lost for the strike/number of employees from the sites involved in the conflict or number of hours or days lost/number of persons on strike;
- Concentration rate: number of persons on strike/number of employees during the period;

- Propagation rate: number of hours or days lost for strikes/number of employees from the locations involved in the conflict;

Other crisis indicators:

- Number of production incidents (errors etc.);
- The increase in the number of working accidents;
- The increase in complaints (petitions, personal delegates complaints etc.);
- Personnelsatisfaction-Studyconcerningtheannualpersonnelsatisfaction(“social barometer”);
- Personnel involvement-Survey regarding the organizational involvement;
- Strategic alignment-Survey concerning employees’ knowledge and acceptance of the strategic focus of the company (USA).

8. Professional risk indicators

They refer to work accidents.

- Frequency rate regarding the permanent working incapacity: number of accidents that have consequences in permanent working incapacity/ number of hours worked *1.000.000;
- Severity rate regarding the temporary working incapacity: number of days lost/ number of days worked *1.000.

IV. Conclusion

The approach of sustainable development has known morethan one interpretation starting from the key moment in 1987. So, sustainable development was seen as welfare growth in the long run and at the same time it was also considered as consumption growth in time. This point of view was accepted by the panel organised by the European Statistics Conference Bureau in 2005, group created with the purpose of identifying the best concepts and practices for supporting governments and international organizations in projecting sustainable development indicators.

The experts consider that sustainable development can be defined based on two concepts: human development and welfare. The development is associated with a better future, which traditionally is quantified by economists according to the income growth per capita or growth of the GDP. But because the income is differently distributed among populations and the poor population is growing, some of the economists are hesitating to consider this development. In this sense, the United Nations Development Programme (1994) defines development through the processes that ensure the development of opportunities people have in making a decision, in having a real chance. The specified processes are treated differently as: environment processes, health and education processes, institutional and governance processes.

Welfare is defined by Desgupta (2001) as the value associated with each individual under personal circumstances and in a specific social state. A social state is described by the limited resources allocation and anything else that is relevant for a personal or social opportunity.

In conclusion, development can be defined as welfare growth for the members of the society, and welfare can be seen as a function for consumption. (Working Group, 2009).

Sustainable development can also be defined (United Nations, 2003) as “development that ensures a non-decrease of wealth per capita by replacement or conservation of wealth resources; such as: production stocks; natural and human capital.” This definition is based on the theory of economic development.

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