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SMEs Role in Achieving Sustainable Development

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Abstract. Sustainable development might be achieved by entrepreneurial enterprises with social responsibility, by innovative SMEs leaded by innopreneurs that not only respect the 21 Agenda advices, but innovate in technologies that reduce the impact of ecological footprint, or that might regenerate natural resources. It is also well know that "the cost of protecting the environment without polluting it is cheaper than bringing a contaminated environment back to its old one. As a result clean and nature-friendly technologies are preferred, and yet again, if there still any pollutants they have to be recycled". [Kendirli, 2014] We always return to the principium "primun non nocere". The article is a plea for accomplishing de sustainable development principles, and shows how SMEs may foster it.

Keywords: sustainable development threshold, innovative SMEs, entrepreneurial spirit, social responsibility

JEL Codes: 030, Q56

1. Introduction

Sustainable development (SD) is very well captured by the phrase "Think global, act local", with implication in regional strategy, economic-financial policies, environmental policies, research and innovation policies, social responsibility policies etc. We all have to get informed, to understand, foster and apply the SD principles, because it is our moral duty to protect de environment for the future generation and get in the same time economical profitability. In this paper we discuss the SD threshold targets for 2030 and how entrepreneurial spirit, innovation, and social responsibility lead companies, with focus on SMEs, to the targets. Information presented in the paper is furnished by the literature review, articles in international databases and reports on Word Economic Forum, Eurostat and World Commission on Environment and Development.

2. Sustainable Development Threshold for 2030

Sustainable development has many facets, such as: economic, social, institutional, ecologic, cultural, educational, moral, temporal, political, spatial etc. These facets may be express by four primary dimension [WCED, 1987], each of them having his own indicator to be measured. They have to take into account human needs and long-term ecological sustainability, in the same time.

Sustainable development's primary dimensions are [Holden, 2014]:



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- safeguarding long-term ecological sustainability through conservation of plant and animal species" [WCED, 1987].
- satisfying basic human needs, assuring long-term ecological sustainability.
- promoting inter- and intragenerational equity based on development policies (changes in access to resources and in the distribution of costs and burdens)" [WCED, 1987].

In order to achieve sustainable development the threshold values for these primary dimension are measured and it is recommended that their limits for the year 2030 to be lower than the ones in the table below.

Dimension		Indicator	Threshold 2030
1	safeguarding long-term ecological sustainability	Yearly per capita ecological foot-print	Max 2.3 gha per capita
2	satisfying basic human needs	Human Development Index	Min 0,630
3	promoting intergenerational equity	Gini Coefficient	Max 40
4	promoting intragenerational equity	The proportion of renewable to total energy in primary energy production	Min 27%

In 1987 Brundtland Report of the World Commission on Environment, entitled "Our Common Future" launches the term sustainable SD. Based on the Brundtland Report was created Agenda 21: Action Programme for Sustainable Development. The report recommendations to achieve SD are:

- ensuring further growth with respect basic condition conservation of natural resources;
- eradicating poverty and ensuring conditions meet the basic needs of work, food, energy, water, housing and health;
- orientation processes of growth towards a new quality;
- providing a controlled population growth;
- preserve and enhance natural resources, monitoring the impact economic development on the environment;
- restructuring of production technologies and maintaining risk control thereof;
- ensure an integrated approach to decisions on economic growth, environment and energy resources.

There are countries that might meet the thresholds for one or two dimensions, but none of them meets the thresholds all four dimensions. Unless the all four dimensions are met a country can achieve sustainable development. Thus achieving sustainable development might by an overwhelming target.

In general the high level of human development is associated with the cost of a large ecological footprint. In the undeveloped countries the ecological footprint is low, but it associated with low HDI (health, education, safety has to be improved). The relationship between sustainability indicators – HDI (human development index) and Ecological Footprint - reflects the immense challenge of our time to the development of human society, not jeopardize the ecological capacity of the Earth. Rich nations have reached high values the HDI but exceeded the carrying capacity of ecosystems; many developing states



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have not exceeded (yet!) limits the support of ecosystems but failed to reach targets on human development. From these reasons, the chart below is noted that sustainable livelihood (sustainable) as the final target sustainable development is not met in any state on any continent.

