

Academic Sponsorship in Europe: Encourages or Inhibits Research?

Cash Cow Cutback?

Common wisdom suggests that publicly funded universities in Europe are still reticent about exploring opportunities for private funding, compared to similar institutions in the United States. Myth or reality? *Lab Times* investigates.

The global financial crisis is beginning to have an impact upon research and university funding. In May, for example, UK medical research charities, which provide one-third of public funding for medical and health research, publicly appealed for donor and government support through the recession. In a survey of the British Association of Medical Research Charities (AMRC), one quarter of respondents said they planned to curtail their research funding in the next two years by 10 to 40%.

Elsewhere, research funding is also on a budget. The Lithuanian government reduced expenditure on higher education by 6% in May. However, contributions for scholarships and student loans remained unaffected in Lithuania.

What is the outlook for universities across Europe and how do they compensate for downward pressures on academic budgets?

Major impact still to come?

Research universities in the European Union (EU) largely depend on state and federal funding, according to Thomas Estermann, Senior Programme Manager at the European University Association (EUA). Thus, "universities in the EU will be strongly affected by losing a higher percentage of public funding – and the worst is still to come," Estermann predicts. "Usually, it takes several years, until the full punch of a financial crisis is felt in public spending. Universities in countries heavily struck by the credit crunch will suffer most".

Moreover, the situation faced by European universities is shaped by diverse national political priorities. The National Rectors' Conferences reported that the governments of Hungary, Italy, Lithuania and Poland have announced budget cuts for higher education. The Austrian government revoked pre-election promises to increase investment in higher education. In contrast, Denmark, France, Germany and Switzerland increased public spending for universities. However, there are worries that co-operation with the business sector and funding from private sources might decline as a consequence of the global financial turmoil. The British university sector has started the "Standing Together" campaign to actively promote co-operation between business and universities.

How important is private funding?

The European and US university systems are mainly funded by the state. Over the last ten years the expenditure of universities in the EU rose to a higher level than their income from public funding. Strategies to save costs and to increase and diversify the funding base had to be developed. "Besides internal restructuring, universities seek strategic partnerships with the business sector," Estermann told *Lab Times*. "Private donors have played a minor role in university funding so far. An exception are countries with high tuition fees like the UK, the Netherlands and Italy."

A retro analysis of public R&D expenditure in Germany showed an increase between 1991 and 2004 of only €2 billion, to a total of nearly €17 billion. At the same time, private and industrial expenditure on R&D increased by €16 billion to €38 billion in 2004.

University R&D expenditure in Germany was €9 billion in 2004, of which €3.5 billion came from third-party funds and €1.2 billion from industry. Industrial cash accounted for 13% of total expenditure in German Universities. Private funding did increase more strongly than money from the state. More recent data show about the same absolute and relative figures, however, with a faster increase in the rate of private funding.

