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Research, development and universities are considered the fundamentals of European competitiveness and therefore require sustained action in partnership with social and economic environment. At European and international level it was discussed about the urgent need to work changes in higher education concerning the role and organizational structure. There is consensus about the need for higher education to substantially contribute to the development of entrepreneurial skills of university graduates who will work in a society that requires frequent changes of occupation, international mobility and a fast adaptation to flexible structures.

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The entrepreneurship concept

Allan Gibb (2005, p.28) considers that *the entrepreneurial concept* described above will demand: more integration of knowledge (within faculties and departmental areas, between various social science disciplines, between fields in arts and science and between tacit and explicit knowledge); much greater opportunity for experiential learning; greater space for the testing of explicit knowledge in practice (with more time for reflection and learning by re-doing); greater equality of emphasis upon how things are taught with what is taught; innovation in assessment and accreditation procedures; changes in some of the basic philosophies of learning – particularly in the field of management. Mintzberg (2004) and Ghoshal (2005)

Entrepreneurship is associated with major innovation step changes in technology, process, organization or management. Entrepreneurship defined in terms of behaviour, skills and features necessary to meet the demands and opportunities of the social environment aims a larger framework than the economic field and market and makes the difference between the institution defined as “formal and informal ways of doing things” and the organization these practices may be embodied. This approach adds a critically important dimension to the evaluation of the process of market development and indeed other ways of organising exchange. The strength of this conceptual perspective lies in its appropriateness for dealing with organizations of all kinds, not just businesses.

In Gibb’s opinion, the list of *entrepreneurial values* are in line with the «ways of doing things» and are associated with organizing things, feeling things, communicating things, understanding and thinking things and learning things.

Fundamental coordinates of the entrepreneurial university

Entrepreneurship University is a concept used by B. Clark as a reaction of the new type of university to changes of the external environment engaging itself, on your own risk, through employment in economic and social development of the region, using existing resources creatively, operating in costs and profit parameters. It puts education on spotlight as a value on the market and can be an extension of large corporations.

Directions of transformation of the university through entrepreneurial efforts, in Clark's opinion are:

- an enhanced decision-making right of the frame consists of administration of the university and the academic departments to ensure efficient and flexible reactions to environmental demands;
- an extended dynamic periphery consists of flexible units that work as interface between the institution and the external environment;
- a diversified funding base through grants and contracts accession, identification of tertiary sources (traders, local authorities, philanthropic foundations), intellectual property valuation, taxes, administration campuses;
- a good core academic well stimulated represented by research departments focused on certain disciplines and interdisciplinary areas of study; this core structure is categorized as providing conduct of most of the academic work;
- an integrated entrepreneurial culture represented by the favourable change in work culture that is based on ideas, principles, culture of the university, institutional identity.

The triple helix of university – industry – government relations

The Triple Helix of university-industry-government relations provides a neo-evolutionary model of the process of innovation that is amenable to measurement. The first dimension of the triple helix model is internal transformation in each of the helices, such as the development of lateral ties among companies through strategic alliances or an assumption of an economic development mission by universities. The second the influence of one helix upon another. The third dimension the creation of a new overlay of trilateral networks and organizations from the interaction among the three helices, formed for the purpose of coming up with new ideas and formats for high-tech development. The triple helix denotes the university-industry-government relationship as one of relatively equal, yet interdependence. (H. Etzkowitz, L. Leydesdorff, Martin Meyer 2000)

The interaction between university and industry has been a classical theme in the agenda of nation states, OECD, EU. It has been discussed that much of the academic knowledge comes out not in the forms of written knowledge, but as tacit knowledge within the individuals (i.e. researchers and graduates). The flow and mobility of these skilled individuals from academy to industry are the most important way for the transition of knowledge from basic research to applied research or innovation. However the flow of knowledge is not an easy matter. The transition of academic knowledge into commercial sector requires several factors, such as an excellent research results, managerial and industrial competence and financial support. Traditionally academic sector is assumed to provide basic research results, but in most of the cases it lacks of commercial skills which is normally found outside academia like in firms.

University-industry relations have become a common and widely accepted phenomenon of the nineties. There is a flourishing of literature and policy programs all around the world. There are several reports of OECD 1998-2000, EU framework Programs, US AUTM Projects, World Bank 1999, UNESCO 1998. By the same token, various scholars have worked on this subject matter based on different concepts and assumptions. Namely, Pavitt, 1997; Steinmuller, 1994; David, Forray and Steinmuller, 1997 have mainly based their theories on the concept of scientific networks. Although all these reports and theoretical discussions aim to understand these diverse relations and mutual benefits of university-industry relations; they still underline how difficult it is to obtain information to uncover these relations, and thus illustrate the role of these settings in the achievement of an interaction between university-industry. Thus this thesis aims to document the university-industry relations further

Companies want universities supply the fundamental research needs, which are generally pre-competitive. Apparently both sides are willing and in need of cooperation. The interaction and relations between university and industry need to be institutionalized and regulated in order to eliminate the cultural clashes as well as to endow both sides and society with benefits. Therefore

benefits of this interaction for both sides would explain not only the gains of these two settings, but also the implications on the whole innovation systems would be clarified.