In the figure 1 is represented the Human Development Index and Ecological Footprint Indicator between 1980 and 2007. The origin of the graph is the target to be touched representing high human development within the Earth's limits. The countries in each corner are: **C1** Mauritania, **C2** Somalia, Sudan, Congo, India, **C3** Bahrain, Denmark, US, UK, Russia, Latvia, Japan, Hong Kong, Argentina, Brazil, **C4** China, Cuba, North Korea, Romania.

In this figure we may see that the World average biocapacity per person in 1961 was almost 4 gha per capita. The biocapacity constantly and concern decreased to almost 2 gha per capita in 2006.

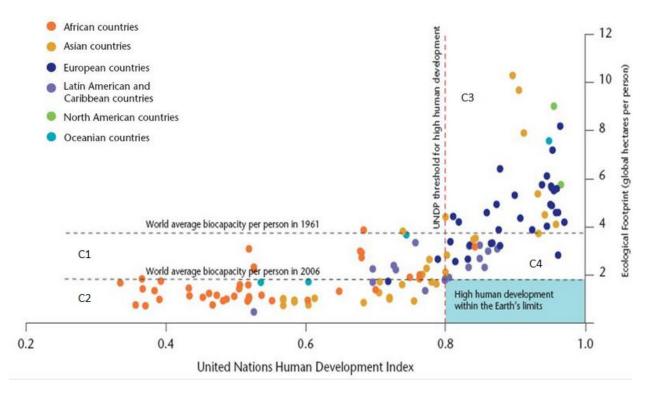


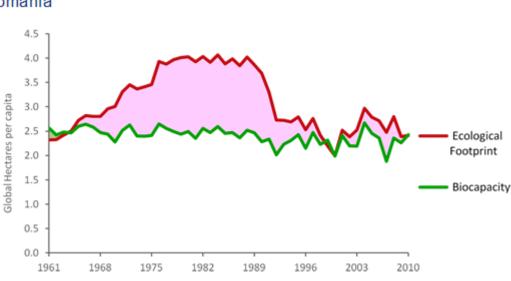
Fig. 1: Human Development Index and Ecological Footprint Indicator between 1980 and 2007 (source: www.wbcsd.org/)

In this context Romania is located in corner 4 (C4) having the threshold of ecological foot print around 2.5 gha per capita and the biocapacity value around 1.3 gha per capita. (Fig. 2) Romania has to increase her biocapacity by protecting the environment, developing new safety technologies for the environment that might increase de economic indexes and HDI and reducing the ecological footprint, thus meeting the principle of sustainable development. Although Romania reduced her ecological footprint, that reached am max of 4 gha per capita between 1975-1990, she has to continue this process through



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entrepreneurial dimension of innovative SME's and through educational and cultural dimension. The biocapacity varies each year with ecosystem management, agricultural practices (such as fertilizer and irrigation), ecosystem degradation, and weather and population size. The ecological footprint varies with consumption and production efficiency.



Romania

Fig. 2: The tracks per person resource demand ecological footprint and biocapacity (source: http://www.footprintnetwork.org/en/index.php/GFN/page/trends/romania/)

In Romania the fiscal framework strength deteriorates, the government public debt increased constantly: it was 16.7% of GDP in 2000 and now it reached 41% of the GDP, reaching the highest ceiling level of sustainability. [Georgescu, 2013] And the absorption rate of structural and cohesion funds by the end of 2014 reached only 52%, but much better than the years before. [www1] Our governors ask for sovereign loans as (co)financing sources of investment projects in order to get economic growth. If Romania could absorb more European funds, that could mitigate the pressures on the governmental debs payment, diminishing the interests and commissions of the debts and the internal/external financial requirements. Romania should implement the Brundtland Report recommendation to achieve SD, thus decreasing sovereign risk.