Private funding shows stronger increase

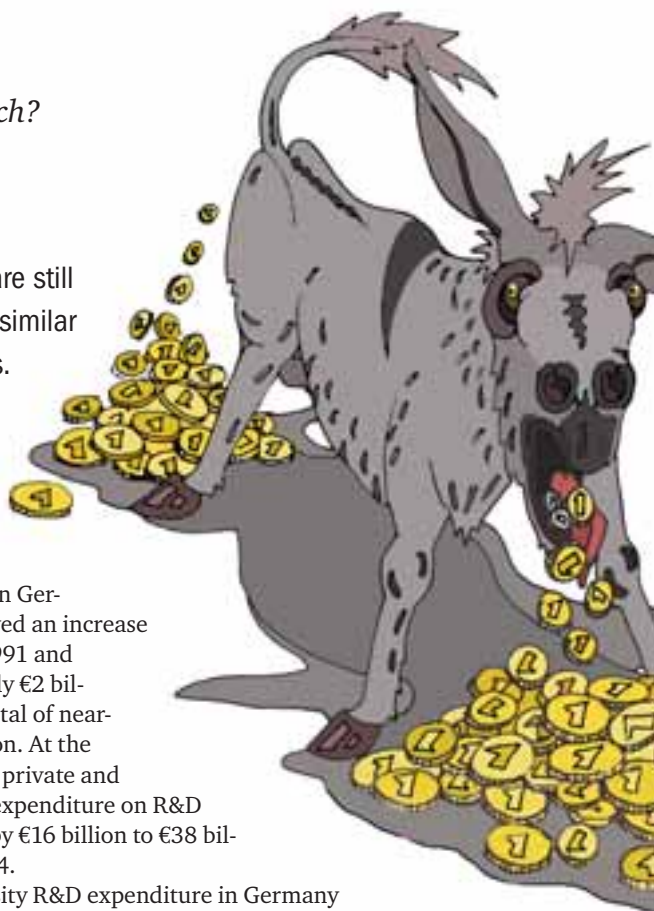
Surprisingly, R&D investments in the US, at approximately the same time, showed a similar percentage of private and industrial sponsorship as in Germany, which is close to the European average. The data from the National Science Foundation Report of 2002, show that an adequate €22.5 billion was spent on R&D by U.S. academic institutions. At the same time, private industry spent approximately €1.4 billion. Taken together with other private funding, the same percentage of 13% of private sponsorship of the total appeared.

What is private sponsorship? Private sponsorship comprises donations, like endowments, and cooperative projects with industry. These financing tools only work if the interests of the university as well as those of the donor are respected.

Academic freedom not always consistent with private interests

Firstly, universities in the EU have the principle of academic freedom and the 'purpose of research and teaching'. If an institution cooperates with a private partner, both ideally have a common interest either in education, generating human resources, the qualification of young academics and the need for first class research or innovation.

An indicator for "innovation" (please forgive us for mentioning this *faux-pas* here!) has been defined for 17 industrial countries and was published for 2008 by the German Institute for Economic Research. The indicator, which covers hard data like re-



search expenses and patent applications and soft data such as political decisions and management style, placed Sweden, the US and Switzerland in the first three spots, the UK at number 7 and France at place 13, with Spain and Italy at the bottom of the list. Germany ranked at place 8, but was praised for its collaborations between companies, universities and other research institutions.

Common interests in education?

As mentioned, education should be a key priority of both public and private institutions. Endowed chairs, financed in the long term by endowment capital, are common in the US. Harvard University alone has a fund of €25 billion of endowment capital, usually generating 3% interest and financing endowed professorships and other expenses to the tune of €0.7 billion, according to a NACUBO (National Association of College and University Business Officers) report in 2008. In total, 791 colleges in the US own €281 billion in endowment assets. However, since the financial crisis started, these endowments have lost €65 billion in market value.

In European countries, endowed professorships are often sponsored by private individuals or companies for a limited time period rather than in the long term by the generation of interest on capital assets.

In Germany the *Stifterverband der deutschen Wirtschaft* measured 660 ongoing privately financed endowed professorships, or approximately 2% of the total number of professorships in Germany. German Universities aspire to raising their own money for endowed chairs due to continuity problems in short-term arrangements.

Rat runs to reach the goal

Universities in Europe are often regulated by their state or federal sponsor. Thus, some institutions try to find ways of being more flexible in managing private money. One solution was found by the Johann Wolfgang Goethe University in Frankfurt, Germany, which changed from a state-owned university into an endowed university in 2008. A precise directive details the use of donations from private donors. At Frankfurt University this sort of sponsorship is approximately 9% of the total €120 million budget of third money funds. Another way to improve education is the practice of founding more effective schools of education, such as the School of Education at the Technical University of Munich. Again, an industrial foundation, the Telekom-Stiftung, sponsored the school with €1.5 million for 3 years.

