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## Regional flow of education in Austria

Developments since the school years of 1985 and 1986 and a prognosis for lower and upper secondary level up to the year 2020

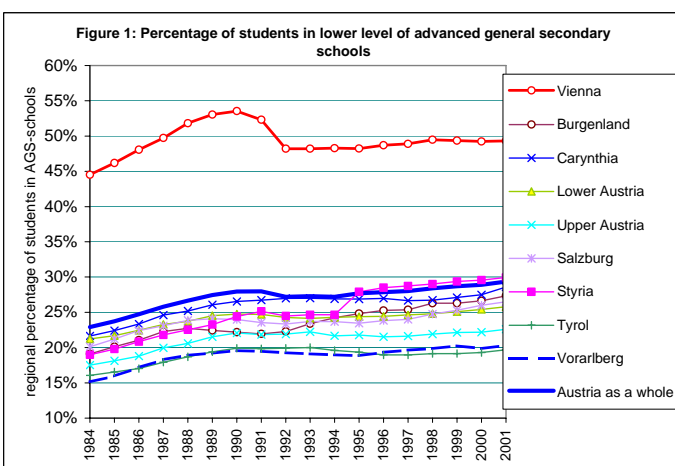
**It is striking that the public discussion about developmental tendencies in the field of first education (school-based education, that is) usually includes little of the aspect of regional variability. The present study has a twofold claim: on the one hand, it will present distinctive developments of the flow of education on lower and upper secondary level since the mid 1980s in a comparative and empirically condensed manner, both for Austria as a whole and regarding their regional varieties (on a provincial level). On the other hand –or, moreover– an attempt will be made to derive possible near-term and medium-term scenarios of development on the basis of these trends (with 2020 as the horizon of prognosis). Special attention will be paid to the demographic and social components of the expansion of education.**

### Flow of education on basic and lower secondary level

After four years of primary school, Austrians have to make the first fundamental decision about their future school career. At this point, one can choose mainly from one of the following two school types: the main general secondary school, and the lower level of the advanced general secondary school (AGSS)<sup>1</sup>. As one can see from figure 1, there is a clear tendency towards the lower level of advanced general secondary schools. However, one can not identify the often-bemoaned *dramatic* trend to the advanced general secondary schools if one counts the relative distribution of education on a federal level. Therefore, the main general secondary school has indeed remained the 'main' school of the country as a whole. There is a trend towards the lower level of AGS schools; but still, students of MGS schools make up more than two thirds of all youngsters on lower secondary level.

If one compares the provinces, a clear dichotomy can be observed: the advanced type holds a high percentage in the capital Vienna (around 50%), but in all other provinces, it is much lower (20 to 30%). If we analyse urban and rural differences, the picture is even more striking: here, the flows of students diverge clearly. In rural regions, main general secondary schools constitute 80 to 90% of the total, while there is a strong tendency towards advanced general secondary schools in urban regions<sup>2</sup>. In approximately three quarters of all school districts, more than 60% of all students on lower secondary level attend main general secondary schools<sup>3</sup>. Detailed analyses of those school districts where MGS schools make up less than 60% show that they are all located in urban areas or cities. Thus, **the increase in popularity that advanced general secondary schools are witnessing is an urban phenomenon.**

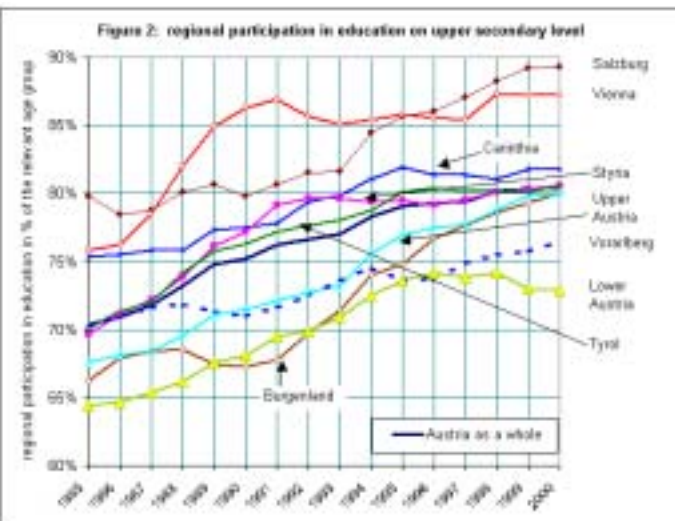
Regarding the **choice of school forms** in Austria, there are only relatively **slight differences between the sexes on lower secondary level**. However, two aspects are to be highlighted: First, the proportion of girls to boys in main general secondary schools -though it still mirrored the proportion of the sexes in the mid 1980s- has decreased, while the percentage of girls in advanced general secondary schools has gone up. These days, girls account for around 52 per cent of all students in this school form. Second, the percentage of girls attending special needs schools has, by contrast, constantly been under 40 per cent, and it is currently going down again. Differences in the various provinces can only be spotted concerning the point in time after which the percentage of girls in advanced general secondary schools grew above the demographic ratio. Today, girls make up approximately 52% of all AGS students in all provinces – a number that is practically identical.