Unfortunately these sovereign loans have not reached the target mentioned before, but counteracted of the global crisis effects and internal problems. The indicator public government debt rate/GDP(nominal) rate has increase from 1.05 in 2000-2006 to 3.17 in 2007-2012, because Romania has borrowed almost 20 bn euro in 2009 from IMF and EU; and about 15% of the public debt consisted of interests and commissions, meaning almost 2% of GDP in the year 2012 [Georgescu, 2013] Thus the government spending is not sustainable and could run the country to financial destabilization and difficulty of future payments. This crisis is exacerbated by population aging that increases the costs of the social insurance budget. "Measures and policies of inserting youth onto the labour market are one of the major issues that



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decision making authorities should solve in order to give substance to the sustainability of economic growth and cooperation among generations." [Simionescu, 2014] The companies try to reduce cost, reducing the personal no matter what. The massive layoffs are associated with psychosocial pressure, diminished living standards, with implications upon sustainable economic growth.

There have been done errors in economic policies, and the restorative solution is to find a way to ensure the solidity of the internal and external economical equilibrium, with a higher competitive economy and a transparent and efficient business environment, keeping in mind the SD principles.

Possible solutions to obtain balance surplus are budgetary restrictions, or fiscal stimulation (investment policies in order to increase economic growth, without affecting the environment), or the forced directing of the funds to the state budget, mainly by maintaining reference interest rates at low levels ("financial repression") [Reinhart, 2011].

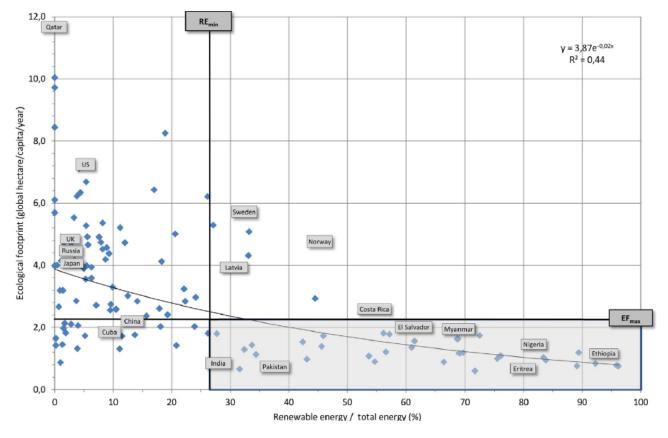


Fig. 3: The ecological footprint and renewable energy/total energy for 2008/2009 (source: UNDP, 2011).

If we consider the ecological footprint and renewable energy/total energy we get the graph in figure 3, the sustainable development space (SDS) is in the lower corner in right quadrant (shaded). Developing countries such as El Salvador, Myanmar, Nigeria, Ethiopia, India, and Pakistan met these criteria.

If we consider the maximum threshold value for daily per capita ecological footprint of 2.3 global hectares there are countries, such as Japan, Hong Kong, Israel, Latvia, and New Zealand [WWF, 2012] with a



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very high HDI that have per capita ecological footprints close to 4.0 global hectares.

If we consider the minimum threshold value of 0.630 for HDI there are less developed countries with an average of HDI of 0.493. The developed countries have to help them to reach the target by 2030, in order to achieve global sustainable development, because there is a mutual dependence of countries (Brundtland Report).

If we consider the maximum threshold value of 40 for the Gini coefficient, the concern is high because over the last two decades the income inequality has increased in most countries and regions [Holden, 2014], that might seriously affect sustainable development.

If we consider the minimum renewable energy share of 27%, the target might be reached, because the deployment of renewable energy technologies has increased rapidly in recent years to 12.9% of the total primary energy production.