Benefits for universities are generally stated as follows: new funding for research, new opportunities for graduates, and new directions for research.

The gains of industries are mainly based on earlier and easier access to: university graduates and faculty members, research results, intellectual property rights.

All these features implicitly reflect that the university-industry interaction provides the innovation system with much more dynamism and efficiency compared to each actor working separately.

However despite this positive picture there are problems and clashes among these actors in not only sharing the results of this cooperation but also in coming together. These conflicts and problems generally emerge due to the differences in culture, contributions and expectations.

The research is a source of strategic value in that it helps to improve system-wide:

- capability (such as qualitative research skills) - Knowledge and research skills can be seen as capabilities embodied in researchers and the institutional networks within which they work; scientific knowledge requires a substantial capability on the part of the user both in research and in the application of knowledge, as acknowledged in a recent policy statement from the European Commission;

- variety (the creation of options and diversity) - variety is a vital feature of flexible innovation systems. Variety is widely regarded as a desirable attribute in the context of an uncertain future.

These themes of capability, variety and capacity outline the main sources of strategic value provided by public research.

The literature suggests two main approaches *to measure these relations through quantitative and qualitative indicators*. While the former one consists of amount of measurable intellectual property-Patents, Number of patent licensing agreements; Income derived from licensing, the latter includes level of partnerships between the universities and industries; relationship between university research people and industry engineers (who talks to whom); “«long term» exchange of people.

In order for the benefits of university research to be expressed in the economy, the university research system has to be connected with the economy. The principal channels identified in the literature can be grouped as:

- codification/artefacts: publications, patents, prototypes;

- cooperation: joint ventures, personnel exchanges;

- contacts: meetings and conferences, informal interaction, science parks, industrial liaison offices and funded networks contracts: licences, contact research, consulting.

What has taken in Romania on the construction of university entrepreneurship field?

It can be said that the Romanian higher education trends are: increasing demand for higher education and training in response to the knowledge society; reduction of public financial support; diversifying needs of training and higher education of the adult permanent education; development of information technology with emphasis on the higher education globalization.

Analysis of individual demand for education in Romania highlights some features:

- individual demand for education is centred on diploma, certificates or certifications without being accompanied by a comprehensive assessment of competences, knowledge, values and skills;

- number of highly-qualified and competitive persons that emigrate towards economic developed countries is high;

- Romania is losing highly qualified staff in favour of developed countries, because it doesn't provide minimum guarantees for the performance ones;

- general culture is evaluated against the pragmatic one, using knowledge to solve current problems;

- universities must focus on creation and lifelong learning skills training, on new information technologies and communication usage.

In Romanian context, *entrepreneurial university* is “opposite to the state assisted university”. It's a university that takes seriously the competition criteria and financial profitability. It is a “self-governing” university, lead by a “strategic plan” which seeks to alter the competitive balance in its favour. It is a university in which managers are becoming more specialized and in which teachers are involved only in managerial and policy decisions, not the current administration. It is a university which seeks to diversify budgetary resources (it has a policy to increase their revenue) and provides de-concentration of allocated funds. It is an is open and connected university to socio-economic environment, a university in which explicit standards of quality are functioning, and where it is accepted the idea of bankruptcy caused by poor management. (The final report of the R09601PHARE).

Technical assistance in Western Europe chancellors and Romanian experts involved in this process drafted a general scheme of universities reorganization in this regard, substantiated in first instance, the MO no. 5.647/22.12.97 on the new organization of university and Director General Administration job introduction (DGA), and MO no.3334/26.02.98 regarding the post of Administrator Faculty Chief -ASF. Were also launched initiatives to legislative changes to ensure adequate wages of these two new functions (Law no. 154/16.07.1998).

In terms of *entrepreneurship spirit*, even if it's challenged by many traditionalists, it will be dictated by the budget precariousness and more visible competition that will exert future large private universities.

There have been steps taken at the ministry level on the introduction of the strategic plan and institutional contract field, creating in university a culture of strategic management. The results marked a beginning in this field. After 1999, all state universities have adopted strategic plans, negotiated all this year the first contract between the universities and institutional ministry; all actions were based on MO nr.3595/22.04.1998 on developing strategic plan for institutional development university. However, most strategic plans are not the result of policies faculties aggregation, being developed by a group of people and the procedure of negotiation with the ministry concerned is relatively short and shallow as time.

