

# POTENTIAL DIRECTIONS FOR ENTREPRENEURIAL DEVELOPMENT THROUGH EDUCATION

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*Motto: "Education, innovation and entrepreneurship are keywords today"*

(Silviu Hotaran, director of Microsoft Romania, 2012)<sup>1</sup>

## Abstract

*The European Union lives, for the past three years, a beginning of change. It was initially stated that it is a shift in the existential paradigm. Along with the financial crisis the United States exported in the whole world, primarily in Europe, a social, economic, spiritual, moral crisis is manifested... all these requiring a totally different approach to work, value, money, investment but not to man – as a social individual, with work, saving and consumption behaviors, with attitudes towards his own needs, as well as the possibilities to meet them... The sequence of crises was completed by a system crisis. In my opinion, it is totally true. A system tired, drained and depleted – according to my thinking - absolutely intentional. Of course, each system has its own life cycle, which implies that also the existing macroeconomic system shall reach in a point of inflection, only natural would have been to not cause its decline and death, but to prolong its existence as much as possible, by fundamental and structural modifications to support an innovative idea, of higher quality, viable for a medium period of time.*

**Keywords:** education, entrepreneurship, social/current entrepreneurial opportunities

## Introduction

Who can really know what it was planned for the economic and social future of the European Community? A hasty response could be given by developing and implementing the Europe 2020 Strategy. Sufficiently publicized, commented and interpreted, with pro and con approaches, the document provides targets on social inclusion (as a novelty, it is specified the extension of the green jobs), combating poverty and lack of education, rethinking the traditional forms of energy which can be replaced with alternative ones... A deeper approach should offer solutions to questions like “How could we achieve objective ...x?” And this is how the entrepreneurial solutions appear. In this presentation we shall develop a few valuable ideas that inspired entrepreneurs and professional investors may capitalize on today’s market. We are going through a difficult period, even hostile for the small and medium business environment, but contrary to the general opinion, one can find enough entrepreneurial opportunities. To the question if entrepreneurship should be learnt, the answer is definitely yes. In this paper we shall illustrate this fact both theoretically, through studies in the traditional educational system or in the public/private organizations of continuous formation, and practically, by actual profession – either individually, in low level attempts or in groups, often facilitated through different projects.

Ever since mankind realized that a form of organization increases its chances of having a comfortable existence, it also understood that the role of learning is in continuous growth. Each may learn from the life experiences of their ancestors, from the close observation of others or of nature.

Nowadays there are many forms of training, for any level of education and formation. Also, there is a wide range of possibilities for each individual, provided that he is willing to learn. Of

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<sup>1</sup> [http://www.euractiv.ro/uniunea-europeana/articles/displayArticle/articleID\\_13320/Educatia-inovatiea-si-antrenoriatul-cuvinte-cheie-in-lumea-de-azi.html](http://www.euractiv.ro/uniunea-europeana/articles/displayArticle/articleID_13320/Educatia-inovatiea-si-antrenoriatul-cuvinte-cheie-in-lumea-de-azi.html).

course, the chances are not the same for everyone, the equal access to opportunities is not to be found in reality. What we can do, as trainers, is to provide them with as many information as possible, to instill them the courage to undertake, to encourage them in their actions and to consolidate in them the principles, norms and rules of entrepreneurial conduct. Of course, all in the spirit of respect for the ecosystem, the natural laws of the riches that the earth provides us so generously.

The education system introduces the pupils and students in the mysteries of entrepreneurship. It develops not only through education, exchange of experience with other universities with similar activities, but also by practice, or visits to successful companies entered in market niches. In recent decades, entrepreneurship has developed in its social form. The social entrepreneurship (HBS Social Enterprise Initiative) appeared and expanded from an idea, designed to meet a social need, which has been translated into reality and attracted followers, not only support funds, and transformed over time into a prosperous business.

### Social entrepreneurship

Fundamentally different from the object of activity of NGOs, which support certain categories of disadvantaged people, social entrepreneurship stands aside from the charitable, voluntary and profitless actions conducted for the needy. The social entrepreneurs are "problem-solvers" and do this for money. Namely, away from the altruist idealism directed towards others, the social entrepreneurs make business plans based on ideas that generate innovation, in order to prepare the society for change, to open the way for new entrepreneurial actions with profound social impact. Social entrepreneurs work to find means, tools, and ways of economic development that would lead to increases in profit. Of course, there are entrepreneurial courses in many universities of the world, people are competing for scholarships in different pilot organizations in the entrepreneurial environment, or there are research grants to address some pressing issues in society.

