

recommendation

Austrian Council for Research and Technology Development

7 September 2015



Recommendation for Funding Research and Development in Austria

Background

Current estimate of the research rate targets – The achievement of an R&D rate of 3.76 percent (in percent of GDP) by 2020 was defined as a goal within the scope of the implementation of Federal Government's Strategy for Research, Technology and Innovation in 2011.

WIFO studies show that the development of the R&D rate does actually show a slight upward trend. However, the required increases to achieve the 3.76 percent goal will not be reached. The current figures show an accumulated additional financing requirement with the public sector financing of more than EUR two billion.

Despite the need for a budget consolidation in view of the scarcer financial resources, there is an urgent requirement for an increase in financial resources for research, education and innovation, especially because investments in these areas require a long time to be able to fully develop their overall economic effect. It is therefore imperative that greater parts of the budget be freed up for the future areas of education, research and innovation. Special importance is awarded in this respect to the securing of sustainable, long-term financing of the universities. As centres of education and research they are guarantors for these two key factors of the future capability of a knowledge-based economy and society.

Financing Situation at Universities

The goal of achieving 2 percent of GDP by 2020 for the tertiary sector was confirmed in the last government programme. According to the current calculations, this would mean an increase from 1.47 percent or EUR 4.66 billion (in 2012) to EUR 8.16 billion by 2020. The current financial framework, however, indicates that this development cannot be complied with. The financing shortfall grows, and the underfinancing of the universities remains.

The universities receive a share of more than EUR 10 billion for the coming 3-year performance agreement period. Annual expenditure of



approx. EUR 3.8 billion is, however, only about 50 percent here of what is available for universities in Switzerland or Bavaria – and this with a significantly lower number of students. In Switzerland, approx. 143,961 students studied in 2014/2015; in Bavaria, it was 242,160 and in Austria 304,160.

The budget increase is far from keeping up with the expanding student numbers. This means that supervision ratios, infrastructure and even research performance suffer here, as the capacities for research, education, knowledge transfer and even administration at the universities in recent years have not increased by the same amount. In addition to logical and socially compliant access regulations, an increase in the funds provided by the Federal Government to the universities is therefore also imperative.

Furthermore, the level of competitively awarded funds for financing basic research must also be increased further. This could not be increased sufficiently in the past to advance forward to the leaders in Europe. The base budget of the universities in Austria compared with the competitively awarded funding volumes shows a significantly higher percentage. The case is precisely the opposite in Switzerland. If there is no trend reversal here, the Austrian universities will fall even further back in the international ranking.

Furthermore, with approx. EUR 800 million, the Swiss national fund has an annual budget about 4 times higher, compared with the FWF. This comparably low allocation of funds of the most important funding bodies for basic research in Austria peaks on two levels: Firstly a growing number of superbly rated projects can no longer be approved due to insufficient budget, and secondly this contributes to the continuing, frequently cited “brain drain”, as researchers (young talent) migrate due to the falling approval rate and do not consider a return to Austria.

As an important location factor in the national innovation system, the universities must, however, be perceived as key institutions for an attractive environment for companies and nonuniversity research institutes. This potential must be leveraged and utilised by guaranteeing the quality of research and teaching and continuously improving the framework conditions required for this.

This is all the more urgent as the requirements at the universities are no longer only restricted here to education and research, but rather, in addition to research and teaching, the completion of their social assignment (“Third Mission”) is also required, whereby a higher knowledge transfer to achieve social goals must be made: both with increased cooperations between universities and businesses and with the best possible trained and educated graduates, who can bring their knowledge to the businesses.

The performances of the universities are in particular measured however, in increasing student numbers, higher research output, more publications and increasing graduate numbers.

Recommendation

Financing

The Austrian Council recommends closing the financing gap of approx. EUR 2 billion (accumulative) to be able to achieve the goal of an R&D rate of 3.76 percent of GDP by 2020, and the reallocation of resources from less productive areas into research, education and innovation to consequently promote long-term economic growth.

Universities

The Austrian Council recommends:

- The implementation of capacity-oriented study place financing in combination with fair access regulations and performance-oriented study progress. This must continue to be a priority goal in order to improve study conditions and supervision ratios. This can only be achieved with a significant increase in the budget available for this.
- Adjusting the funds for competitive financing of basic research by 2020 to that of the Innovation Leaders. This is equal to an annual increase of 12 percent to achieve the calculated target value of circa 0.91 percent of GDP.
- Increasing the annual awarded amount of the FWF by 2020 for competitive research to at least EUR 400 million p.a., so that training of young talent researchers is guaranteed and basic research can continue to make its contribution to providing a solution to society's challenges.
- The Austrian Council therefore once again recommends vehemently pursuing the goal of 2 percent of GDP by 2020 at the latest. The data for universities in Germany, Switzerland and Austria was compared to estimate the situation with university financing. The following tables illustrate information on the tasks for universities, student and graduate numbers and current supervision ratios at selected universities.¹

¹ Data records for 2013, if not otherwise noted.

	Students in universities 2014/15	Expenditure in billions €	Funding / graduate (in €)	Funding / student (in €)
Austria	304,160	3,838	102,869	12,619
Switzerland	143,961	7,220	216,284	50,152
Bavaria	242,160	6,308	142,415	26,051
	Students in universities	Expenditure in billions €	Funding / graduate (in €)	Funding / student (in €)
TU Vienna	29,002	0,322	134,167	11,103
ETH Zurich	18,616	1,469	334,472	78,911
TU Munich	35,979	1,203	169,127	33,436
	Students in universities	Expenditure in billions €	Funding / graduate (in €)	Funding / student (in €)
University of Vienna	92,011	0,537	42,343	5,836
University of Zurich	25,634	1,274	214,767	49,700
LMU Munich	50,327	0,579	62,151	11,505