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## University education and the labour market

An analysis of the trends and an international comparison

**T**he public discussion around universities and the labour market in Austria is contradictory, and this feature comes up again and again: on the one hand, we lament over a percentage of university graduates that is far too low in comparison to other countries; on the other hand, we complain about a tense situation on the labour market for university graduates which is due to a decreasing absorption capacity of the public, and the publicly funded, sectors. It is the aim of the present study to rid the discussion of this contradiction, which is in the interest of an empirically funded perspective for the development of tertiary education.

*The prerequisites for a comparison of university graduate numbers are not taken into account sufficiently in public discussion*

The first step of the present investigation shall examine more closely the alleged “low percentage of university graduates” in Austria. Is it substantial or is it rather a problem of definition?

*So as to secure international comparability, degrees that take equally long, as well as degree numbers of the studies that lead to the students’ first graduation have to be compared (OECD in 2004).*

This differentiated view is, however, not exactly maintained in the publication “Education at a glance” [*Bildung auf einen Blick*]. First degrees are presented in a differentiated way, but in summation they are presented badly. Viable comparisons of university degree figures require a) a strict inclusion of the vertical structure of the studies, and b) at least elementary information on how the degrees correspond to the jobs in the respective countries.

The percentage of university graduates among the Austrian population went up from 4 percent in 1981 to 5 percent in 1991; in 2001 it was almost 8 percent. Among 30 to 40 year-olds, it reaches nearly 10 percent. The claim

that our university degree figures are too low, can be mainly put down to a lack of information about the structure of university education in those countries that have more than 20 percent university graduates among their people in jobs. Austrian students are trained in non-university institutions such as advanced secondary vocational or technical colleges or academies for health professions up to a level that corresponds to the Bachelor degree.

*Insufficient information on university degrees and jobs in other countries causes misunderstanding in Austria: after a thorough empirical analysis, there can not be seen a lack of university graduates*

The main difference Austria displays in an international comparison of educational structure is that there is a strong tendency towards on-the-job education in the form of apprenticeship training, specialised schools and advanced vocational or technical colleges. Here, all figures correspond to the OECD average. Countries that show high figures in OECD comparisons such as the USA are of interest here. How can we find out about and assess future demand, both mid-term and in the long run?

According to calculations by the *Bureau of Labour Statistics* in Washington D.C., 12 to 13 percent of the total of 21 percent university graduates among all people in jobs in the USA hold a Bachelor's degree without any further specialisation; moreover, not more than 8 percent have gone through long studies at universities that are so typical of the German speaking countries and culture. This results in relative figures that roughly correspond to the Austrian university degree figures of the 1991 census.

As regards the tertiary educational system, an outlook until 2010 shows the following: specialised fields related to computers see growing chances of employment. Among all tertiary studies, short studies that take two or three years are said to correspond best to the future demands. Among all persons in work, further university studies as well as additional diplomas are intended to remain below 10 percent of the demand also in the long run.

On this basis, one can easily understand the aforementioned discrepancy between a tense situation on the labour market for new university graduates on the one hand, and the gap that is generally assumed to be there compared to international percentages of university graduates. The essence of this discrepancy lies in a lack of information about the job fields corresponding to university studies in countries with different educational traditions.

### *60 percent more university graduates in jobs since 1991 – new ways have to be opened for job beginners*

According to the 2001 census, 312.641 people with an academic degree worked in Austria; that meant an increase of 58 percent compared to the year 1991. Compared to this, the number of all persons in work only went up by 8 percent between 1991 and 2001. These trends became manifest in a significant increase in the overall percentage of university graduates: from 5.4 percent to 7.8 percent in the decade mentioned above. The situation on the labour market for university graduates has changed noticeably in the last years, as there are more registered unemployed than there were in the 1990s. Reasons for this can be found in the spread of university degree holders on the labour market, as well as the fact that many studies are orientated towards the public or

publicly funded sectors (between 70 and 90 percent in the humanities and medicine) – while these fields can absorb fewer and fewer of them, and while there is only little economic growth. In addition to universities, moreover, upper secondary schools and further trainings qualify people for and in jobs and sectors that would, in countries with a developed system of short studies, be taken and occupied by university graduates.

### *More short studies and offers for people in jobs, in light of 40 percent graduates from secondary schools, are necessary so as to secure a sufficient amount of need-oriented educational offers in the future*

An economy that is based on knowledge needs more people with tertiary education that touches economical fields. This is due to 'informationisation' (ICT knowledge on a high level for nearly every specialised field), an 'internationalisation' (foreign language skills, intercultural experience), and the increasing number of research and development branches of successful companies. Yet, this will not be achieved by merely expanding the figures of the 'classical', long studies. A first assimilation to the altered conditions has successfully been made in the form of specialised tertiary colleges: 84 percent of their graduates work in the private sector – a percentage that university graduates only reach in the fields of technology and business. In light of 40 percent graduates from advanced or specialised secondary schools, as well as growing demands regarding specialised knowledge and additional skills, one can expect a further adjustment of the tertiary education system to the benefit of young people's job possibilities.

