7. CONTEMPORARY STATUS OF THE EUROPEAN UNIVERSITIES

The whole world is moving towards the society of knowledge; some might argue that it is already a reality in the most developed countries:

Knowledge is produced by research, transmitted through education, disseminated (through information and communication technology) to the knowledge users, used through technological innovation.

Universities have the most significant role in the first two elements, and they also have a role in innovation. Consequently, we can consider them as the vital factor for success of the implementation of the knowledge society. They implement 80% of the fundamental and 34% of total research in Europe, while they also carry the load of knowledge transmission, providing education to continuously increasing number of students.

There were 3300 Universities in European Union in year 2000 and approximately 4000 in Europe as a whole (that means including western Europe and the candidate countries). The number of students has raised between years 1990 and 2000, from less than 9 million to 12.5 million. As a comparison, we mention that the USA has more than 4000 higher education Institutions. [Euro stat]

European Universities (at least the majority of them) are modelled according to the traditional way that stands for nearly two centuries, with their operation and research and training based on this. It has become apparent though, that higher education is changing, moving away from the traditional model.

Change in higher education in Europe and worldwide is already a fact originating from the change in economy and society.

It affects all the stakeholders (students, institutes, authorities and policy makers, labour market), although maybe not all of them accept change eagerly. Which are the factors that drive the changing force?

Universities are the vital factor for success of the implementation of the knowledge society.

Increased demand for higher education. This requirement is posed by society but also by the labour market and is expected to rise even more in the following years, posing a major problem on the demand of financial resources and also inevitably to the lack of human resources (teachers, researchers).

The already underfunded European Universities (compared to the USA ones), will face even worse financial capacity (ratio of income per student) due to the rise in the number of students, which should be considered as sure. This fact will lead to reducing of quality and will destroy the vision of excellence for European Universities.

Globalisation. Education could not be an exception to this worldwide trend and globalisation results to increased and intense competition. Competition exists in attracting financial resources (funds), students and also quality and productive staff (teachers, researchers). Competition is not only between Universities and countries but also between Universities and research institutes, public or owned by major companies.

The current position of European Universities is not very satisfying at this moment, always compared to the U.S.A. USA attracts more students from third countries (mainly Asia), especially at the advanced levels of education. The USA also is more successful in retaining the better students (doctorate qualification), including students from Europe. It is a fact that European Universities are less attractive to both teachers-researchers and students.

Collaboration with the industry. Technological innovation is very important for an economy to remain competitive and dissemination of knowledge from Universities to the business sector is one of the most critical steps in implementing innovation.

The companies outsource or subcontract their research activities in universities and it is a major challenge for the latter, to take advantage of this. It also quite common that small technological and knowledge intensive innovative companies, approach Universities geographically (in the so called technological parks), in order to facilitate knowledge transfer.

The current position of European Universities is not very satisfying.

It seems though, that the link between industry and Universities is still weak in Europe and this poses an obstacle in the efficient dissemination of knowledge and the growth of innovation.

Change in Universities organization. The market urges for diverse and specialized knowledge, in order to fulfil its needs. Companies need innovative solutions and they need them rather urgently. The new fields to explore, require interdisciplinary approach, but Universities still remain organized in the same old compartmentalized way. The borders between fundamental and applied research is also getting harder to distinguish, since whatever research takes place, it has to proof its application.

This is against the current academic culture which consider fundamental research as aiming to produce knowledge for its own sake. There seems to be a weak connection between fundamental and applied research and striving hard to collect funds, the European Universities move away from fundamental research, endangering their ability to produce knowledge.

New societal role of the University. Apart from initial training, the Universities should now provide opportunities for learning, such as life long learning, interdisciplinary skills etc. This means that the borders between formal higher education and vocational and other forms of informal training should be eliminated, training should become target oriented, new partners in education should be looking for (e.g. industry).

The link between industry, service sectors and Universities in Europe has to switch from week to strong.

