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Between a Shortage of Tertiary Graduates and Precarious Employment

Proof of Value of Higher Education Expansion on the Labour Market

This report first and foremost aims to document institutional changes in the Austrian higher education (HE) landscape and, on this basis, prove the trend and current new HE qualification offers on the labour market. This comprises in particular the role of the relatively new *Fachhochschule* sector and scientific universities by specialisations. In another chapter, the “qualification requirements of the economy” (which is an often used, but by no means easily definable category) are specified by applying various empirical indicators. This is done by analysing job vacancies, recent data provided by Public Employment Service Austria (AMS) and by Statistics Austria (microcensus, censuses), a company survey, as well as the analysis of published national and European employment projections, which reveal changes regarding academic professions.

Objectives and empirical bases of the study

Public discourse about the education of HE graduates is characterised by contradicting statements between a drastic backlog in the “HE graduation rate“, on the one hand, and, on the other, complaints about the precarious employment of new graduates of rather non-business-oriented study courses. This study aims to help resolve this contradiction.

Research is based, in particular, on secondary statistical analysis of data provided by HE, labour market and employment statistics produced by Statistics Austria, the Economics Ministry, or AMS. In addition, evaluations were conducted of online job vacancies for HE graduates, a company survey from 2008, as well as published research works on the labour market of university and *Fachhochschule* graduates, but also national and European employment projections about employment in academic professions.

From 200,000 to 450,000 gainfully employed HE graduates since 1991

First of all, the HE development of recent decades is investigated regarding influx and graduates' figures, in

order to subsequently reflect the consequences of the expansive development – the number of annual tertiary study qualifications increased from below 12,000 to some 28,500 in a comparison between 1990/91 and 2006/07. From the perspective of the longer-term employment development of HE graduates (changes of sectoral and professional structures), the current labour market situation is examined on the basis of demands for qualifications (print media, Internet, labour market data) and recent research publications.

The number of gainfully employed with an HE degree has risen e.g. since 1991 from about 198,000 to around 450,000 in the Austrian employment system. Although employment in the mainly public sector has declined from about 50 percent to below 43 percent of gainfully employed HE graduates, this has meant in absolute figures that numbers have almost doubled. Employment of HE graduates in the private services sector has grown even more intensely in the same period from around 71,000 to some 197,000 gainfully employed (plus 177 percent). The largest relative growth has occurred in the field of business-related services.

TABLE 1:

**Sectoral structure of graduates' employment in a comparison over time,
rounded absolute figures,**

Economic sector	1991	2008	Change
	Labour force census, (LSC)	Labour force, microcensus, (LF)	
Agriculture and Forestry	1,200	3,600	2,400
Manufacturing	26,100	58,200	32,100
Mainly private services	71,600	196,700	125,100
Mainly publicly financed services*	99,400	192,600	93,200
Total	198,300	451,100	252,800

* education; health and social affairs; public administration, defence; social security; arts, entertainment and recreation; extra-territorial organisations and bodies.

Source: Statistics Austria, censuses; microcensus; own calculations

Despite an expansion of employment at the high qualification levels, the public sector and private large enterprises are less and less able to maintain their absorption function regarding the increasing number of new graduates. As a consequence, there are complaints about problems regarding entry into the world of work and “precarious” employment relations mainly of non-business-oriented studies, as graduates still need to acquire specialisations that are compatible with the labour market step by step. A considerable portion of demand for higher and upper intermediate qualifications is, as is shown by analyses, covered by VET college (BHS) and other advanced forms of VET in this country.

As a result, freelance activities of the workforce with HE qualifications is growing. Meanwhile, more graduates from the economic section “Freelance scientific and technical services” can be found in the private sector than in manufacturing (industry; construction; utility companies). With 35 percent of the workforce, freelancers boast by far the highest tertiary rate (average 13.5 percent).

Differentiation of job and career pathways

The labour market has absorbed the risen supply of new qualifications from HE institutions. Open unemployment

is not a quantitatively relevant topic, but adequate employment is, even though 73 percent of gainfully employed with an HE qualification still attain professional positions that match their educational level (1991: 83 percent; 2001: 80 percent). The analysed income data also proves higher differentiation within the education level than in other formal education levels. This is proof of the hypothesis that education increasingly differentiates not only by formal level but, in higher education, also within education levels.

Specialist over-qualification for holders of first degrees

The trend points towards a more pronounced differentiation of professional and career opportunities by specialist and general qualifications while HE graduation rates are expected to continue to rise (currently some 22 percent per age group). In this context, issues related to the “over-qualification” of holders of first degrees in relation to job offers, successive continuing education and training, and the international comparison of graduation levels are becoming increasingly relevant topics of the educational discourse.

TABLE 2:

Graduation rates in Austria in a comparison over time

Graduation rates related to ... or source	2000	2006	2007	2008
Graduation rate of Austrians (own calculations)	17.1	25.1	25.6	-
OECD: Current graduation rate in the tertiary sector A	16.0	21.5	22.1	-
30 to 34 year-old labour force (microcensus*)	9.8*	14.8	15.6	16.4
HE graduation rate of 25-64 year-old labour force	9.0*	11.8	12.1	12.2

* census data from 2001

Source: Statistics Austria, OECD; own calculations

Over-qualification is also a topic in technology-relevant studies, which have an average duration of some 7 years at the universities of technology until they acquire their first degree (i.e. “DI”, which is a master degree level roughly equivalent to “C.Eng.” in the UK). Some 80 percent of the total of 1,000 job ads for graduates of “technology, engineering sciences” that were analysed in this study were not located in the professional field of “research and development” (the traditional *telos* of long university studies). Requirements of the jobs include: a good command of English, customer orientation, in-depth ICT knowledge and skills, as well as the willingness to move location.

