
UNIVERSITIES: A REGIONAL DIPLOMA-MILL OR A GLOBAL INNOVATION CENTRE?

PÉTER DOBAY

TRADITIONAL ROLES REVISED

The word “regional” should involve activity of an organisation towards many regional actors. Universities have always had a—minimum—role to communicate with the regional government, later with labor market agencies and politicians. Today universities also work as entrepreneurial organisations, attracting fee-paying students and participating in lifelong learning movements for adults. How are they to maintain their traditional roles—research and the training of talented young people—within these new circumstances? This article is going to focus upon these new challenges.

Traditional universities have always used the dual-objective strategy of “Research and Education” as “terms of reference”. While for hundreds of years universities emerged at venues where political or social circumstances supported (or, as a minimum, permitted) the cultivation of these aims on a relatively free basis, today, I suggest, the situation has totally changed.

In a global networked economy (and all these words have significance) the site, that is the locality in which to establish an institute for fulfilling these aims seems to be neutral. Is it compulsory to provide well-trained professionals for the local community? For which “community” in a unified Europe, where free movement of labour and ideas are among the main principals to live on? Second: is it necessary to run basic research in a situation where global companies spend 20-30% of their revenue for product development and related research projects and use global virtual networks of excellence involving university researchers? Does the “regional university” exist at all?

Medieval universities aligned structures to the mission and strategy of their time. Mainly they followed a voluntary organisation model; however, the regulations (the “statutum”) of the School had to be strictly followed by university citizens. The professors were anyway only responsible for the scientific community and their own

university bodies, although the students achieved high academic levels, and possessed real competence to modify the structures, invite professors and hence to change the direction of training.

In 1810 the Universität zu Berlin was established by the liberal Prussian educational reformer and linguist Wilhelm von Humboldt, whose university model has strongly influenced other European and Western universities. The idea of “free research”, freedom of intention towards any part and direction of sciences, pursuing “the truth and only the truth” has become very popular within leading universities, as it emphasized the necessity of social funding of institutes that served the community, mainly with proven research results. The organisation of a Humboldt-type university is based on the “cathedral”, on the professor, who leads this research-oriented process. All can learn from the leading researchers—a strict hierarchy, a safe university career. I think this is the time to leave this path and turn towards much more flexible, service-oriented structures.

UNDERSTANDING TERMS: PRODUCTION, VALUE, CUSTOMER, PRODUCT?

Several Authors (Temesi, 2006, Barakonyi, 2004) are in debate over the “economical role” of a university today. A diploma in these contexts might be simply a “product”, families sending (and sponsoring) their children are “customers” and university programmes are “production processes”. The question in this case is to understand and accept the value of the diploma—customers pay for value only.

My guess is that there is no doubt that a modern university produces knowledge in two main forms:

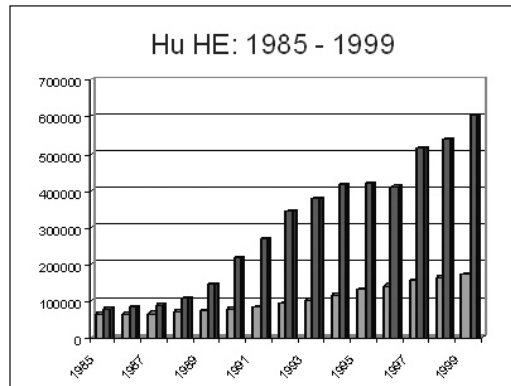
- First, it “produces” educated, creative, innovative people, graduates & researchers, bearers (and also end-users, builders) of knowledge;
- Second: it produces basic & applied research results, tangible innovations, which might support industrial and other field development.

What can the word “produce” mean in this context? In business, a company produces a product, offers a service,

- as a response to demands of customers, giving them value,
- while working effectively, fulfilling the requirements of owners and shareholders.

If this process is a value-generating process, who is the beneficiary? This question has become essential, as many of formerly state-sponsored universities have opened doors to mass clusters of students, fewer and fewer students are finishing their studies within the normal time period, and infrastructural investment prices have been rocketing sky-high towards a modern higher education. If a higher education institute is interested in enrolling more students (call it “value generating”) and in deriving the state funding, then it will follow that type of business model. The result is well known: the Hungarian higher education sector has tripled the number of students in 10 years (see Figure 1.).