## Flow of education on upper secondary level

Austria's **educational system** on upper secondary level is **oriented towards qualification**. This means that it characteristically involves a high degree of specific vocational education. Combining a highly developed apprenticeship system with an extensive in-school system of vocational education allows for the educational system to convey skills that are relevant for the job. If one adds up all forms of vocational education, almost 80 per cent of all Austrian students on upper secondary level attend one of these post-obligatory educational institutions today. More than half (55%) of the students in the various forms of vocational (!) education attend a school (MVZS or AVTC), while the remaining 45 per cent are going through dual vocational education.

Figure 2 clearly shows that the **participation in education on upper secondary level** has continuously risen in the time observed. While only 70% of the 14 to 18 year olds took further education in the mid 1980s, this percentage has increased to almost 81% today<sup>4</sup>. Although the female group could increase their participation in education more strongly than their male peers, there still exists a wide gap of 8 percentage points<sup>5</sup> between the sexes. Since the mid 1990s, the increase in educational participation rates has lost momentum, and with male youths one can observe complete stagnation. Yet, the **provinces partly differ very much**, not only in figures, but also in the development over time.



In all provinces, this spread of education on upper secondary level came about mainly via generally increasing rates of educational participation; moreover, it happened especially in advanced vocational and technical colleges, and, to a lesser degree, in advanced general secondary schools - these are exactly the school forms that have formal higher graduation as their educational aim. Apprenticeship training figures, by contrast, have declined (see figure 3). Also, medium vocational or technical schools have lost ground. **In terms of relative importance and the dynamics of change, there are significant regional differences.**

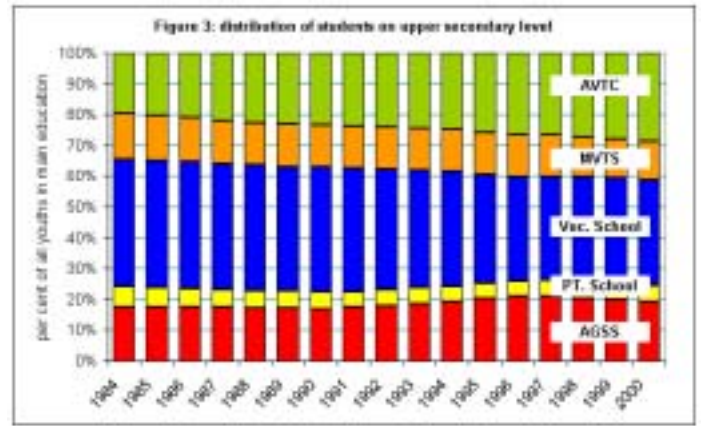


Figure 4 shows **regional differences in the current educational distribution of tenth-graders** in various school forms (of 2000/2001). The percentage of students attending part-time vocational schools ranges from an extreme low in the Burgenland (25%) to an extreme high in Tyrol (45%). Contrastingly, more than 40 per cent of all students in the Burgenland attend an advanced vocational or technical college, while only 20% of the Tyrolean students do so. The differences in the regional rates of youngsters attending medium vocational or technical schools vary only slightly. What is interesting, too, is the fact that –leaving Vienna aside- between 79% and 85% of all students chose a vocational variant (vocational school/college or an apprenticeship).

In Styria, the dual system holds the highest percentage of all vocational variants (60%). Also Tyrol, Upper Austria, and Vorarlberg show almost equally high percentages of the dual system.