Change in European Universities is a reality as we discussed above, but it also remains a need. We need even more change. The European Universities are now playing in a European but even more in a global and very competitive field. They should be comparable not just to other national institutions, but to the world community of higher education and research. [57]

It is a must for the European Universities degrees to became competitive and comparable between them, but also with the rest of the world. This is one of the main targets of the Bologna declaration. [47]

Another fact is the students and teachers mobility. Although significant steps have been done towards this direction, mobility is still considered low, at least compared to the USA.

New facts and new challenges have appeared, such as the common European economic space and labour market, which means that people can now move and work all over Europe, a fact that intensifies the need for a formal way of skills certification. Another important issue, is the E.U. enlargement, which will of course bring in new players, increasing the complexity and heterogeneity of the higher education space.

European Universities have to face the four following challenges:

- Acquire and utilize more resources (both sufficient and sustainable)
- Use of the old ones efficiently,
- Consolidate their excellence, both in teaching and researching,
- Increase their attractiveness globally.

Is necessity for European Universities to be competitive and comparable.

Changes needed at Higher Education Institutions in order to create a coherent, compatible, open and competitive European Higher Education area.

An essential element of a science-based economic area must obviously be education and, in particular, higher education.

European higher education Institutions will have a two-fold task in this process: by achieving excellence in education, training and research, they will help to increase European competitiveness. At the same time, the challenges for European citizens with regard to mobility, flexibility, language skills and openness to the unknown will increase gently.

- The mission of the University has always been simple and complex at the same time. In generating new knowledge and critically review existing knowledge. These complex tasks make it obvious that state guidance should limit itself to the prevision of general objectives and rules of procedure for the make of fairness and transparency.
- 2. The organisational of higher education, training and research is and should remain primarily a public task. A private commitment is always welcome.
- 3. Research needs the liberty to evolve in the expectation of the unexpected, freedom of research and teaching does not imply that staff can not be dismissed if they do not do their job, nor does it imply that students can remain indefinitely in their study programmes.
- 4. The practice of more autonomy and accountability in Universities requires professional management by academics trained for this purpose.
- 5. The regular assessment of department's performance in accomplishing these tasks is undoubtedly needed to improve quality. Equally necessary are new systems of incentives in the allocation of posts and funding, and in the salary structures for employees in Universities and research.

An essential element of a science – based economy must be education.

There are four tasks, however, which we consider of particular importance at this stage of the process:

- Firstly, the message is there. But we have to listen it. We have to get it through to professors, staff, students, and by the media to the general public. With the Bologna Declaration and in the ensuing discussions, a majority of higher education Institutions and governments in Europe decide for this. This is not the end of the development, it is just the beginning. In each country, University leaders and government representatives will have to make an analysis of the present situation and decide how to proceed from there.
- The second task refers to the need for coordinating quality assurance and accreditation on a European level. There was a need for a trans-European quality assurance framework which would ensure the international visibility, compatibility and credibility of European higher education degrees.
- The third task refers to the importance of stimulating staff exchange. A more sustainable European dimension in education, however, can also be achieved by increasing staff mobility. We should aim at making mid- and long-term intra-European mobility of professors a much more common phenomenon that it is nowadays.
- The fourth task refers to strategic alliances has to be placed at many European colleges and Universities: gaining competitive advantage and the chance to increase income, greater visibility, and improved services. For example, the Vienna University of Economics and Business Administration has been successfully offering an IMBA degree (International Master of Business Administration) together with the University of South Carolina for many years.

Other similar example is in Austria also the cooperation of Danube University Krems - MBA program with Alaska Pacific University.

Academic Units as like Departments or Institutions would be motivated to redefine their roles and responsibilities within the Institution.

Will have to make an analysis of the present situation and decide how to proceed from there.

In this setting, academic freedom would be used to meet the needs and expectations of external and internal constituencies, and would serve the interests of the institution rather than the disciplines.

Through shared governance, professional management, and committed leadership, a "triangle of partnership" could be formed between administration and faculty. Administrations increasingly use management techniques to run Institutions and to support core academic activities.

