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## Educational structure and demand for qualifications in Vienna

Trend analyses and prospect for the future

**T**his report aims to analyse trends and structures in the field of education and qualifications in the federal capital Vienna with the goal of examining matching problems with companies' recruitment needs and other future-oriented issues of education and training on broad empirical evidence and deduce starting points for educational policy-makers from the findings. The report uses a variety of data and published research findings.

The education structure and demand for qualifications in Vienna reveal clear differences compared to the Austrian average. This is due to a large number of factors. The Vienna school sector has to cater for a much higher proportion of children and young people who do not speak German as their mother tongue than the other provinces. The capital does not produce any higher educational participation and graduation rates of locally resident young people than the average of the other provinces. This applies equally to education and training. In its function as capital and metropolis, Vienna is characterised by mobility and immigration, by national and international links in business, society and the population. Vienna accounts for almost 40 % of immigration to Austria at present – according to data provided by Statistics Austria. These basic facts need to be considered in an education and qualification/skill needs study about Vienna.

### **More children in the lower cycle of academic secondary school, but lower educational participation overall**

In a comparison of Vienna with the national average, first and foremost the difference in school type proportions of schoolchildren in their 5th year is striking (in Vienna, 53 % of children in that year are in the lower cycle of academic secondary school, in the Austrian average this share is 33 %). Despite this, the participation of young people in secondary school education after year 5 is lower in Vienna than the national average (some 74 vs. 78 %) and the rate of holders of the upper secondary certificate among the Viennese youth is not higher than the national average (the high proportion of people with a higher education study qualification and graduates among young adults and the workforce in Vienna is to a considerable degree the result of immigration!).

The result of the education system in Vienna in the context of the very heterogeneous immigration in terms of education is a relatively strong differentiation in educational status and educational opportunities of children and young people. In 2008, 21 % of 20- to 24-year-olds of the local Viennese population had only completed compulsory schooling as their highest formal educational attainment, in the Austrian average this was below 15 %. At the same time, 52 % of the above-mentioned age group in Vienna boasted the upper secondary certificate or higher, in the Austrian average this was 41 %.

### **Deficits in basic education – Vienna-specific challenges in the compulsory school sector**

On the Viennese labour market there were not only recruitment problems for companies regarding the high-qualified but also problems in the search for skilled workers at apprenticeship diploma level and of compulsory school graduates. This is evidenced by the findings of company surveys, which are presented in this report.

One major problem on the Viennese labour market is weak basic education, often accompanied by a poor command of German. The qualification deficits do not always concern subject-specific knowledge, which is often only demanded at the level of semiskilled labour, but rather general qualifications, such as a willingness to learn, command of German and teamwork. Immigration produces "brain gain" for the Viennese economy but also risks of segregation, which are due to migration, connected with difficulties in accessing education and have roots spanning various generations. This discrepancy can be illustrated by two comparisons of figures. At the time of the most recent census, for

example, 61 % of immigrants from non-EU countries (in case of immigrants from some countries of origin this %age was clearly higher) did not have any educational qualification after compulsory schooling, compared to 29 % in the capital's long-established population or immigrants from EU countries. Among immigrants from EU countries, 32 % had an HE qualification, which compares with 10.5 % of Austrian citizens.

Much more than in other provinces, Vienna's compulsory school sector is confronted with compensatory tasks due to the low education levels and educational affinity in the parent generation in parts of the immigrant population. When taking into account the relevance of the fact that in the academic year 2007/08 almost 50 % of children in primary schools in Vienna did not speak German as their mother tongue (compared to about 13 % in Lower Austria, for example, and similar values in the other provinces), it is obvious that Vienna's compulsory school sector has to tackle special problems that require specific attempts at solving them. This is true of nursery school and primary school and particularly of the intermediate and lower secondary level.

According to data of Statistics Austria, the proportion of schoolchildren who do not speak German as their mother tongue was 59 % in Viennese lower secondary schools at the time of reference, in Lower Austria by comparison it was only 12 %. The early separation of educational pathways at the age of ten years does not work in a metropolis which is characterised by strong migration movements in the population. As mentioned above, in Vienna more children attend academic secondary schools than in any other province, without producing a better basic education for all and a higher participation in education after compulsory schooling or higher rates of holders of the upper secondary certificate.

All traditional immigration societies, such as the USA or Canada, have not maintained any external differentiation in the secondary school sector. These countries are the origin of the PISA approach and the general idea of the governance of the school sector based on scientifically founded educational standards. As is revealed particularly by the structure of the cohort of children at lower secondary school (59 % of young people who do not speak German as their mother tongue) and at prevocational school (58 %), it cannot be dismissed that there are tendencies of a segregation of the Viennese young people's life opportunities which is intensified by education.