Social entrepreneurship, up to the present crisis, had only followers lacking of courage, who critically observed those who really have proven their entrepreneurship in real life. Nowadays, as funding has become more expensive and discretionary granted, entrepreneurship lost popularity. People think more before testing a new idea, which is a great loss for the practical dimension of the concept. In vain we have some well-prepared enthusiasts, with one or several potentially successful ideas, if they do not have the courage to borrow money from the banks to make them viable. It is really a pity because the present society offers many opportunities. Now the conditions to develop a successful social entrepreneurship are really met:<sup>2</sup>

1. *Entrepreneurship plus innate qualities* – the ability to identify and capitalize commercial opportunities in the economic and social environment we live in; the ability to think freely, to be a visionary, on the long term, unhindered by the restricting actions of ordinary people; determination, strong motivation to create and innovate; ability to take risks for the sake of goals.

2. *Behavior characteristics of a change agent, with "generator and destructive role in the same time"*– the ability to identify opportunities, creativity and determination. The idea of entrepreneurship success and serial entrepreneur is based on the perseverance of the entrepreneur to obtain and increase success, hence the profit, to "trigger a chain reaction", encouraging other entrepreneurs to restart the same process and, eventually, to promote the new, multiplying it up to the so called "point of creative destruction", when the innovative exhausts its innovative capacity, the products, services and the business itself ending its ability to generate profits (Joseph Schumpeter).

3. *Social mission* – the creation of value to determine social change, by speculating an opportunity, makes the entrepreneur a social missionary. Identifying the social problem entails the perception of the adequate opportunity for the respective community need. The prospect of financial gain is not as important as the community benefit, the impact with profound changes in attitude,

<sup>2</sup> <http://master-supervizare.blogspot.ro/2009/11/antreprenoriat-social-nasterea-unei.html>.

behavior, system of needs and possibility to satisfy them. The business turned into a social missions offers a special status to that particular business.

### Current entrepreneurial opportunities

1. In the midst of uncertainty caused by the prolonged crisis, successful business ideas are those related to existence, working and living style of people. There will always be new directions for those in the food industry. The obvious trends of extension in current consumption of genetically modified organisms are not examples to follow. But, shift towards organic farming, capitalize each plot of land with agriculture potential, expand agricultural land and irrigations are the imperative of the moment.

2. Permanent restrictions shall turn the future entrepreneurship towards unconventional energy systems. The depletion of fossil fuel reserves, estimated – at the present consumption – to maximum 25 years, as well as the continuous increase in prices for energy obtained in the traditional ways, require research and testing of primary energy resources, renewable and inexhaustible, but dependent on the sunlight, internal temperature of the earth, gravitation interactions of Sun and Moon with the globe's waters<sup>3</sup>. *Solar energy*, annually captured on Earth in quantity of 720x106TWh (dependent on the alternation day/night, on the latitude and longitude of captation, on the seasons and cloud interference) already offers many opportunities for captation and conversion. *Thermic solar energy* is already brought to experimental centers (with low capacity of 15%) through extractions by means of thermodynamic machines (with capacity of 2%, where differences between the surface and depth waters are of 25-30°C). These solutions are not cost-effective, but there is a field where research can be further done. *Photovoltaic solar energy* may be used to produce electricity using silicon cells. Photovoltaic panels are used to convert 10 – 15% of solar energy into electricity. These panels cover increasingly larger areas in Romania, even though its position does not allow capturing sunrays of strong intensity. *Wind energy* has a significant potential, because, at least in theory, the world availability of 60.000 TWh per year may cover the global demand of 40.000 TWh (including losses). *Kinetic and potential water energy* provides the cheapest energy. In terms of power installed, at world level, the hydroelectric power may be considered the first renewable source of electricity. Technically exploitable are 14.000 TWh of the theoretical potential of 36.000 TWh. *Tide energy* is not an opportunity, as projects already started in Canada, France and Britain transform the local ecosystem. *Waves energy* is an important source of energy, unfortunately cheap on the shores and expensive on territories far from them, because of the large areas occupied by the caption facilities. *Geothermal energy* can be transformed into electricity by pumping hot or warm water from the inside of the crust towards the surface. *Biomass*, supplier of biofuels (solid, liquid, gaseous), becomes renewable energy source on two conditions: expansion of forest areas and their rational exploitation. Here there can be identified many opportunities for entrepreneurship.