German universities are building up a network of private sponsors to supplement their budgets. A survey among 78 German universities by the Centre for Higher Education Development showed that in 2006 fundraising contributed to less than 1% of the budget of most universities. Only five universities had more than 5% income from fundraising. Companies were the most important sponsors. Donations by alumni played only a minor role.

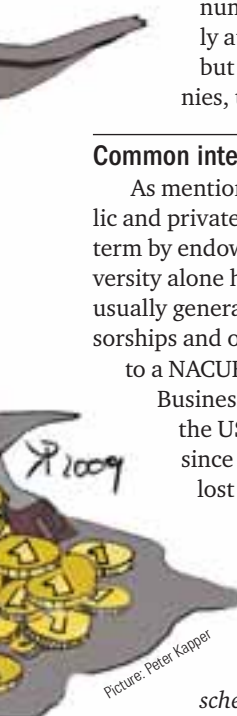
Charitable contributions

In 2008, American universities and colleges raised €22 billion in charitable contributions, a survey by the Council for Aid to Education says. Charitable contributions covered 9% of expenditure overall. They are considered an additional source of income, not a primary solution to budgeting challenges. Just under half of the €22 billion came directly from individuals, with alumni contribut-

ing 28% and non-alumni 19%. Foundations gave 29% of the total, while corporations and other organisations gifted 16% and 9%, respectively. The Council believes that contributions to higher education institutions will decline this year due to the recession and the declining stock market. The main reason for the higher contribution of private money to US institutions compared to Europe may have historical reasons. Most of the universities founded in the US in the 19th century have been so called "land-grant universities" and were institutions of higher education in the United States, designated by each state to receive the benefits of the Morrill Acts of 1862 and 1890.

The Morrill Acts funded educational institutions by granting federally controlled land to the states for them to develop or sell and thus fund "land grant" colleges. The mission of these institutions as set forth in the 1862 Act is to focus on the teaching of agriculture, science and engineering as a response to the industrial revolution and changing social class, rather than higher education's historic core of classical studies. Later, at the beginning of the 20th century, rich sponsors founded outstanding institutions like the Rockefeller Institute of Medical Research, established by the oil magnate and benefactor John D. Rockefeller in 1901. Rockefeller also founded the University of Chicago, Illinois in 1890, which today spends €220 million on scientific research. Stanford University was founded in 1885 by the California governor Leland Stanford.

According to the European Commission, universities' share of total research expenditure is, at 22%, higher in Europe than in the US (14%). This means that the financing of research ▶▶





►► by private institutions is higher in the US than in the EU. However, the results of European research are often not commercialised to their full potential and to the same extent as in other regions of the world, in particular the US, the European Investment Fund observed. This is partially due to a culture opposed to commercialisation in public research organisations in Europe. Additionally, technology transfer offices in European universities are understaffed, under resourced and less professional than their US counterparts. There is also a lack of appropriate financial instruments to assess new technologies before a company is set up, assist universities in filing patent applications and find the first customers for academic research results. Hardly any venture capital is available before a company is founded, a report by the European Commission says.

WARF: Technology transfer made in the USA

The US-American Wisconsin Alumni Research Foundation (WARF) is an example of successful alumni commitment and technology transfer. WARF was founded in 1925 as a private, independent, non-profit patent management agency to support scientific research at the University of Wisconsin-Madison.

The founding of WARF goes back to biochemistry professor Harry Steenbock, who in 1923 discovered that UV-irradiation increased the vitamin D content of foods. Steenbock filed a patent application with \$300 of his own money. To administer patents for the university's faculty and staff, WARF was founded with \$900 in capital from nine alumni. WARF acted as an independent mediator between research and commerce. The agency's first licence agreement was accomplished in 1927 with the Quaker Oats Company. Steenbock's patents brought €14 million to WARF and earned the biochemist himself €680,000.