### **Divergence: education, prosperity and youth unemployment**

The economy, education and the labour market of the metropolis Vienna are characterised by contradictions. In 2008, when Vienna experienced a wave of immigration

of qualified labour from the provinces and abroad, it had a rate of upper secondary certificate holders of 45 % and therefore by far the highest share of formally higher qualified workforce in a comparison of provinces (Austria overall: 29 %), despite this Vienna had an above-average unemployment rate. In particular, youth unemployment with 14 % in 2008 was clearly above the national average of 8 %. Vienna boasted the best economic indicators (gross regional product, income), but still a relatively high unemployment and the highest youth unemployment in a comparison of provinces: obvious evidence of education-related risks of segregation in education, the labour market and society. It must be noted in this connection that it is by no means true that growing employment in the service industries reduces opportunities for simple and intermediate qualifications. 83 % of the Viennese workforce is active in the service sector, in the other provinces this proportion is clearly lower at an average of around 66 %. This does indicate specific initial and continuing education and training (IVET and CVET) needs in the federal capital but not in the slightest that there is only demand for formally higher qualified people, as is sometimes insinuated.

IVET and CVET is also necessary in Vienna at all qualification levels. In the foreseeable future, according to current projections, some 70 % of occupations in Vienna will require IVET and CVET (below the traditional academic level); 20 % are estimated for academic professions or qualifications; and around 10 % for compulsory school plus induction training. An analysis of the occupations that were most frequently demanded between 2006 and 2008 reveals that qualification and skill need is strongly vertically structured despite the high share of the service sector and therefore, as well as demand for holders of the upper secondary certificate and graduates (outside the public sector: mainly business-oriented subjects), VET, induction training and CVET in simple and intermediate qualifications is very strongly represented in most sectors.

Regarding requirements in simple occupations, however, a difference becomes evident to times when agriculture and crafts often looked for workers who did not speak German and did not have any other compulsory school knowledge or recruited people from abroad. The minimum level for employability has also increased in simple occupations in Vienna's service economy. This has become evident in the current vacancies offered to the Public Employment Service Austria AMS as well as in the print media, which show a continuing high demand for labour in relatively simple occupations.

Despite the media's focus on top qualifications, this segment of demand for staff is by no means free of recruitment problems for companies. Where companies are asked for such problems within the framework of

relevant studies, they mention command of German, teamwork and the willingness to learn as areas where they notice deficits.

### **Apprenticeship training**

In the 10th school year, 40 % of young people in education in Vienna attend a dual training programme in training companies and part-time vocational school. The major problem in Vienna is the weak basic education of apprenticeship beginners and a more unfavourable situation on the apprenticeship training market than in other provinces (the surplus of apprenticeship posts was clearly larger in Vienna than in the remainder of the national territory in late July 2008). Sectors and apprenticeship occupations which cannot be as selective in their access as e.g. banks and insurance companies train the overwhelming majority of apprentices in Vienna, but not all reach a positive final exam result. In 2009, in the “Crafts and Trade” segment in Vienna, precisely 2,197 examination attempts were registered, with a success rate of 74 %, the “Bank and Insurance” division had 109 examination attempts and a success rate of around 96 %.

Also dropouts from training and switches to another programme are a major issue for apprenticeship training in Vienna. The connection with career choice issues and basic education deficits is obvious, therefore support by pedagogues and social workers in the preparation for training and in the initial stage as well as during training at part-time vocational school and the training enterprise is extremely important.

### **No demographic easing of the apprenticeship market**

In the foreseeable future the number of young people in Vienna will not be lower – as opposed to the other provinces – than in 2010. A demographically caused improvement on the apprenticeship market cannot be expected in Vienna. Due to basic education weaknesses it is indispensable that young people are promoted as early as at the beginning of dual training as well as that permanent cooperation with part-time vocational school is set up. Here new major tasks for the professional organisations are arising in the field of small enterprises. Without any socio-educational assistance and institutions, it will barely be possible in the near future to realise the objectives, which are shared by all political forces, to implement a “training guarantee” for young people up to the age of 19 who do not want to attend any upper secondary programme. At their core, the integration problems are of a structural, economic and social nature. It does not seem to be a realistic approach that one waits until the problem has dissolved by itself due to demographic changes.

### **VET for adults**

At present, 33 % of all attempts to take the final apprenticeship examination in Vienna are made in second-chance education, as additional exams or on other special VET qualification pathways. Apprenticeship training in second-chance education is therefore very popular in Vienna, which is connected with local demands on the labour market as well as with subsidies by AMS. Here a rising trend can be observed, which will most likely be further enhanced due to demand-oriented priorities of labour market policies. The analysis of job vacancies in Vienna’s print media in 2009 revealed that 41 % of all advertised posts were for apprenticeship graduates. However, less than 25 % of young adults in the federal capital have completed an apprenticeship.

In the 2008 company survey, the share of enterprises with recruitment problems at the level of apprenticeship graduates was around 30 % and thus the highest share in a comparison of qualifications. The demand for workforce at apprenticeship diploma level will remain unchanged, which is corroborated by current demand for staff as reflected in analyses of job ads and company surveys (AMS, ibw) as well as by national and international projections on occupations.