From a structural perspective, the University of the future could be differentiated into core competencies. A focused mission could integrate these areas on an institutional level and provide direction and the overall goals toward which the University was developing. This new University would be characterised by an entrepreneurial culture in which all members work in accordance with changing environmental demands and for the common institutional good.

The functions of this new University would include efficient and effective decision making (doing the right things and doing them right) through the reduced size of governing bodies and the participation of external interest group representatives.

Consultation, dialogue, and consensus would continue to be traditions within institutions of higher education. But they would be used to serve the new functions of the University and engage administration, faculty, students, and external constituencies on equal terms.

Regarding services of the new University, the amount of interdisciplinary research would become the key measure for funding and promotion of specific academic units. Programs focused on specific job markets, general education including personal development and lifelong learning opportunities could develop and improve. Transparency of processes would help to fulfil the public for accountability and responsibility of Institutions of higher education.

Consultation, dialogue, and consensus would continue used to serve the new functions of the University.

Resources

European countries spent an average of nearly 5% of their G.D.P. (not all) on public funding to education, a figure close the level of the USA and quite higher than Japan 3.5%.

The number of students though has increased and the public expenditure has increased accordingly, leading to a wide gap between Europe and the USA. Resources per students in the USA is two to five times higher than in Europe. This gap is not only due to the difference in public founding which in the USA includes research and defence founds, but also to the fact that USA Universities have a wider range of choices for private funding (donations) and of course the students fees.

It is clear that USA is more attractive compared to Europe and they have an serious advantage in striving for excellence. European Universities must explore new sources of funds and resources, taking into account that there is no margin for increase in the public founding. These new sources could be as follows:

Public founding for research: Although this source of funds could help and the E.U. has committed itself in increasing investment in human capital, it can not be accepted that it can sufficiently cover the future needs.

Private donations: It can be a substantial source of income for European Universities, but there are obstacles due to cultural and financial reasons and they must be addressed accordingly.

Service provision to the private sector: The existing framework does not help towards this direction (intellectual property royalties) and this also has to be changed.

Students fees: European Universities are starting to change in this area, and fees already exist in most countries, but due to political and partly cultural reasons fees can't rise that much, in order to provide a sufficient solution on itself.

The European Union has adopted the vision of "education for everybody" and in most states, everybody that completes secondary school, has the opportunity to enter higher education, without any more selection procedures.

European Universities not only have limited funding, but it also seems that they are not using their funds very efficiently.

In this way, just because they have the right to, students who are not really interested in a specific faculty, enter the relevant schools and after some time, when they realize what they really want to do, they dropout their studies.

Average dropout range is 40% in the EU, it is very high and is major problem concerning the efficient use of educational resources.

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There seems to be a gap between the skills provided by Universities and the skills required by the labour market. The needs of the latter are rather volatile and are requested in short terms (since this is the way that the market moves). Education generally should be oriented to serve (among the others) and the labour market (having an open ear in its requests). In this way, society will gain benefit from education and the educational resources will be considered as efficiently used.

Duration of studies is not common for every state. In fact, there are differences in the ratio of one to two. Countries like Germany or Greece, need five or six years to train an engineer and during this period, the studies are funded by the state. In U.K. though, an engineer would enter the labour market after three years and he would like to go on to postgraduate studies, he should finance the studies himself or his company would do it for him.

This (irrational) difference, a part from the aspect of studies cost and resources utilization subject, has also other significant impacts on education in E.U. and the Bologna declaration has set a target to align qualifications and degrees.

The cost of research in European Universities is not (reliably) known, since the accounting systems are different and not comparable. It is not possible though to calculate the efficiency of investing in research, in order to allocate investment and resources more efficiently.

There seems to be a gap between the skills provided by Universities and the skills required by the labour market.

Excellence

Excellence is a necessity for European Universities, but how can it be achieved? There are some prerequisites that should be in place:

Transparent, efficient, flexible and robust administration. The traditional administration scheme cannot cope with the urgent need for change.