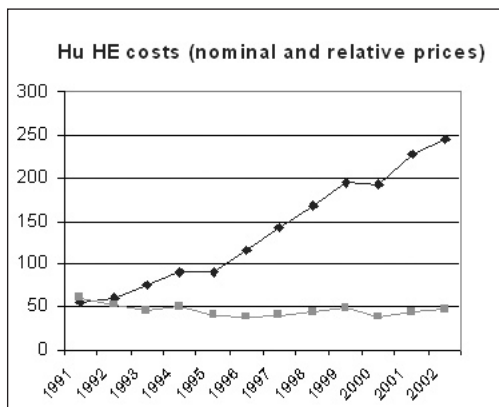
Figure 1. The enormous growth of the number of students in the system



(Source: KSH, OM)

Many arguments state that the benefit is a “state-level profit”, having more highly-educated people, they will have better qualified jobs, attract more investors, etc. This was an indubitable truth when countries normally enjoyed the labours of workers with degrees within their borders for decades as the normative. Now look at the EU, as an example of today: millions are “on the road”, having temporary or final workplaces in another country. If they are knowledge workers, their knowledge is an asset, having been accumulated in a higher education institute of their home country. The circle is closed then: it becomes very bad “business” to offer free home education and suffer—for many reasons—the loss of the educated population.

Figure 2. Growth in funding higher education



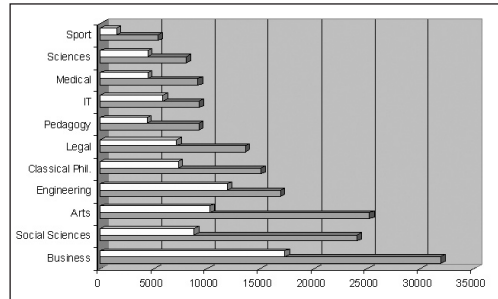
(Source: KSH, OM)

The real beneficiary is the student (and, indirectly, his/her family)—the “student-network”. I call them a “network”, as they interchange information about their future schooling, about faculty, about courses, performances, future job possibilities and all other problems around, together. All of these groups have different expectations, they have non-equal information and we compete for their decision. The knowledge gained (certified by a degree) is an asset for them, if used well as a resource, it can produce profit (i.e.: higher salaries, a better job and position in society, etc.). If an institute can produce good statistics to prove that alumni have better jobs, higher positions, higher salaries, the value generated by the educational process is given as acceptable evidence—this can be called a reference-based value. A huge problem is the information supply towards these “student-networks” about requirements while being in the institute, the full costs of educational programmes and, of course, the value of the degree in the labour market. To see just how biased the situation is, look at Figure 3. It shows what false expectations student-networks have about the future value of the demanded degree.

There is another case, which is important as well for our investigation: when the “product” is needed by a profit-oriented firm. The formula is clear here: if the production process (let it be anything) requires a special trained-educated-skilled workforce, a “university factory” can have production capabilities to produce the demanded number of people. Adult education, further educational forms, vocational trainings: all can produce direct value for a nearby company, offering a business-like alternative for a regionally embedded university. Many experts call those modern

institutes, where the educational budget is half covered by these type of activities—fee-paying courses, make-to-order type educational programmes, accredited testing and so on “entrepreneurial-type universities”—a new role, with a new paradigm: “serving the region”, instead of (or simply alongside) “serving science”.

Figure 3. Applications to study fields in 2006, Hungary (accepted vs. all applicants)

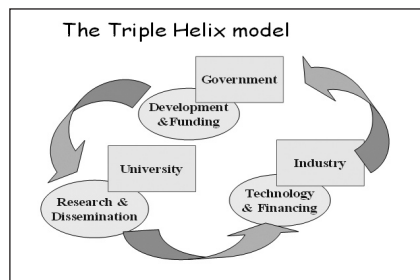


Source: Hungarian HE Statistics, KSH, 2007

THE INNOVATION ISSUE: THE TRIPLE HELIX MODEL

There is another field of activities that has always been a role for solid HE institutes: scientific and industrial innovation. Today the well-known academic narrative, the Triple Helix Model, focuses on innovative ideas coming from the Universitas, on seed capital for basic research coming from Society (the State), and on “orders” for new procedures, products AND new knowledge workers coming from Industry (the Economy)—see the Figure 4. below.