For this reason new paths to the apprenticeship diploma in first- and second-chance education should be pursued vigorously due to the expected future demand on the labour market. In structural terms, however, the creation of more flexibility via the European transparency instruments ECVET and EQF/NQF should be considered and, in this way, build more accessible bridges between IVET and CVET to promote lifelong learning.

### **High educational attainment level and high study and graduation rates: “brain gain”**

In Vienna, higher education always benefits from immigration, i.e. “brain gain”. This applies to all relevant comparisons of indicators between Vienna and the national average. The rate of holders of the upper secondary certificate is around 52 % of the Viennese residential population at the age of 20 to 24 (according to the 2008 microcensus), for example, and this figure – considering the indicators of the secondary school sector – cannot only be due to the educational output in Vienna but is both the result of immigration from the provinces (domestic migration) and of immigration of students from abroad (international migration).

As can be expected, the tertiary study participation rate of young adults resident in Vienna is far above the national average. Many immigrate with the intention to study. Statistics Austria calculated a university study rate (initial registration rate 2008/09) of 33 % for Vienna and 24 % for the Austrian average. For the sector of

universities of applied sciences (Fachhochschulen) the respective figures are 15 and 12 %. Calculations are based on groups of the residential population of comparable ages. A simple addition of the two study rates does not render precise results as there may be overlaps in the form of multiple enrolments.

In 2008 the ratio of graduates of universities, HE institutions and post-secondary VET colleges was 22 % in Vienna as opposed to 13 % in the Austrian average. This lead in the tertiary rate and the ratio of holders of the upper secondary certificate, which totals 45 % of the workforce and is high by Austrian standards, are also a result of brain gain caused by domestic and international mobility due to career opportunities in highly qualified service occupations in the capital. The effects of Vienna's position as the capital city not only become apparent in the public employment sector but also in private services. The predominantly private services account for 50 % of employment, whereas employees of the mainly public services accounted for ca. 33 % in 2008 (respective total shares of the other provinces: 40 and 26.5 %).

### **Shortage of technology professionals and its background**

The shortage of technology professionals is a relational phenomenon because the demand for business-related occupations is much higher but so is the respective qualification supply. The 2009 vacancy analysis of the print media reveals that the occupational sectors of business, wholesale and retail trade as well as tourism account for 56 % of job offers. Technology and IT occupations combined account for less than 10 % of demand. The gap in the labour market supply in the technical occupations can therefore be explained with the relation to the lower labour market supply and new offers on the labour market than in business occupations.

As a majority of highly qualified technical occupations are also advertised for applicants with a degree from Fachhochschule or a college of business administration (HTL), it is crucial to not only direct one's attention to the universities of technology. Thanks to their graduates' varied employment options, the Fachhochschule programmes, whose development was launched in 1994, have clearly gained a strong position on the labour market. This can be proven when analysing the companies' demand for these graduates. Nevertheless it will not suffice in the future to expand the number of study places in the technology-oriented Fachhochschule segment without ensuring that far-reaching measures are set up to improve the influx to the field of technology. Between 1998 and 2008 approved study places in the technology-oriented Fachhochschule segment

across Austria were clearly less utilised than business programmes in the Fachhochschule sector. From the viewpoint of educational providers, this was tantamount to a lack of suited applicants. In the future, particular attention should be given to a stronger orientation towards all levels of the education sector (but above all in schools to the 10- to 14-year-olds) as well as add-on options at the upper secondary and tertiary levels. In this connection, the Berufsreifeprüfung (i.e. an exam and certificate providing university access for skilled workers) must be mentioned, for example, but also the creation of credits awarded between the programmes of two-year post-secondary VET courses at colleges of business administration and three-year Bachelor studies in the Fachhochschule sector. Here an excellent orientation option emerges towards the implementation process of the European Qualifications Framework (EQF) in Austria. Across Europe, qualifications at the post-secondary level have a more pronounced vertical structure than in Austria.

Despite the dip in demand in 2009 and 2010 it is expected that the demand for graduates will grow in business-oriented segments. This is corroborated by the results of a company survey conducted in early 2010. The strongest demand for staff is for business studies, followed by technology and law. Complaints about the precarious employment of graduates on the Viennese labour market are therefore mainly attributable to the high proportion of graduations in non-business-oriented study branches accompanied by the public sector's declining capacity to absorb graduates.

### **Average CVET participation despite larger share of more highly qualified employees in Vienna**

The participation rate in continuing vocational education and training (CVET) in Vienna is – despite the highest share of highly-qualified and above-average CVET-active companies – only the Austrian average (among men even below that). Combining courses and formal education, the edge for Vienna becomes evident however.

The companies perceive demand for more public support in longer CVET programmes. According to the 2008 ibw company survey, some 70 % of the companies did not use any provincial funds (not even in part) and about 50 % did not do so with a view to subsidies by AMS. Not only are subsidies rated as too low but also applications as too complicated. Therefore a clearing office for CVET funding should be considered.

The entire research report can be obtained from ibw as a print copy in German (ibw research report no. 159, ISBN 978-3-902742-30-8) or [online](#).