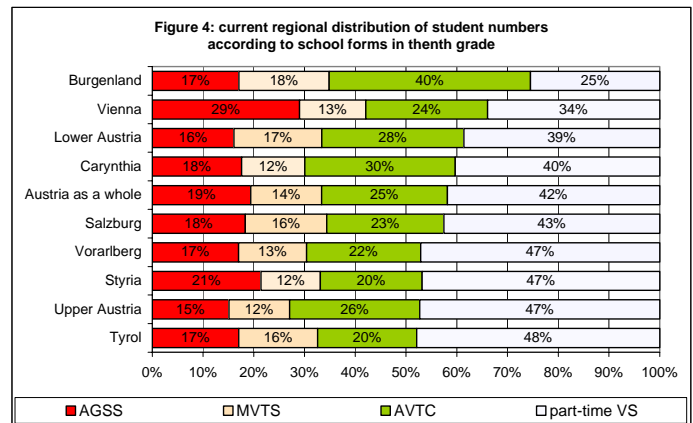
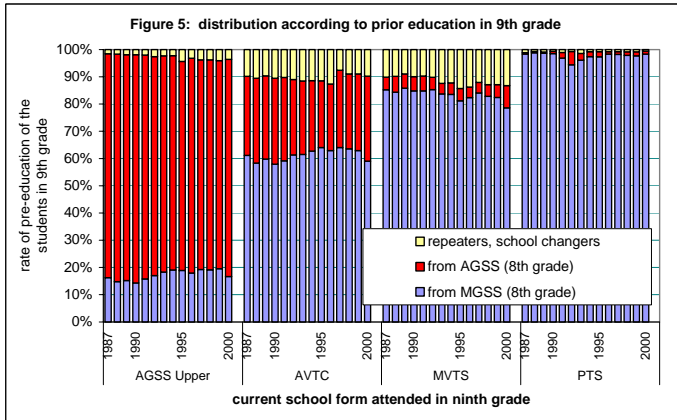


Figure 5 shows the **distributional figures of ninth-graders in terms of prior education**. It becomes clear that these have been stable over time. To a very high degree, the upper level of advanced secondary schools is mainly fed by lower level graduates (70-80%). Advanced vocational or technical schools, however, draw upon relatively few from lower level AGSS schools (20-30%); around 70% of its freshmen come from main general secondary schools. For medium vocational or technical schools as well as for polytechnic schools, the main general secondary school is more or less the only "supplier". The structure of this outcome for Austria as a whole also mirrors the results in the respective provinces; merely Vienna differs slightly<sup>6</sup>.

There is yet another aspect that is worth mentioning: Due to the number of students who fail and are thus not al-

lowed to enter the next grade being generally higher in vocational and technical schools/colleges than in advanced general secondary schools, the rate of students who repeat the grade is higher. Moreover, these two school forms see a significant influx from students that change from other schools on upper secondary level.



The **distribution of prior education among tenth graders** bears the imprint of the school chosen in ninth grade. Almost all tenth graders in AGS schools come from ninth grade AGS. The picture in advanced vocational or technical colleges is analogous, and also medium vocational or technical schools recruit their students primarily from their “own” school form (91%). There are a few students that transfer from AVT colleges to MVT schools, though.

Looking at **where apprentices are recruited from**, one finds a wide spectrum: approximately 42 per cent come from polytechnic schools, one fifth transfer directly from main general secondary schools, and more than a quarter (28%) of all apprentices in part-time vocational schools come from other school forms (mainly from MVT schools: 13.3%)<sup>7</sup>. These figures also unveil an interesting aspect: An ever increasing number of youths finish compulsory schooling in ninth grade of an MVT school or an AVT college and then drop out to enter apprenticeship training. From this, one could conclude that they expect from it a signalling effect for finding a post as an apprentice<sup>8</sup>.

On lower secondary level we identified only marginal differences in how Austrian youngsters choose a school form according to their sex; yet, **on upper secondary level, clear differences in how boys and girls choose their school emerge**. Even though the percentage of female youths attending an MVT school has decreased from 65% (when monitoring started) to presently 60%, MVT schools have remained the school form with the highest proportion of female students, together with AGS schools. Also in AVT colleges, women now constitute slightly more than 50% of the total number of students. In apprenticeship training and polytechnic schools, the figures are considerably lower.