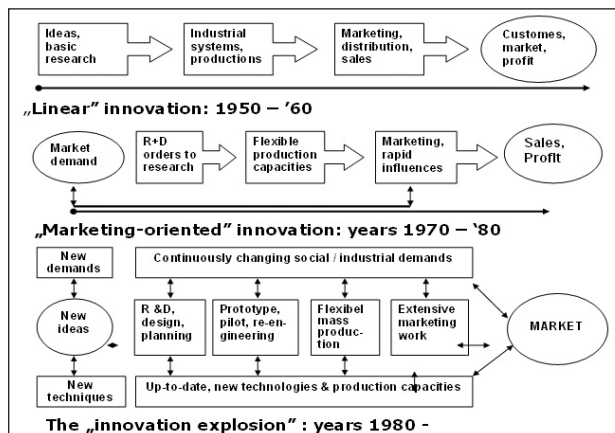
Figure 4. The Triple-Helix Model of regional innovation networks



Source: edited by the Author

The idea of a changing innovation environment is well-known from literature: the former linear model does not work any more (individual invention—industrial innovation—new product/service on the market—people pay for it—profit feedback to new experimental work). Figure 5 demonstrates the relationship of different partners of today's world. In a linear innovation model the universities have the illusion that we do research, make publications, they come and pay for the idea. By the 1970s this process had changed radically towards “marketing-oriented innovation”: transfer organizations come with customer (market-) demands, offer funding for R+D centres to work on innovations. This is new stress and pressure for university centres, a paradigm shift: do they have to decide to insist on ideal academic freedom, or decide upon well-paid research-for-order? The third wave is here: the innovation explosion. The markets (industries, the army, large businesses, customer market, etc.) are demanding ever newer products, processes and services – the first to satisfy demand, wins all. Can a regional university play this role? If not, it does not matter: it can be a small research lab, it can be a software company in India, it can be somebody from Asia—in a global world of information exchange everyone is a competitor for a local university!

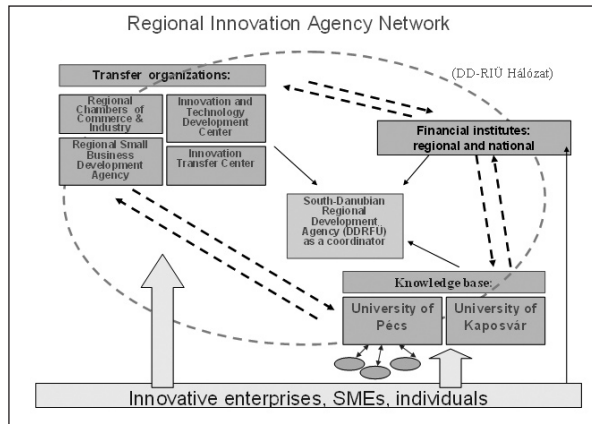
Figure 5. Change in innovation processes—new roles for R & D knowledge centers



Source: edited by the Author

Figure 6 demonstrates how this works at Pécs, Southern Transdanubia, Hungary. This TH model (The S-D Regional Innovation Network) explicitly shows relationships among knowledge-bases (universities), transfer organisations (agencies, expert networks, consultants) and financial partners (like state-origin and EU funding, banks, etc.).

Figure 6. The Triple Helix model implemented at the Southern TransDanubian Region



Source: edited by the Author

But numerous questions emerge even with this model. Would this rotating “helix” and the activities involved satisfy universities and academic communities—in academic and in business fields, too? How can the regional community transfer demands to a regional university of well-trained and locally “rooted” people to foster regional business development? Would it be possible to have resources from this university for lifelong learning, or for more “community oriented”, mainly basic level courses, if academic departments run for global high-tech research funding? Could university branches participate in local innovation projects and listen to SMEs, while they rather listen to “A” category publications in research papers and seek for global academic rankings? Can we call a regional university complex a “diploma-mill” disdainfully, if the regional needs are served well and satisfactorily? Where are the borders of the middle-aged phenomenon of “university autonomy” in a world of business efficiency and even, in some cases, economic crisis?

A honest answer could only be a compromise between the demand for world-class innovation and research, and small, application-oriented, field-research towards the region.

