

The magic of the century we live in. The supremacy of three bio factors and their impact on firms trading

*Magia secolului în care trăim.
Supremația celor trei bio și impactul
acestora asupra firmelor de comerț*

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Abstract

Technology has come to be appreciated as key to the competitiveness of micro and macroeconomic level. Technological environment affecting business firms by increasing trade efficiency in making services and quality of services. Usually there should be no problems related to computer equipment or communications systems. Life of individuals and firms will be influenced increasingly more by biotechnology, bionic or biometrics. Today it put more emphasis on the development of biotechnology, whose future shows to be as extensive as in the case of information technology. Biotechnology also founded an alternative universe.

Keywords: *technology, biotechnology, bionic, biometrics, firms trading*

Rezumat

Tehnologia a ajuns să fie apreciată drept cheia competitivității la nivel micro și macroeconomic. Mediul tehnologic influențează activitatea firmelor de comerț prin creșterea operativității efectuării serviciilor și calitatea prestației. Actualmente nu ar trebui să existe probleme legate de echipamentul informatic sau de sistemele de comunicare. Viața indivizilor și a firmelor va fi influențată din ce în ce mai mult de biotehnologie, bionică sau biometrie. Actualmente se pun multe accente pe dezvoltarea biotehnologiei, al cărei viitor se prefigurează a fi la fel de amplu cum este cazul tehnologiei informațiilor. Aceasta a pus bazele unei univers alternativ.

Cuvinte-cheie: *tehnologie, biotehnologie, bionică, biometrie, firme de comerț*

JEL Classification: M20

The firms are influenced in their activity by macro-environment factors such as demographic-environmental factors, economic environment, social and cultural environment, technology environment and legislative political environment (Somes et al. 2001)

Technological environment includes components that explain how to obtain products or services that use the company at a time. The main particular factors that technological progress may express concern the inventions and the innovations. What led to redefine the roles of various factors was the fact that in industrialized countries the technological factor was responsible for 40% to 75% rate of economic growth recorded.

Alvin Toffler emphasizes high-technology as support in the development, underlying the modern technologies role. Knowledge, new technologies and new institutions are the most recent sources of development (Griffin 2000).

Analysis of environmental technological highlights put in first frame the speeding of technological progress, there are unlimited possibilities for innovation, of substantial budgets for research-development, focusing on minor improvements to the detriment of major findings and growth of regulations on technology transfer. The pace of economic development depends on the number of technological discoveries. Having a remarkable impact, the use of technology enhances from the quality point of view, diversifying and specializing. Technological environment is characterized by the level of technological capacity, receptiveness towards technological innovation and the endowment of goods. Technology is causing a domino in all sectors of business, the most illustrative example is the Internet (Figure 1. Share of persons which have internet access at home: 2005/1, 2008/1).

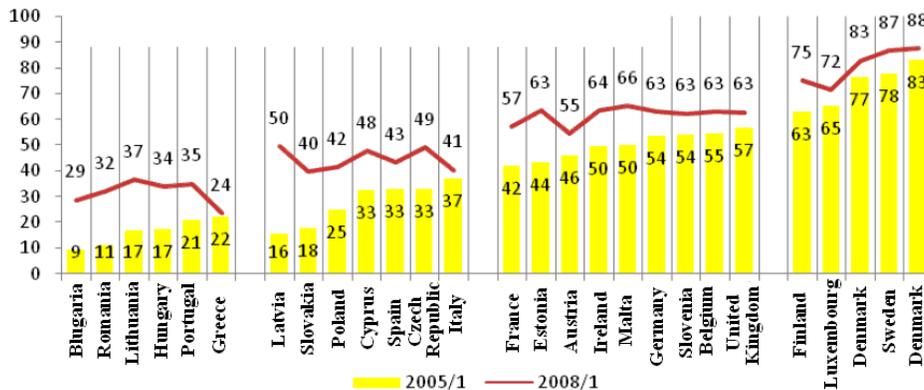


Figure 1. Share of persons which have internet access at home: 2005/1, 2008/1

Source: Eurobarometer 69, Public opinion in the European Union, Spring 2008
 (http://ec.europa.eu/public_opinion)

A very important one feature currently owns the Internet, as an expression of expansion technology. Remarkable development of the Internet led to numerous changes in different environments: economic, political, social, natural etc.

Internet access in Romania has tripled in the past three years. According to the report *The Global Information Technology 2007-2008*, the phenomenon is specific to countries that were and are still the most poorly connected to the internet in the European Union. Similar increases have registered also Bulgaria, Hungary, Latvia and Lithuania. There are clear signs of a reduction in disparities of population stratification in the union. Also, according to the same report *The Global Information Technology Report 2007-2008*, the indicators: Internet bandwidth (place 34), subscribers to broadband internet (place 35) is for our country strengths, but weaknesses points are more numerous. Government priority in terms of information and communication technology puts us on the spot 101 of 127 countries under review, the availability of the newest technology, the costs of companies in research development, collaboration between universities and industry are low (Table 1 The number of Romania's Rating from 127 countries, depending on other technological factors).