There are already more or less prosperous businesses<sup>4</sup>: electricity in the paving (through parquet, tiles, carpets); facilities to melt ice and snow outdoors, protection of roofs, gutters and downspouts, pipes, gates and exterior doors; foundations of freezer rooms and skating rinks; relays and mobile phone antennas; not to mention greenhouses in agriculture, livestock farms, public spaces destined to entertainment and recreations (malls, stadiums...)

3. More expensive are and will remain the futuristic initiatives. They have always supported bold ideas those beautiful dreamers who have brought the future in the hands of their fellows. Now it is the time of nanotechnology. Are not sufficiently promoted those researches on technologies and techniques of medical rehabilitation – for example, the efforts of Prof. Samuel Stupp team, with significant results in reversing and preventing the paralysis through regeneration of the spinal cord, the conservation of Parkinson and Alzheimer diseases, the universal repair of all fractures and

<sup>3</sup> [http://www.armonianaturii.ro/Sursele-de-energie-neconventionala.html\\*articleID\\_1193-articol](http://www.armonianaturii.ro/Sursele-de-energie-neconventionala.html*articleID_1193-articol).

<sup>4</sup> <http://energie-neconventionala.blogspot.ro/>.

production of new cartilages<sup>5</sup>. And these are not the only achievements. As seems obvious, nanotechnology is most present in computers<sup>6</sup>, varnish industry, colours and paints<sup>7</sup>, constructions – automatic systems, automatic cranes, laser excavators, industrial robots<sup>8</sup>...

Unanswerably, entrepreneurship can be taught. The present offers wide entrepreneurial opportunities, in terms of types of business, scope, viability over time. Questionable is the capacity of financing the idea. As also the favorably legislative frame.

For several decades people are taught, through the educational system or via non formal and informal training, that in the battle with nature, the latter always wins until the end. Man must understand nature, identify the resources that it provides, the conditions under which it accepts his intervention, and most importantly respect it because if we were to state for the man to “cherish” or “love it” we might just overcome the economical-educational framework. Who teaches man how to find business opportunities without jeopardizing his present and future relationship with nature? The educational system did not always accomplish everything. At least lately, the involvement of various actors from the market has been more than welcome – they are training companies, economic agents, various projects which reunite non-governmental organizations, administrative structures with private partners, they are multinational companies with creative projects, they are organizations powerful research and development departments and pilot products in areas where ordinary human mind cannot imagine reaching.

The very premise is wrong, man cannot fight nature, man must not fight, especially nature. In a more formal way and quite commonly used, the rational man, "Homo tehnicus" or "Homo oeconomicus", as a product of nature, makes decisions based on ethics, environmental responsibility, respecting the rules of human coexistence with nature [Odum, 1971]: not to dissipate potential energy; to know exactly which elements our own survival system depend on; to act in such a manner so that all may benefit as efficient as possible from the energy circuits of the system; to outline in his own work systems those parts that place him on the good side of events; to value other life in the surroundings as one of his own, for only so can he survive; to judge any value through the energy spent to produce it and the energy that he is able to accumulate, and not to convert the energy current into insufficient money means whenever possible; not to use large amounts of energy because mistakes, destruction, noise and excessive surveillance lead to the increase in waste; not to take anything from man or nature without providing an equal value service in return; to enrich informational heritage, because using this unique and complex action, the system will justify new through what is immortal in it; to believe in the benefits of stability over growth, of organizing over competing, of diversification over uniformity, of the system over parties and of the process of overall survival of mankind over personal peace. But who to tell man how to act in order to meet the above standards? Examples to be presented in the paper come to reinforce the need for education in an entrepreneurial manner, innovative, responsible, economically and environmentally responsible, supporting the ecosystem.

Predictions about the future of mankind have always been more or less alarming. It seems that the present ones are based on the restrictive access to resources of an increasing number of consumers. Are we sufficiently educated to meet the needs of the planet that gives us existential support? Of course not. Do we really strive to teach our offspring how they can healthily live and work, economically and environmentally? Absolutely not. Do we manage to sufficiently develop everything that is provided to us by the environment? Certainly not.