But, also, innovation should not be contained within the local city or region. Let me quote here a Hewlett-Packard story from the California Institute of Technology, one of the high-tech institutes of developed world. The local HP research centre offered a problem to CalTech students to create any ideas to support poor rural communities in India. The story is about two young women, Saraswati and Gowri. They live in a rural community called Kuppam, India, and it is about 100 miles from Bangalore, the most developed high-tech region of India. But at Kuppam, one in three citizens is illiterate, more than half of the households have no electricity, and many of the adults are HIV-positive. Now what HP students did: they packed a solar-powered digital camera and a solar-powered colour printer into a backpack and went to Kuppam. They trained the ladies, who started taking photos and had success in the villages around. Then they took some photos of local citizens posing together with a popular, elected politician. It seemed so successful they decided to follow the campaign tour and distributed very cheap photos to locals. This micro-business showed up a larger success in a week than long months of work before.

Is this a regional activity? Of course, not. In our global world a university can outreach to even India from Europe, or vice versa and innovations can be an inspiration and/or have an effective utilisation anywhere on the Globe.

THE RESPONSIBILITY TO SHARE

Regionalism means a diversified and developing labour market, means that the level of local services, development in local industries, space to live and the overall quality of life are safe for generations. Education is part of our life, part of everyone's life career. As the world around is increasingly more complex, more technical, more fast-moving, citizens need more and more time to spend on educational forms. Their need to learn is lifelong. The word "responsibility" is the best to use, when we take HE institutes as regional players on this ground. I strongly believe regional universities should form a new, broadening educational portfolio. Here are some of the reasons worth mention:

- new & developing professions need new training,
- fewer full-time students foster internationalisation,
- people at work (and/or engaged by other reasons) demand part-time & eLearning forms.

To know and understand these demands, we need professionalism. It means a new organisation, it means professionals to be employed, it means processes worked out. Some ideas:

- A professional “liaison office”, a “reachout center” or other solutions might generate more external effects upon decision makers,
- A special “regional policy” calls the interest of all partners to University offers,
- Building a “regional network” needs close co-working activities from university leadership towards regional governmental bodies and towards business representatives,
- Communicating the idea of a “Learning Region” should convince all partners: the University will never more be an academic ivory tower, with never-ending demands for a higher budget to spend—but an “embedded entity”, a serving organisation “Let Academia Serve the City”.

LOCALITY VERSUS GLOBALITY

Borders are not so strict and can even be transparent. See some arguments:

- Academic research has ever been a “global” issue, and this tradition should not change,
- In a “welfare society” students can be mobile, selecting distant venues to learn (even for only a semester abroad), if language barriers are easy to break—“global” universities emerge again, like in the Middle Ages!
- Additional “university services” can be globally marketed (textbooks, cases, Ph.D., lecturers, software, special trainings, research projects, educational methods, etc.).

What a university can do when training its decision makers to plan globally and act locally:

- An institute has to know and understand the borders (the scope) of the region itself and understand & declare what “locality” means. A region can be a city, an economic space, 100,000 or a million citizens, a poor or rich, a developing or a depressed area. If the University has misinformation about basic parameters this is a bad message to build a strategy.
- The institute has to understand the business and development trends of the region call it Role A/: Serving the regional labour market. Industries always need (and immediately need) specific labour, even executives, and if they cannot find them

locally, will go away from the region, or as a minimum, import people from far-off places. Neither is a good message to a regional training institute.

- According to the above, a regional institute has to offer a broad educational & further training portfolio—call it Role B/: Serving immediate community demands. business and social communities always change around: if a local university is narrowing its portfolio for any reason, another institute will emerge very soon. A market need forces players to react!
- As a consequence: we have to re-structure existing (and formerly planned) resources in line of the above—call it Role C/: Governing with a clear regional strategy. All partners around us should know we are able and we intend to serve regional educational and research / application needs—it has to be expressed in a real, strict regional strategy, publicly repeated at any possible occasion.
- And finally: we have to try forcing our labs and research centres to orientate research to local innovation—Call it Role D/: Applied research, regional reachout centres. Having a dedicated regional “Science Park” or similar organisation gives a clear picture to all would-be partners that we are committed to regional development, and we can do basic and even high-end research to support their aims. Future funding depends on this belief. If local players always run to the capital, or even abroad for a simple consultancy work needed—we have done a very bad job.

THE STAKEHOLDERS CONFLICT

Some words have to be said on possible conflict when turning towards regional directions. There could emerge academic conflicts, like

- Excellent departments may intend to be “global” in their research & even education,
- Installed and supported high-tech facilities, other resources might not be utilised well for local research,
- Traditional educational programs and courses are easier to run than creating new ones,
- Local problems are less attractive to solve with a traditional publish or-perish attitude of faculty.