“Over-qualification” is at the focus of international criticism of the Austrian university education strategy (cf. Ederer et al. 2009). This is largely ignored in this country but is clearly reflected in the problems understanding and accepting study qualifications below diploma level. When the *Fachhochschule* sector was established, it set itself a level which, in case of a first degree, is equivalent to Level 7 of 8 possible qualification levels of the currently implemented European Qualifications Framework. Internationally it is a normal cultural situation to have two or more qualifications below the diploma level.

Specialist knowledge and key qualifications

The consequences of the demand for technicians illustrates exemplarily the complex job requirements of graduates on modern-day labour markets: not only are high demands made on the individual’s skills by specialist initial HE-based education, successful entry into the labour market also requires specialist and interdisciplinary knowledge and skills. Therefore it is far too insufficient to reduce needs-orientation to the topic of “study specialisation” or “uni vs. *Fachhochschule*”. Internationally, less than half of graduates state that specialist

knowledge is their major resource to tackle jobs, with general competences, such as “performing under pressure”, socio-communicative skills, use of the possibilities of the information and communication media at a high level, etc., being just as important.

In Austria there are massive public debates and uncertainty regarding HE-based preparation for gainful employment, which vacillates between “lack of HE graduates” and complaints about the “precarious employment” of young graduates. What is behind it? What do graduates need to successfully act in their professions in the “knowledge society”, where HE education has become a first-rate economic factor? For this purpose, empirical evidence from national and European surveys was revealed and put forward for debate. Specialist knowledge alone is certainly insufficient, particularly for highly qualified professions. Specialist education or extracurricular involvement often promote a high competence level in cognitive and socio-communicative respects in general, e.g. the ability to become acquainted quickly with new areas.

The gainful employment of graduates is characterised by performing with high demands made in terms of time pressure, complexity of topics, intransparency of tasks, socio-communicative and strategic acting, and not least use of ICT instruments at a high user level.

It is decisive how HE studies are pursued

In a certain sense it can be stated that it is not always important what graduates have studied but “how” (!) they have studied. Because the way how the pressure to perform has been tackled or communication skills in German or English, for instance, are frequently decisive for success in professional life, where tasks are often designed so they cross the boundaries of specialisations. Specialist qualifications as such or by themselves are nearly

always too little or will consequently lead to dead ends. It is only with a complex array of conditions, encompassing additional qualifications and key qualifications, that knowledge and skills acquired at HE level can be transformed into reality.

Self-responsibility and structural opportunities to learn

The acquisition of interdisciplinary additional qualifications or key skills is, on the one hand, a consequence of a *self-responsible* selection of studies and study design by young people at HE institutions, which needs to be emphasised, and on the other hand it is an issue related to *the opportunity structure*. At a private university or *Fachhochschule* with a limited number of students the outcome may be different than in the overcrowded auditoria of universities, which are not able to control access.

The opportunities to learn and practise competences that are of interdisciplinary relevance are suboptimal for students where the ratio between learners and teaching staff at HE institutions is unfavourable. The quality of education and the acquisition of qualifications for the dynamic knowledge-based economy with international links require adequate resources and structures. With an HE study rate of 40 percent or more it will hardly be possible to provide a high quality of learning in the longer term without introducing a variant of co-determination for the later beneficiaries of the HE-based preparation for upper intermediate, advanced and top functions in the world of work; nevertheless, this issue is currently being blocked due to competition between our national parties.

Above-average public expenditure for the HE sector

It will most likely not be possible to resolve this issue solely by increasing public expenditure for HE, which in 2006 was 1.2 percent of the GDP and thus clearly above the OECD country mean of 1.0 (cf. OECD 2009, p. 243), the more so because, as early as in 2006, our country's tax ratio, at 41.9 percent, was above the EU country mean of 39.8 percent (cf. Statistics Austria, Statistisches Jahrbuch 2009, 2008, p. 573). Without a certain socially acceptable cost contribution, e.g. by type of adult learning, it will however become difficult to mobilise the necessary resources to provide for high-quality HE for an estimated 50 percent per age group.

Needs-orientation as a fuzzy factor

“Needs-orientation” as a benchmark to design the studies on offer and provide guidance on study and career selection is indispensable, although the need for graduates on the labour market can only be identified imprecisely. Not only are needs for professional qualifications undergoing changes due to economic developments, but also a narrow concept of needs-orientation is proven as unrealistic by the variety of opportunities for graduates, extending even to subsequent successful obtainment of qualifications for an activity that is far away from the study course in terms of subject matter. Universities and other HE institutions have always produced a part of the creative and critical intelligence and can therefore not be reduced to places where specialist qualifications are obtained, no matter how important these may be in the working society which is characterised by division of labour. But it is possible to extend requirements- and acceptance-orientation by the way *Fachhochschule* study programmes have developed over the past 15 years.

Internationalisation makes it necessary to modernise the tertiary education sector

In order to attain the rate of “at least 40 percent of HE graduates among 30 to 34 year-olds” set as a benchmark for Europe in 2020, which is already today being clearly exceeded by many countries among those aged approx. 25 to 30, however, additional and in particular structural measures to modernise the HE system will be required. This will necessitate in particular the integration of additional occupational sectors into tertiary initial and further education based on the model of the Anglophone or Northern European countries and will also require overcoming the strong institutional segmentation between HE institutions, adult learning, and VET colleges. Due to the internationalisation and Europeanisation of HE and the graduates' mobility it will be indispensable to structurally modernise the tertiary education sector (which should encompass more than HE institutions), in order to ensure that the educational location of Austria and its young people are not put on the sidelines.

The entire research study in German can be obtained from ibw in printed form (ibw-Forschungsbericht no. 153, ISBN 978-3-902742-09-4) or [online](#).