It is difficult to meet all the threshold values in the same time. The specialists say that a possible solution would be separate unwanted influences between the dimensions, respecting, in the same time, other important principles, such as democratic and libertarian principles.

3. Entrepreneurial Spirit, Innovation, Social Responsibility and Sustainable Development

The entrepreneurial enterprises, the innovative SMEs (small and medium-sized enterprises) are considered the engine of innovation and competitiveness, achieving sustainable development. They may solve societal and environmental problems. [Kardosa, 2012]

Applying innovative environmental and/or social practices SMEs obtain competitive advantages, that positively affects the economical facet of sustainable development.

The relationship between entrepreneurship and innovation is reflected in the figure 4, where the countries with more innovative SMEs and with a higher entrepreneurial spirit have more sustainable developed scores.

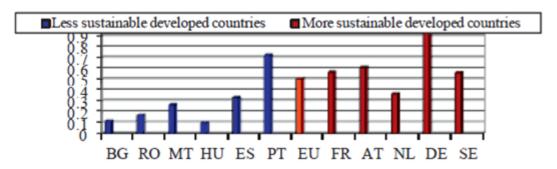


Fig.4: Performance score of "Innovators and Entrepreneurial spirit" [Kardosa, 2012]

In the figure 5 we may observe that in more developed countries, innovation (in house, in product or process, in marketing/organizational or collaborating) and entrepreneurial initiatives bring higher economical sustainable results. The low sustainable developed countries have to take advantage of the



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valuable information provided by science, have to innovate in production, in marketing, in organization and have to collaborate with other enterprises or state institutions, universities, research centers, etc. SMEs with a high spirit of entrepreneurship are more innovative and bring superior performances for sustainable development. Therefore, the state should be involved in SMEs' innovation initiatives and activities, answering to the present and future challenges.

"Sustainable entrepreneurship obtains such main features as social responsibility, competitiveness, progressiveness, knowledge creation and usage, innovativeness, dynamism and seeks for business benefits creating social value". [Krisciunas, 2007]

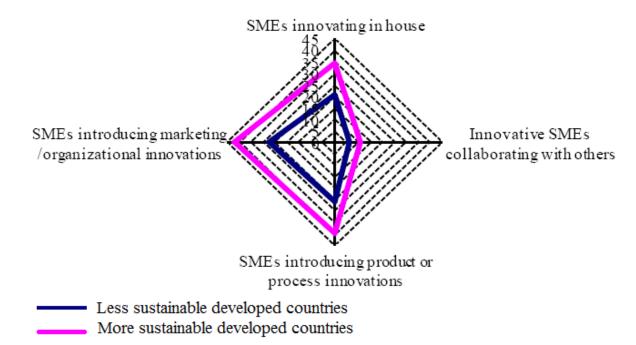


Fig. 5. Performance as a consequence of innovation and entrepreneurial initiatives [Kardosa, 2012]

The relationship between entrepreneurship and innovation arises a new term in the scientifically literature: the innopreneur. He is the entrepreneur "that undertakes to manage, and take the risks of a business model. In our time, an innopreneur is interested in research and development and characterized as an innovation hunter who aggressively seeks for opportunities; transforms those opportunities into concrete marketable ideas; creates value-added; makes maximum efforts, assesses and undertakes the relevant risks to apply those ideas; and gathers the crops at harvest time." [Gündogdu, 2012]

Nowadays SMEs need innopreneurs, very flexible in the adaptation process to an environment constantly changing, being in contact with the clients and offering proper feed-back, using the online marketing advantages and continuously innovate, in order not to be excluded by the system.