The focus is on short, modular studies. These are (still) relatively underdeveloped in Austria both in terms of graduate numbers as well as in what they offer, as the international comparison has shown – a fact that is due to the diversification of the university system only setting in rather late. Shorter studies reduce drop out numbers compared to longer studies (which 40 percent do not finish); moreover, they appeal to more people who want to brush up their qualifications – granted a wide regional offer.

Not only the development of specialised tertiary colleges since 1994, but also how fast the universities implement the international standard of a three-layer graduating system –especially in computing and business administration- will be milestones of balancing 40 percent school leavers that are allowed to go to university each year and the altered possibilities on the labour market. In winter term 2002, already 10.800 Bachelor students were counted at the universities. This shows the popularity of these newly set up types.

The most common reason why students drop out of their university studies (40 percent of all students) is closely connected to the fact that these studies take such a long time – which place the first chance to graduate too far ahead for many (7 to 8 years on average for many subjects). The current OECD data implies that the chances for success are noticeably higher in Austria with shorter studies (78 percent) than longer ones (58 percent); this connection can also be observed on an international level (76 compare to 62 percent).

The yearly graduation numbers could most probably be increased from 18 (in 2002) to almost 25 percent by sim-

ply intensifying efforts to establish more (short) first studies. Beside this, there should be established training offers for people in jobs that boast modern didactics and methodology (including e-learning), so that one could in the long run expect graduation numbers from short studies of 30 percent per year after optimising study offers, their permeability, and orientating them towards the actual needs.

The next step of university development that is oriented towards the labour market will involve gaining the maximum of the potential of Bachelor and Master studies at universities and specialised tertiary colleges for the labour market. A broader spectrum of the population should be able to enjoy tertiary education if we extend on-the-job studies and adequate acknowledgment of VTC (vocational tertiary college) certificates in Bachelor studies – which would in turn secure the competitiveness of the Austrian economy in the future. In Finland, for example, 41 percent of all university students do part-time studies; in Sweden, 47 do so. In the United Kingdom, 27 percent are part-time students, and in the USA 25 percent.

FIGURE 1:

**Percentages of university graduates from short and long studies related to the population at the typical graduation age in 2002**

*Grouped according to long university studies*

Selected countries	Short studies: from 3 up to 5 years	Long studies: 5 years or more
Italy (2001)	2.5	<b>20.2</b>
Slovakia	5.0	<b>17.9</b>
Finland	27.3	<b>18.1</b>
France	8.6	<b>16.2</b>
Austria	2.7	<b>15.3</b>
Czech Republic	2.1	<b>12.9</b>
Germany	6.5	<b>12.7</b>
Australia	35.9	<b>9.5</b>
Ireland	23.8	<b>7.3</b>
Japan	29.3	<b>4.5</b>
United Kingdom	33.3	<b>2.6</b>
Sweden	31.5	<b>1.2</b>
Average	21.2	<b>13.3</b>

Source: OECD 2004

Figure 2:

**Formally highly qualified people among persons in work:  
USA - Austria, in %**

Formal education	USA: 2000	Formal education	Austria: 2001
First Professional degree	1.4	Degrees from long university studies (Dr., Mag., DI)	7.6
Doctoral degree	1.0		
Master's degree	1.0		
Bachelor's or higher degree, plus work experience	5.0	Specialised tertiary colleges	0.2
<b>In summation</b>	<b>8.4</b>	<b>In summation</b>	<b>7.8</b>
		Academies, colleges, advanced secondary schools	10.7
Bachelor's degree	12.2	Advanced general secondary school, partly with part-time studies	4.8

Source: Our own composition; Bureau of Labour Statistics; Stat.A.; Austria Statistics

Figure 3:

**Trends in university graduate employment  
according to specialised fields and types of universities**

Specialised field, type of university, academy	2001	Change in %
Historical, Cultural Studies	9,851	98.6
Sports and Physical Education	3,421	96.4
Economic and Social Science	51,634	83.8
Philosophical, Humanist Studies et al.	19,714	74.7
Engineering	39,088	71.7
Veterinary Medicine	3,104	66.5
Arts	17,832	63.9
Translator and Interpreter	2,796	61.7
Agricultural Science	8,968	61.6
<b>University in summation</b>	<b>304,597</b>	<b>53.6</b>
Mining	2,927	45.5
Philological and Cultural Studies	22,356	45.0
(Technological) Science	29,932	44.4
Law	31,816	30.6
Pharmacy	5,328	28.0
Medicine	36,438	24.2
Theology	7,379	7.9
<b>Specialised tertiary college</b>	<b>8,044</b>	<b>-</b>
<b>Both types</b>	<b>312,641</b>	<b>57.7</b>

Source: Austria Statistics census, 1991, 2001

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