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New directions of technological development are involving portability, online presence. More and more trade companies operating through digital networks, this direction of development for online authentication will result in increased confidence in transactions through the Internet. It is noticed a trend toward mobility in Romania, both in sales of portable equipment to the detriment of desktop, also in the management, control and business development at distance.

The Internet is a means of communication of the company trade with its customers, a way of marketing products and payment of value of goods purchased by customers, reducing the space and the time.

Thus, in one, *the world is dominated by small e*” (Dinu, 2007), is very much exploit the facilities provided by the Internet: the ability to communicate, winning boundaries, time and space.

Among the economic sphere, transformed by using the Internet in e-fields, we appreciate the development of activities such as: business knowledge, e-business, web-business, M-business, B2B (business to business), C2C (customer-to-customer) B2C (business to consumer) e-commerce, e-tail, P2P (peer-to-peer), M2M (machine-to-machine) network-to-network, e-market, your market, e -marketplace, e-scholarship, e-procurement, e-tendering, e-compensation, e-tourism, e-money, digital money, cyber money, cyber coin, card, e-payment, e-bill, e-tax, e-banking and banking, m-banking, e-engineering, e-learning, e-shipping, e-leasing, e-commerce, i-commerce, m-commerce, etc.

The number of Romania's Rating from 127 countries, depending on other technological factors

Table 1

No. crt.	Name index	Held in place by 127 countries
1	Number of telephone lines	62
2	Availability of new telephone lines	86
3	Internet servers	62
4	Extent of business Internet use	78

No. crt.	Name index	Held in place by 127 countries
5	Accessibility of digital content	54
6	Availability of scientists and engineers	47
7	Quality of scientific research institutions	70
8	Cost of mobile telephone call	63
9	Company spending on R&D	87
10	University-industry research collaboration	87
11	Government prioritization of ICT	101
12	Government success in ICT promotion	73
13	Gov't procurement of advanced tech products	81
14	Importance of ICT to government vision of the future	81
15	ICT use and government efficiency	71
16	Presence of ICT in government offices	35
17	Availability of government online services	73
18	Mobile telephone subscribers	48
19	Level technology absorption	83
20	Capacity for innovation	62
21	Availability of latest technologies	91
22	Utility patents	61

Source: *Processing data by The Global Information Technology Report 2007-2008*
 (<http://www.insead.edu>)

Development of technology has changed the entire activity business of trading firms, such through electronic payments ensures maximum efficiency for the customers, it can order products and may pay from computer.

Electronic commerce although it is not expanded in Romania, is an activity which is forecast to take magnitude in the future, but currently is the hallmark of the economic crisis will have a separate development. E-commerce has significantly changed the scope of payment and purchasing habits.

Development of e-economic areas is very pregnant. The main reason for development is the flexibility of organizing business activities in order to guide consumers.

In Romania there are gaps in the science of population stratification on urban-rural environments, to the detriment of the rural environment, and trade firms, which have a weak connection with the people of the area. A potential tendency to reduce disparities in terms of access to the Internet will support to facilitate trade relations firm-client-firm trade administration.

Increased of competitiveness and economic performance of economic operators and accelerate the introduction process of advanced technologies in the economy is one of the directions contained in the programming budget of the Ministry of Education Research and Youth in the strategic plan 2008-2010. For this purpose has resulted the planned results and performance indicators, according to Table 2.

Indicators of performance

Table 2

Computing modality of performance indicator	Performance Indicators			
	2007	2008	2009	2010
Share of export of high-tech products in total employees in industry manufacturing/services (0.4% / 1.5% of total employment)	4,2%	4,5%	4,8%	5,2%
	0,5%/ 1,8%	0,6% 2,2%	0,7% 2,5%	0,8% 3,0%

Source: *Strategic Plan 2008-2010, The programming budget element, the Ministry of Education Research and Youth (www.edu.ro)*

According to the global area, the sector of information technology will influence the increasing number of sectors, by implementing new technologies or earlier, but renewed such as nanotechnology (Figure 2. Significance of nanotechnology). Webster Dictionary defines this term as „the art of handling tiny devices of molecular dimensions”.