SMEs and theirs innopreneurs have to be implied in decision making processes at global and regional levels. The global strategic guideline, European Small Business Act, is the formal manifestation of the EU "think small" approach, that emphasize the role of SMEs in the decision process that sustain

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innovative sustainable development. [Muresan, 2012] In order to reach the target the SMEs should use networking facilities being a member of a Network Business Environment for Open Innovation as described in the paper [Ţoniş, 2014]

Kuznets curve for Environmental establishes the relationship between environmental quality and economic growth in the long term [Ciupagea, 2006]. This curve shows that:

- up to a certain threshold, environmental degradation increases with increasing GDP/capita, beyond which environmental quality is improved by a higher level of GDP/capita;

- The low-income, predominantly changing economy from agriculture to industry, which means an increase natural environmental impact; at higher levels of income, the economy is predominantly focused on service, having the effect of reducing environmental impact.

In the empirical studies it is shown that the effect that innovation and entrepreneurship have on economic growth and development differs according to the development stages of a country. The economies have three stages of development: the factor driven stage, the efficiency-driven stage and the innovation-driven stage. [Szabo, 2012]

In the Global Competitiveness Report 2013 Romania and Bulgaria are classified as being efficiencydriven economies, while most of the Europe countries (20 of them) are innovation-driven economies. Global Competitiveness Index GCI for Romania was 59 from 144 countries in 2014-2015. (WEF, 2014) Competitiveness might be increased by innovation in the entire life circle of a product or services, keeping in mind the SD principles. (Fig. 6)

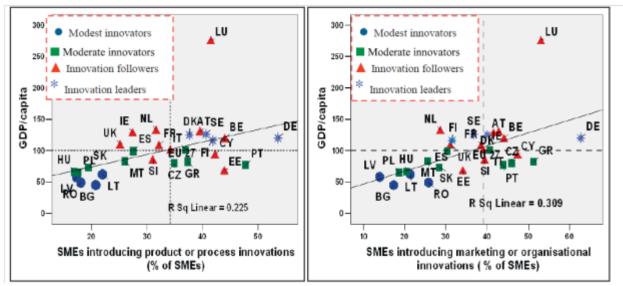


Fig. 6: Direct correlation between a) Technological innovation and economic development; b)Non-Technological innovation and economic development [Szabo, 2012]

Usually the countries from innovation-driven stage have a higher level of GDP/capita that is associated with prosperity and SD. The gaps between countries in terms of economic development can be explained



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by the disparities in innovative performance. [Szabo, 2012]

3.1. Social responsibility in SMEs

The SMEs that receive information regarding social responsibility (SR) manage to change their environmental action in a responsible behavior. SMEs may improve their image if becoming responsible regarding the sustainable development principles. It's a form of free publicity for them to events, meetings, and conferences for the promotion and development of responsible practices. The SMEs which are well informed about action related to SR, use to go to meetings on sustainable development (SD) and SR, sometimes put in practice specific action to raise awareness, to educate and to inform employees on the principles and actions related to SR. These SMEs use consumables and/or processed goods of low environmental impact, they save energy and use alternative sources of energy, they are planning their investments to reduce the environmental impact that they generate, they recycle materials, they use, purchase, or produce environmentally friendly goods and use recyclable containers and packaging.

The principles and actions related to SR values have to be considered when writing the firm's vision and strategy. The SMEs may choose to cooperate with other firms and institutions that act positively to obtain SD.

4. Conclusions

Sustainable development is imperative for everyone, as to be able to maintain human health and the biome (environment) for current and future generations. In order to obtain SD the countries with a very high HDI that have per capita ecological footprints close to 4.0 global hectares must reduce their per capita ecological footprint by about 40% [IEA, 2012], which is a manageable task using current knowledge and technologies. The countries with a low HDI and low ecological footprints have to increase their economic, social and cultural level, protecting in the same time the environment. Also has to be reduced the gap between the wealthy and poor, diminishing the frustration of Third World, and not being just homoeconomicus, but homoinnovation.

As Stiglitz says the limitations imposed by natural resources can be compensates by the optimal mix of technological change, capital and economies of scale. Economic growth on the long term is obtaining with low rates of natural resources consumptions.

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