The crude distinction between MVT schools and AVT colleges, however, conceals the pronounced sex-specific distribution in the various fields of specialisation. The number of girls in economic (and other) subjects as well as commercial business is equally high in both AVT colleges and MVT schools. Yet, the proportion of women is “traditionally” low in technical/commercial fields<sup>9</sup> (includ-

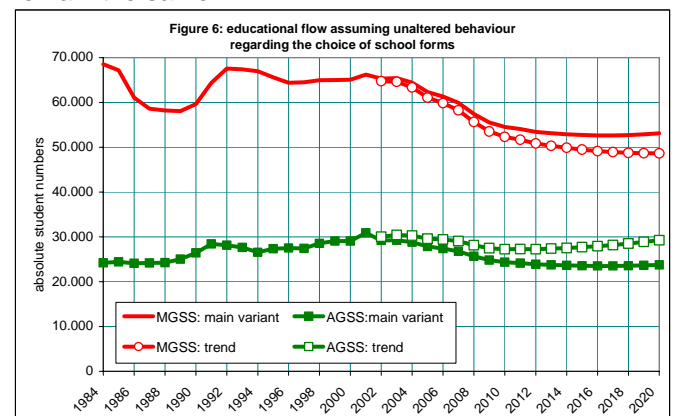
ing art commerce). What is striking, finally, about these proportions is their having been very stable over time.

## Forecasting the flow of education

The model of the *ibw* that allows for flows of education to be forecast was run according to a modelling of school attendance figures. Thereby, current figures or trends in what schools youngsters choose were extrapolated according to the expected growth of population in the relevant age groups..

In addition, the model also boasts the possibility to split the real development of the flow of education (beginning from the mid 1980s up to 2001) into a demographic and a social component. The demographic component shows the demographic influence on the flow of education in the past. The total flow minus the purely demographic components equals what is called the “social” component. The latter includes all effects that are not caused by the demographic development, and it is commonly interpreted as habitual changes in which schools are chosen.

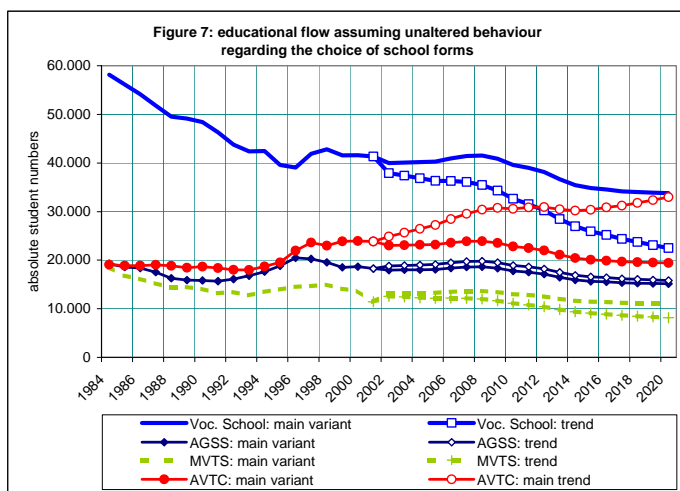
On **lower secondary level**, Austria sees a trend away from main general secondary schools towards advanced general secondary schools, which is not directly influenced by the demographic development. At the same time, though, it was striking that the lines actually do mirror the general trends of the development of the population, i.e., the absolute educational flow was partly affected by the demographic development. On a provincial level, similar regional developments can be expected with minor regional modifications in marking. Figure 6 shows the absolute flow of education in the two school forms of lower secondary level in Austria. The main variant displays the predicted absolute flow of students, assuming unaltered behaviour regarding the choice of school forms. The trend variant also takes into account the habitual changes in the choice of schools over the last 15 years. Both approaches result in student numbers clearly dropping in main general secondary schools until the end of the decade; after that, they should stop plummeting. Given unchanging trends in the choice of schools, the number of students attending lower secondary level of AGS schools is expected to drop due to demographic development. If the trend towards AGS secondary level continues, however, the absolute student numbers will remain the same.