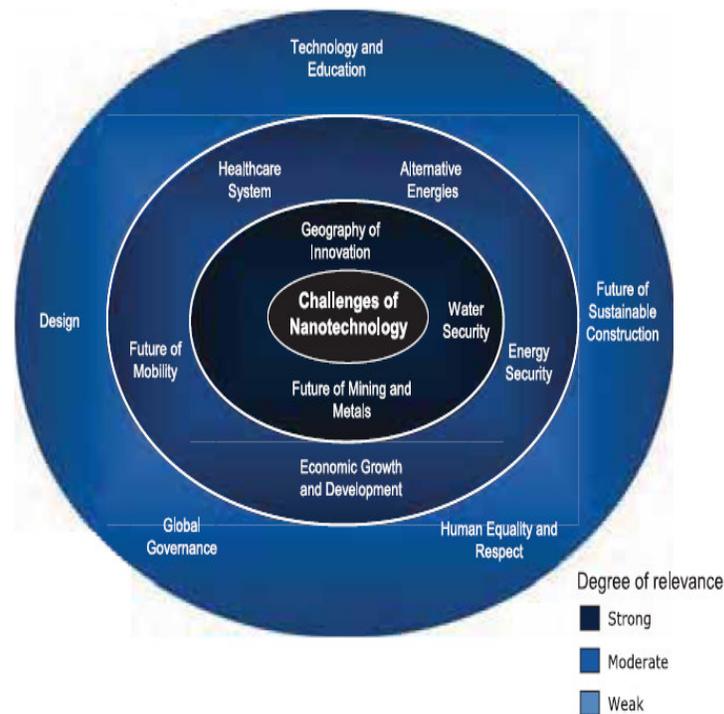


Figure 2. Significance of nanotechnology

Life of individuals and firms will be influenced increasingly more by biotechnology, bionic or biometrics.

Today it put more emphasis on the development of biotechnology, whose future shows to be as extensive as in the case of information technology. Biotechnology is a science that successfully combines scientific conquests of biology with technology to improve the standing of life. Biotechnology is any application that uses biological systems, living organisms or derivatives thereof, to create or modify products or processes well. Technology trends supporting economic development, the impact is particularly reflected by the development of communication technologies and the organization of economic activities

Biotechnology also founded an alternative universe. For example, there are companies (IBM, Philips and Vodafone), which opened offices in Second Life and the example has aroused the interest of official institutions such as the European Commission, intends to open virtual offices and embassies. Second Life virtual world is a 3-D world, created by users and provides a platform for communication, business and education. With the virtual world some of the big companies already have this conference in the universe.

Second Life will change people's perception essentially on the manner how we interact and how to conduct business development in present or future.

„The three bio-parameters” make more efficient the business firms. Recent progress in new techniques determines radical changes in the techniques of operating business units.

Currently, there are multiple applications of technologies in the field of trade firms. For example, Bionic has a clear influence on companies and people, many of the phenomena observed in nature are applied at present in people's lives, and using biometric devices, such as those employed for clocking, to obtain data on the exact number of hours worked, removing also the time that it would assign an employee of this activity. Biometric devices can be used independently or integrated to access control systems, recognizing the characteristics of typical behavior and physical measurable human rights, offers advanced certification for establishing identity. Biometric solutions may take physical form or forms of behavior. Natural solutions for obtaining biometric data measurement part of the body involving face recognition, iris, retina recognition, fingerprint recognition, the arteries and hand geometry recognition. The biometric solutions involve behavioral biometric voice recognition and signature recognition. Biometric solutions consist in transforming biometric characteristics known a man to code without equal, but that only specific people. This code is recorded in an electronic environment and compared with records established the identity of the person active and in this way to obtain the desired results.

The biometric systems allow the access to monitor the people controls and thus can be distinguished and separated persons authorized by the unauthorized. Unlike access card or code, biometric systems make it impossible copying or imitating the characteristics of personal, they may not be transferred to another person, can not forget and can not be lost.

The influence of environmental technology companies in trade shows by major innovations: the houses marked with scanner, encoding goods (EAN, UPC, etc.) network transmission of data, preparation of automated controls, the expansion of electronic commerce, development of telematics. Houses marked with scanner accelerates the process of collection, revealing sources of unplanned losses, saving bookmarks regarding prices and

improving management purchases, stocks, linear, promotion, etc. Telematics can occur while a reorientation of manners purchase of goods, in this case, innovation is crucial.

Some authors emphasizes the need to take into account not only the positive environment that has over the company name, to choosing the optimal variant of the strategy, but also negative ones, present in the form of political risk, economic, legal, technological, Financial (Mathé 1987).

Activities of transport, warehousing, storage, wholesale and retail of goods, services, etc. utilities are increasing the value of gross domestic product. Meanwhile, the cost of them are influencing the price which the product is adopted by consumers, which together with the cost of which is obtained a unit product characterize along with the size of gross domestic product per capita, the state of the economy.

The condition to enhance business contribution to firm growth is the modernization of the distribution, by incorporating scientific and technical progress contemporary. This objective requires a comprehensive process of recovery advanced creative experience in the specific area of our country, start from the fact that distribution systems are very varied from country to country, even among the economically advanced.

Implementation of scientific and technical progress has profound implications for the evolution of trade firms: increasing number of new or upgraded increasing the demands on the purchase of products. The discovery and exploitation of technological opportunities should become a permanent activity of senior management and those participating to substantiation strategy of the company.

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