It is difficult to understand how we should organize and administer our existence. The consumer society has destroyed almost all human common sense. The needs do not longer meet the

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<sup>5</sup> <http://www.prostemcell.ro/stiinta-cercetare/viitorul-nanotehnologiei-si-medicinei-regenerative.html>.

<sup>6</sup> <http://www.cs.cmu.edu/~mihaib/articles/nano/nano-html.html>.

<sup>7</sup> <http://www.bejeus.com/2010/06/viitorul-masinilor-coupe-cu-patru-usi.html>.

<sup>8</sup> <http://www.proiectulvenus.ro/tehnologia/constructiile.html>.

level of existential comfort. There is an obvious and excessive polarization of the population – on the one hand an alarming majority survives at the minimum level of subsistence, and on the other hand, there is a small group, part of a “selective club, perpetuated in the family”, the owner of wealth and numerous resources. What can we do? How could we overcome the current deadlock, in its double manifestation (economic and environmental)? Who is entitled to coordinate such actions? In any case, someone who is capable, someone literate and with vision, someone who is educated in the sense of respect, responsibility and duty towards fellow predecessors, contemporaries and successors. This means we need learning, experience, theoretical and practical knowledge, support and proper measures taken at high level, but also actions taken by smaller entrepreneurs.

### **From where we can start the entrepreneurial learning in resource exploitation**

Entrepreneurship remains a process of identification, pursuit and capitalization of a business opportunity. The entrepreneur tries to make a business plan, which he must observe as closely as possible, in a structured manner, in order to achieve success on the market, i.e. to collect a satisfactory profit from the opportunity he discovered. A very important aspect is the time horizon, at least three-five years to develop the respective business, during which it is desirable that it becomes self-sustainable. If the entrepreneur succeeds in repeating the process at least two times, with the same good results, watching different opportunities, he is a serial entrepreneur<sup>9</sup>. As everything is learnt, except native abilities, it is obvious the need to introduce as learning subjects (at any level) the entrepreneurial experiences, the good practices and the success in business, especially for low level businesses. The entrepreneurship and the business administration is learnt from the books, in a formal organized frame or from practice. But entrepreneurship is strongly related to the personal qualities and skills of a certain person, as well as to the managerial skills. An entrepreneur can develop by accumulating quantitative and qualitative knowledge at theoretical level, he keeps himself permanently active, individually or within organizations, he operates in a extremely dynamic competitive environment, which is way too turbulent in recent years<sup>10</sup>. Regarding exploitation opportunities, there are many factors that influence the price and output trend in the mining industry, the most important being: fluctuations in profit rates, fluctuations in the cost of extraction, the introduction of taxes by the government. Some of these, such as taxation and the profit level, may be treated as variables of the pricing policy by the government in order to influence the extraction of non-renewable mineral resources.

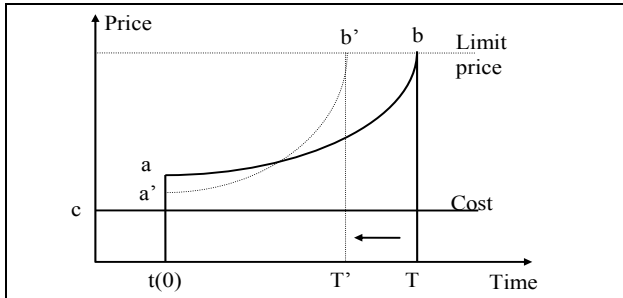
### **A. Changes in the profit rate**

Profit fluctuations may strongly influence production - price trends in the mining industry. For the beginning we shall assume that the profit market rate will increase. This means that the income rate obtained from a project of alternative investment, say term cash deposits, increases. If the owners do not undertake any amendments to the original plan, the stock reserves shall lead to suboptimal income rates in time. A way to avoid such losses is to transfer production into the present. Namely, the owners shall extract and sell more in the present, which will lead to lower market prices. Therefore, the less it is extracted, the higher shall be the net price of remaining reserves. This means that reserves would be exhausted in less time than the time needed to increase profits.

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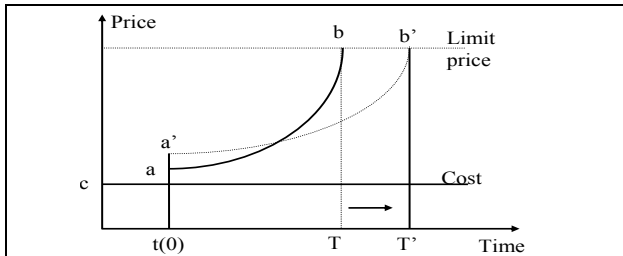
1. <sup>9</sup> [http://www.finmentor.ro/business/educatie-financiara/antreprenoriat/antreprenoriat\\_ac.aspx](http://www.finmentor.ro/business/educatie-financiara/antreprenoriat/antreprenoriat_ac.aspx).