Transparency will be throw public announcement of balance sheets, budget statements.

Communication of the vision towards excellence, building efficient teams, interdisciplinary team work, monitoring of the process, appropriate decision making and action, wise allocation of resources are rather complex tasks, that need persons with managerial skills, lucking at this moment in the administration organization of Universities.

Planning. Building excellence is a rather long process that includes finding sustainable and reliable sources of income, recruiting top performers and building worldwide reputation. It is a project and as such, proper long term planning is essential, otherwise the resources will not be efficiently utilized and the final target will remain impossible.

It is necessary to take decision, by the States and the Universities themselves, in which area are they going to concentrate their interest and effort. Every University cannot be excellent in every area and specialization is inevitable. Decision on this is depending on its University tradition, existing infrastructure, local society and market needs and prospective, possible networking with other Universities and Research centres.

Knowledge excellence requires top performers. Knowledge are produced by man and whatever are the resources and the administration, the most important element for success in excellence, remains human capital.

Europe has to work more towards making education and research more attractive to young graduates, providing professionally and financially motivation in this area..

Collaborative working and mobility should also be established, in order to attract Networking worldwide (and not only European) top performers

Exploitation of research results

Although research takes place in European Universities, the exploitation of its results is not extended, as it should be and is in the USA. Technological innovation companies have appeared in the previous years (particularly in some states), but they do not last long neither do they grow up quickly as they should. This is due to various reasons:

Cultural. The majority of Universities do not seem eager to balance between the autonomy, "knowledge for all" tradition and the managerial aspect of exploitation of knowledge.

Loyalties Framework. In the USA, where spin-off companies have developed rapidly and successfully, the loyalties of the research results is allotted to the Universities. In Europe the relevant framework does not allow this and it is rather complicated, discouraging Universities and researchers. E.U. has taken action towards making the framework simple, attractive and efficient, mainly though the European patent, but its results are still to be proved.

Worldwide perspective of European Universities

In Transatlantic dialog (Quebec), the participants concurred the partnerships and alliances, educational cooperation, and internationalisation are vehicles for riding the turbulence of the times. Inaction is not an option. [36]

Higher education leaders, who struggle daily to keep the ship afloat, face the central challenge or realizing higher education's potential – serving as a key instrument for political, social and economic change. Building commitment to a long-term perspective is a prerequisite for the continued health and vibrancy of higher education in the United State, Canada, and Europe, and this commitment underscores the importance of continued communication among higher education leaders.

European Universities should move their interest from their own state.

Not overlooking local and regional development, they should consider the world as their field for extension, compete with Universities from other regions (mainly the USA) and make themselves attractive to non-European students, teachers and researchers.

This needs some effort from E.U. to arrange matters concerning migration, visas etc, but there are mainly the conditions for studying and working in a European University should be improved.

The goal of the Higher Education reform is to increase flexibility and adaptability.

Conclusions

The target and the underlying goal of the Higher Education reform is to increase flexibility and adaptability in order to survive in an international competitive market. The European environment priority is to develop and to apply turning process in member states and to establish the Europeans Area of Higher Education.

The Modern University has to take in account the needs of society and economic reality and to apply simple minded rules like:

- Think global act local
- Strong relations with outside environments
- Lean structures with areas of expenses inside environment
- Focusing and offering in an efficient and effective way on what they do best
- International relation with mobility of professors and students
- Quality has to be the priority for the offered services
- Create internal and external networks
- Differentiate their services instead of offering "everything for everybody" or "more of the same"
- The Higher education has to act in three directions: Literacy and numeracy, Qualification and ICT literacy
- Transparency management in economic, administrative and academic matters
- Knowledge management practices also in Higher Education for effective improving students knowledge and skills and for effective improving of staff skills
- New education culture for students and professors
- Fees in a normal way in order to develop the model "not trade but aid" meaning that the public - state fees will be the main fund for institution but also possibilities for cooperation with companies through commercial way (support)
- Flexible structure means basic departments with different centres of studies
- Core programs + speciality