Since its inception, WARF has obtained 1,900 US patents, completed over 1,600 license agreements and given €680 million to the University of Wisconsin-Madison. Today, WARF completes more than 100 license agreements each year. WARF's policies call for 20 percent of the gross licensing revenue from an invention to be returned to the inventor. The remainder is shared with the University of Wisconsin-Madison Graduate School and the inventor's department. The university uses this income to support research projects, sponsor professorships and fund fellowships, retain top faculty and finance the construction of research facilities.

In the EU, although transfer offices are in their infancy, donations are often raised by influential professors or celebrity alumni. Like Bob Pinedo, Director of the VU University Amsterdam Medical Center, a Dutch oncologist who raised €60 million for the VU. European Universities are increasingly organising the engagement of rich and successful alumni, although not to the same extent as their US counterparts.

Unexploited potential for funding

The opportunities for existing charities to accumulate capital and for the establishment of new foundations might be better than they seem. Despite the financial crisis one has to consider the wealth accumulated in Europe since the Second World War and the impending transfers of private property from one generation to the next. "In Germany, for example, it has been estimated that within the next ten to fifteen years, more than three trillion euros are at stake," Wilhelm Krull, Secretary General of the Volkswagen Stiftung said at an EUA conference in Uppsala in 2005.

European universities still have unexploited potential for increased funding. "Technology transfer is a clear focus to create stronger links with the private sector and to add to our funding," Mads Bøndergaard

Kobbersmed of the Danish Aarhus University told *Lab Times*. Jens-Peter Lynov, Vice President of Research and Innovation at the Danish University of Copenhagen, said, "The hope is that income from patents one day can be substantial, but that is not the case now." *Lab Times* obtained similar replies from the Swiss University Fribourg and from the German University of Marburg. Jurate Deviziene, Head of the Division of International Research Programmes of the Lithuanian Ministry of Education and Science suggested that, "better and effective use of EU structural funds is a good possibility for the Lithuanian higher education and R&D sector in times of crisis."

Service supply becomes more and more important

The EU has developed guidelines for publicly financed institutions in the EU (EU Beihilferecht subsidy [EGV 87]) To cover these guidelines, the university has to establish a clear and internationally recognized accounting system. Service supply is a growing source of money for universities. At the University of Frankfurt in Germany, approximately 12% of the total amount of third party funds was generated by service supply in 2008.

In polytechnics and institutions of applied sciences, the impact of supplied services and private sponsoring in general was always very high. For example, at the Technical University of Munich (TUM) the local industrial player Siemens has taken an important role in financing its community university by sponsoring it with €14 million since 2002. 30 patents (IP) have come out of this collaboration. TUM has a budget of €177 million in third party funds, €290 million in state funding and €23 million from earnings.

Industrial partnerships still embryonic in Europe

In Europe, industrial partnerships with universities are becoming established, although they are embryonic. A model for successful collaboration is the Deutsche Telekom Foundation and the Technical University (TU) of Berlin, which founded Telekom Laboratories (www.laboratories.telekom.com). Thomas Kathöfer, Head of the *German Hochschul Rektoren Konferenz* and former member of the Präsidialamt (board) of the TU-Berlin, was responsible for the creation of T-Labs, founded in 2005 and located on the TU Berlin campus. T-Labs is the R&D department of Telekom and the fruits of that partnership have led to the sponsorship of four endowed professorships. The University receives third-party funds, which cover long term joint research and sponsor postgraduates (currently 80) and postdocs (65).

"The synergy benefits for Telekom gives them long term research, extension studies and manpower. T-Labs is a very prestigious and successful project", said Kathöfer. Obviously, the common assumption that publicly funded universities in Europe are shy of private funding when compared to their US counterparts is generally incorrect. Tapping alumni for donations is still much more developed in the US and patent usage is much more successful than in Europe due to America's long experience of patent licensing. However, European income from services supplied is growing and ways of encouraging industrial and academic cooperation are becoming more inventive and successful.

CATHRIN SCHLEUSSNER