<sup>10</sup> <http://antreprenoriat.upm.ro/antreprenoriat-transilvan/antreprenoriat-si-administrarea-micilor-afaceri-6.html>.



**Fig.1. The effect of profit rate increase on the production – price trend and on the depletion time**

"a'b'" shall be more abrupt than the previous "ab".



**Fig.2. The effect of profit rate decrease on the production – price trend and on the depletion time**

that the depletion time increases, as shown in Figure 2.

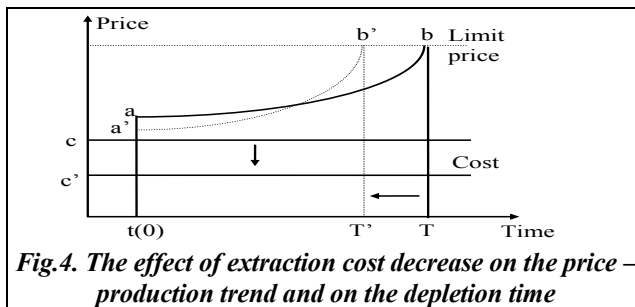
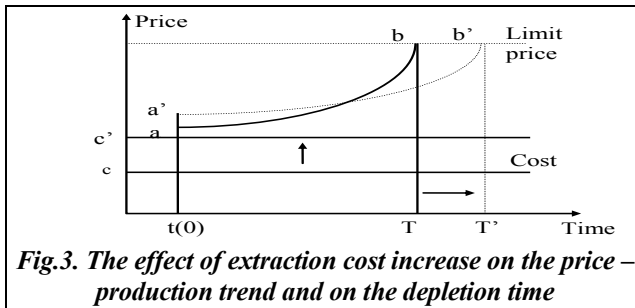
For the start, let us think how the extraction cost increased. This can happen for various reasons, such as the lack of skilled labor, growth of salaries in the industry or the decline in base resources, because the owners start the extraction from ores with difficult access. A growth in costs shall reduce the current extraction level, thus shall increase the starting price, but reduce the subsequent prices. In exchange, this phenomenon shall reduce the amount required in the near future and increase the one in the future. The net effect shall be the increase of depletion time. The situation is described in Fig. 3. As the extraction cost increases, the rent shall be reduced. In response, the owner shall reduce the current production, which shall increase the initial price from  $t(0)$  to  $t(0)'$ , and the new price – production trend shall be "a'b". On the other hand, a decrease in the cost of extraction shall have the contrary effect, by increasing the initial rent. If no adjustment is made, the renunciation price shall be reached earlier than desired, and the owners shall remain with unsold stocks. To avoid such a situation the owners shall reduce the starting price. In this case, when the extraction cost decreases, the immediate level of production increases, which in turn shall reduce the initial price and the time of depletion (Fig.4.).

**B. Taxation system**

The taxation system may have powerful effects not only on entrepreneurial opportunities, but also on the policies used in the mining industry. In this respect we can mention several taxes. **B.1. Excise.** A tax on the value of production in the mining industry shall determine the increase in costs, with an effect similar to that described in Fig. 4. **B.2. Ad-valorem tax.** Set to the price of each production unit, usually as a percentage of the value of the extracted production. Its effects are the reduction of the depletion rate of reserves and an increase in their depletion time. **B.3. Property tax.** This type of tax shall shorten the time of depletion.

Figure 1 illustrates this situation. The "ab" curve is the production – price trend before the increase in profit rate. Immediately after increase, the owners should make an adjustment by growing the production level, the price level shall drop to  $t(0)$  from  $a'$ . For the remaining time it shall be extracted less so as the appropriate rent of the remaining reserves to grow to a higher level. This shall shorten the depletion time from  $T$  to  $T'$ . The new price – production trend

If the profit rate decreases, the reverse phenomenon shall take place. The initial price shall increase as the owners move the production into the future by reducing the current extraction. This is because lower profit rates make stocks more attractive than current production. This is also obvious because a lower profit rate would indicate a lower growth trend than in the previous case. This means



### Conclusions

The above example is just one among the many other opportunities which a potential entrepreneur may take, the majority of these being learnt. Of course the role of learning, individual or organized, is essential, not only because it facilitates the business organization and learning, but because it also offers ideas. The ideas of resource exploitation remain among the most profitable. Or, they continue to incite people with entrepreneurial spirit, precisely because mankind, until now, did not find or did not want to find, at large scale, alternative solutions to replace natural resources.