If the choice of schools stays the same, the absolute flow of education in the respective school forms on **upper secondary level** is expected to remain constant until the end of the decade. Only after that, a drop would occur for



demographic reasons (main variant in figure 7). If one assumed the past trends in the choice of education to continue in the future, there could be expected a sharp drop in the number of apprenticeship starters. Simultaneously, the number of students in advanced vocational or technical colleges would grow substantially. Against the benchmark, however, there would only be a marginal deviation in upper level AGS and MVT schools (consider the trend variant in figure 7). The extremes of the prognosis for apprenticeship training and AVT colleges in the trend variant should not so much be seen as concrete statements about the flow of education that is actually expected, as it should be interpreted as “clear trends in the choice of schools”. In these cases, thus, they reflect the youths’ educational wishes<sup>10</sup>. Yet, as the actual educational offers set limits to the realisation of these wishes (at least near-term and medium-term), they are not likely to come true.



One can conclude from the analysis of the demographic and social components that, until the mid 1990s, the number of apprenticeship starters dropped less than the demographic development would have suggested. In the mid 1990s, i.e., at the time when the market turned around, the picture changed: one would have expected many more apprenticeship starters for that period, due to the development of the population. By contrast, the number of MVTs students more or less followed the demographic development. In AVT colleges and AGS schools, furthermore, the social component has been the determining factor for student numbers in the last 15 years.

In this research brief, only a few highlights of the study could be presented. The paper itself contains detailed statements regarding other important aspects such as distribution of prior education, school changing rates, development of specialisation possibilities in AVT colleges, “foreign” students, interdependencies between the present situation on the market of apprenticeship posts and the flow of education in the school variants of upper secondary level, and analyses of the demographic and social components of the development of educational flow in the various school forms on lower and upper secondary level.

Schmid Kurt: „Regionale Bildungsströme in Österreich. Entwicklungen seit dem Schuljahr 1985/86 und Prognosen für die Sekundarstufe I und II bis zum Jahr 2020“ – (Final report will be published soon, only available in German)

- 1 Not counting the special needs schools that make up two to three percent of all students in Austria, there are a number of alternative schools and experimental programmes being tested on lower secondary level; they were grouped among either the main general secondary schools or the lower level of advanced general secondary schools. For more detailed information, see the final report.
- 2 The high percentages of advanced-type schools in urban regions are partly due to students commuting from the surrounding towns and villages. In order for them to find a place in an advanced-type school in the “city”, however, there has to be a correspondingly rich offer of advanced general secondary schools in urban regions.
- 3 In 13 out of the total of 121 school districts, main general secondary schools constitute a percentage of 100%!
- 4 Strictly speaking, this calculation of participation in education merely serves as an indicator, as student numbers were not exactly grouped according to age-groups. The points “missing” to make up a 100% therefore can not be regarded as an estimation of drop-out numbers on upper secondary level or as the number of youngsters not attending any educational institution after compulsory schooling. For the problematic estimation of this group of people please compare Steiner, M. and Lassnigg, L.: *Schnittstellenproblematik in der Sekundarstufe*; in: *Erziehung und Unterricht*, Nr. 9/10, 2000 [intersectional problems on upper secondary level; in: education and instruction, no. 9/10, 2000].
- 5 This is also due to the choice of school on upper secondary level being sex-specific (cf. further down).
- 6 Even though the structure described can also be seen in the capital, the lower level of the advanced general secondary schools provides more students for the upper level of the AGS schools and the medium/advanced vocational or technical schools/colleges. This results from the much higher percentage of students on lower level of AGS schools.
- 7 The missing ~10% to complete the number of apprenticeship starters are, on the one hand, repeaters of vocational schools and apprenticeship changers. On the other hand, they are drop-outs from higher grades of AGS or MVT schools and AVT colleges that start apprenticeship training, as well as youths who want to learn an apprenticeship trade after having completed their education in one of the school variants of upper secondary level.
- 8 Also, they hope for companies that train apprentices to favour drop-outs from MVT schools and AVT colleges rather than students that attended an MGS school or a polytechnic school.
- 9 This level still conceals the true proportions of the sex-specific choice of education: The percentage of girls in advanced colleges for clothing, for example, is extremely high (~90%), while it is very low in technical colleges (below 10%).
- 10 Interpreting this forecast decline is a complex task: the reasons could be found in the economy’s decreasing willingness to provide training and education (for whatever the reasons may be: the lack of suitable applicants for apprenticeship posts, training costs being too high, substitution effects between one’s own apprenticeship training and employment of MVT school or AVT college graduates and drop-outs, etc.), or in the sinking demand for apprenticeship posts on the part of the youngsters.