Regarding financial autonomy of universities, established as objective of the PHARE Program, has managed a new financing system called “global finance” meant to increase the responsibility of universities and their economic efficiency. This system is based on “funding follows the student” principle and replaces the one which was the number of posts. This requires universities to effectively make their household resources and to establish staff taking to account the budget and not budget after personnel. Application of several orders of the Minister concerned, governmental ordinances and Education Law amended (no. 85/1999) led to the transition to the new funding mechanism of higher education, and the namely implementation has led universities to reconsider their management and make it anchor in the financial return requirements. However, it remains difficult to accept ideas such as «bankruptcy because of poor lacking management», the idea of the financial losses caused by indiscipline and bad organization, and the idea of financial support of those who are the fault of their deficit. Complementary funding mechanism remained a draft, respectively the funding allocation on competitive criteria, performance in research, and explicit policy of the ministry concerned on budgets deconcentration within universities.

In what concerns the *quality assurance in education*, it has been achieved in recent years, a legislative package that includes: Law no.87/2006 approving the Emergency Ordinance no. 75 of 12.07.2005 on the quality of education, Order no. 3928/21.04.2005 on quality assurance of educational services in higher education institutions, principles and criteria concerning the quality system at the institution of higher education - Annex to the Order no. 3928/21.04.2005 Regulation of organization and functioning of the Romanian Agency for Quality Assurance in Higher Education (ARACIS) and Order No. 4.492/06.07.2005 on promoting professional ethics

in universities. It is important the awareness for all faculty of the importance of practical application of the provisions of Annex Order No. 3.928/2005.

As a conclusion, it must establish a new type of Romanian university synchronized with European and global trends in the field, who rely on an institutional and managerial reform, where the initiative, the innovative behaviour and risk be given priority.

How can the issues of Romanian educational system be solved due to the triple helix?

Improvement of relations between universities and economic environment, administration and non-government organization represents one of the ways to settle issues of the Romanian educational system related to: continuous adjustment of curricula to the society needs, quality of learning, job consulting and orientation, graduates integration on the labour force market.

Universities must become open systems able to meet a high level of integration with the economic, administrative, political and non-profitable environment and to meet efficiently the challenges of knowledge society.

Students, universities and economic agents can all take advantage on the existence of common programmes. It would be useful that the universities to propose yearly a considerable number of subjects for licence /dissertation projects, interesting research subjects of economic environment that should be elaborated made up in collaboration with the economic and social environment. In this way, foreign partners could substantially be involved in the activities of universities such as: students practice, laboratory activities, student's research activities.

It would be useful that master and doctoral programmes should be organized as a result of partnership between university and economic agent, thus determining a better integration of graduates on the labour market. An essential role is that of Job Orientation and Consulting Centres; these should be real liaison between universities, student organizations and business environment by facilitating the employment of students in part-time system, by organizing specialized practice, licence and dissertation works. Business environment should be given the possibility of identifying the suitable students, attracting them by private scholarships, paid practical probation. In collaboration with different student organizations, these centres should carry out different projects (campaign presentations, simulations of interviews, job fairs etc) by which, students can get in touch with the employers and thus they are given the possibility to understand better and earlier the labour force market they are going to integrate in.

The European inspector for education, Jan Figel, has declared that the European universities have an important potential not exploited yet, especially concerning their ability to state connections with the business community.

On the second edition of the universities-enterprises forum, on February 5th-6th, Figel has extolled the universities that allow the industry that allow the industry representatives to attend the reviewing process of curricula to ensure they are pertinent reporting to the labour force market. Many employers have complained that some graduates cannot combine their knowledge and skills. The European Committee has aimed to publish a material concerning cooperation between universities and economic environment in order to state a code of good practices in this field.

The European Social and Economic Committee suggests launching a European process that could be called the Prague Process, related to the Partnership Conference between educational institutions and employers on April 6th and 7th, being initiated by the Czech presidency. This could be embodied in a European framework large enough to allow the operators achieving local and national actions:

- challenge of member states and other public authorities to invest more in education, in general, and specially in these partnerships in order to provide a positive reply to the economic crisis and to the continuous difficulties of the labour force market;
- stimulating enterprises and educational institution to conclude partnerships, by formal and substantial innovations;

- organizing changing of good practices and structures of technical and financial appointments, giving the possibility to test, to evaluate and to disseminate the initiative at a European level;
- drawing up common projects (systems of common reference for degrees, initiative and school networks, improvement of teachers and mediators networks);
- promoting programmes of crossed mobility among teachers, students, schools and employer organizations.

Proposal of the European reporters concerning the partnerships between educational institutions and employers related to the necessity adopting a systematic approach, based on simpler mechanisms (but not so bureaucratic like the European programmes), but also more ambitious, including:

- a global political framework, subject to approval, evaluation and control by the social partners, the European Parliament, the European Council;
- european tools of identifying the markets and sectors looking for qualified persons;
- changes of good practices, including both technical education and permanent training and research;
- mechanisms of European scholarships, financed both by the European Union, the member states, but also by the private and associative sector aiming all types of consignees, especially minorities and young people in difficulty: practical probations, projects of innovation and professional insertion;
- elaboration of common reference systems for degrees and professional titles and networks of local initiatives;
- creation of European mediator networks;
- making up networks of European mediators in order to facilitate the partnerships an adjustment to this objective of the European funds and the existing programmes.

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