### References

- AMIGUES, J.P., (1997), *Enjeux et limites de l'évolution des actifs naturels*, în *Economies et Societe*, Serie Developpment croissance et progres, F.nr.35,4.
- BĂDILEANU, M., (2002), *Economia protecției mediului înconjurător*, Editura SYLVI, București.
- BULEARCĂ, M., (1995), *Teoria piețelor și utilizarea eficientă a resurselor naturale*, în *Fluxuri și piețe internaționale de materii prime și energie*, Studii și cercetări economice nr.10-11, ERNE-IEI, CIDE, București.
- MC KELVY, V.E., (1972), *Mineral Resource Estimates and Public Policy*, 'n *American Scientist*, vol.60 (ian-feb).
- MALENBAUM, W., (1975), *World Resources for the Year 2000*, 'n *The Anaals of America Academy of Political and Social Sciences*, july.
- MARTIN, R. L., OSBERG, S., (2007), "Social Entrepreneurship: The Case for Definition", în *Stanford Social Innovation Review*, Spring.
- POSTOLACHE T. (coord.), (1987) *Tratat de economie contemporană*, vol. 2, cartea 1, Editura Politică, București.
- VINCENT A., NELINE R., (1968), *Etude methologigique du Capital natural*, Ed.Dunod, Paris.
- OLSEN, M., ZECKHAUSER, R., (1970), *The efficient production of external economies*, în *American Economic Review* no.60.
- ROTTENBERG, L., (2009), *Speech presented at the 10<sup>th</sup> edition of the Annual Social Entrepreneurship Conference organized by Harvard University on March 1<sup>st</sup>*.

- SAMUELSON, P.A., NORDHAUS, W.D., (1989), *Economics*, 13<sup>th</sup> Edition, McGraw Hill Book Co., New York.
- SAMUELSON, P.A., NORDHAUS, W.D., (1992), *Economics*, 14<sup>th</sup> Edition, McGraw Hill Book Co., New York.
- <http://antreprenoriat.upm.ro/antreprenoriat-transilvan/antreprenoriat-si-administrarea-micilor-afaceri~6.html>.
- [http://www.armonianaturii.ro/Sursele-de-energie-neconventionala.html\\*articleID\\_1193-articol](http://www.armonianaturii.ro/Sursele-de-energie-neconventionala.html*articleID_1193-articol).
- <http://www.bejeus.com/2010/06/viitorul-masinelor-coupe-cu-patru-usi.html>.
- <http://www.cs.cmu.edu/~mihaib/articles/nano/nano-html.html>.
- [www.ecolife.ro](http://www.ecolife.ro).
- <http://energie-neconventionala.blogspot.ro/>.
- [http://www.euractiv.ro/uniunea-europeana/articles|displayArticle/articleID\\_13320/Educatia-inovatiea-si-antreprenoriatul-cuvinte-cheie-in-lumea-de-azi.html](http://www.euractiv.ro/uniunea-europeana/articles|displayArticle/articleID_13320/Educatia-inovatiea-si-antreprenoriatul-cuvinte-cheie-in-lumea-de-azi.html).
- [http://www.finmentor.ro/business/educatie-financiara/antreprenoriat/antreprenoriat\\_ac.aspx](http://www.finmentor.ro/business/educatie-financiara/antreprenoriat/antreprenoriat_ac.aspx).
- <http://master-supervizare.blogspot.ro/2009/11/antreprenoriat-social-nasterea-unei.html>.
- <http://www.proiectulvenus.ro/tehnologia/constructiile.html>.
- <http://www.prostemcell.ro/stiinta-cercetare/viitorul-nanotehnologiei-si-medicinei-regenerative.html>.
- <http://www.responsiblemanagement.ro>.
- [http://ro.wikipedia.org/wiki/Discu%C8%9Bie:Energie\\_regenerabil%C4%83](http://ro.wikipedia.org/wiki/Discu%C8%9Bie:Energie_regenerabil%C4%83).