But even the regional community should highlight conflicts, as:

- “Research” level seems to be a strange, unusual solution to solving regional problems,

- Local industries do not show a clear demand for basic and further education,
- No real links exist between academia & local agents,
- Local problems are usually solved by far-off consultants and researchers—do they have any reason to change this way of management?

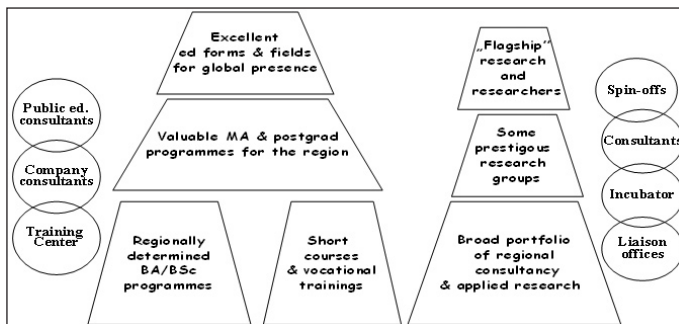
To solve these conflicts requires an indoor change management, with professional skills and with strong leadership commitment. Although universities are frequently called the most conservative organisations, environmental changes (not to forget funding restrictions worldwide) might lead to successful solutions.

FINAL ISSUE: ALTERNATIVES FOR A REGIONAL STRATEGY

We talked about “productivity”, “efficiency” and other business terms related to modern universities. Productivity is a probability process, as we never know whether a freshman will become a Nobel prize winner or will simply fall out during the first year! If productivity means only to issue more diplomas with less cost, we can call the institute a diploma-mill. Parents and student-networks have traditional perceptions, they listen to simple media messages, maybe they have a background informal network of opinions—and they believe in the institute’s reputation. Running a diploma-mill means duping the families and students by telling them they will have a valuable diploma, and cheating society with low level knowledge and missing competencies of graduates. Not a proud portfolio.

Allow me now to finish with an ideal structure for a regional university strategic organisation. Figure 5 shows a demanded level of standard BA level mass-education (“responsibility for labour market”), some valuable MA, MSC programmes mainly with regionally dedicated content. These programmes are running parallel with vocational, higher-level vocational courses and short traineeships, with strong links to local businesses and other labour needs. Research also has to be rooted into local demands, and if the institute is fortunate enough to be able to present some internationally accepted R+D teams, individuals—well, they should do so! Generate local support and be a flagship research topic for the institute.

Figure 7. Proposal for a regional paradigm in structure and in activities



Source: edited by the Author

REFERENCES

- Barakonyi, K. (2003). A modernizációs folyamat csapdái. A Bologna-deklaráció alap gondolatai, a felsőoktatás teendői. (Pitfalls of the Modernization Process. Basic Ideas of Bologna Declaration, the Role of Higher Education). *Magyar Felsőoktatás*, 1-3, 27-30.
- Barakonyi, K. (2004). *Rendszerváltás a felsőoktatásban. (Regime Change in Higher Education)*. Akadémia Kiadó, Budapest.
- Bazsa, Gy. (2003). A Bolognai folyamat. (The Bologna Process) *Magyar Felsőoktatás* 2003.03.
- Dobay, P. (2002). Egyetem, régió, üzleti közösség – az informatikai képzés környezete. (University, Region, Business Community – the Environment of Information Technology Education). *GIKOF Journal* 1. Budapest.
- Földvári, P. (2004). A tudásprémium értelmezése. (Interpretation of the “Knowledge Premium”). *Competitio*, 2004. dec.
- Hrubos, I. (2003). Bologna: strukturális változások. (Bologna: Structural Changes). *Magyar Felsőoktatás*, 1-3.
- Raffai, M and Dobay, P. (2002). A kétszintű informatikus-közgazdász szakképzés koncepciója. (The Concept of Double-level Information Technology – Economist Training). *GIKOF Journal* 1, Budapest.
- Schultz, T. W. (1983). *Beruházás az emberi tőkébe. (Investment into Human Capital)*. KJK, Budapest, 1983.
- Temesi, J. (2006). *A felsőoktatás finanszírozása. (Financing Higher Education)*. Akadémiai Kiadó, Budapest.
- Udvardi-Lakos, E. (2003). A bolognai folyamat és a modulrendszer. 1-2. (The Bologna Process and the Module System). *Magyar Felsőoktatás*, 4-5-6.