

# Long term career tracking of graduates using data from the social security system

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## 1 Background

Studies about the situation of higher education graduates are done since quite a long time. However, mostly they follow a national or regional, i.e. supra-institutional perspective. Usually, these studies are commissioned by the regional/national Ministries, like in Austria the studies from Lassnigg et al. 1981, Loudon 1988, Lassnigg et al. 1998 and Schomburg et al. 2011, in Germany the graduate surveys done by HIS since 1974 (e.g. Fabian/ Briedis 2009 or recently Briedis et al. 2011) or in Switzerland the graduate surveys performed since 1977 (recently BfS 2011). Alternatively, research on graduates may have a special focus, e.g. on Bachelor graduates, certain sectors of the HE-system (in Austria e.g. Hoyer/ Ziegler 2002) or certain fields of study. In addition, some international comparative studies can be mentioned, most of all the Reflex-study (Allen/ van der Velden 2007), in Austria work done by Kellermann and Guggenberger (e.g. Guggenberger/ Kellermann et al. 2001 and 2007) or international comparative analysis from Schomburg/ Teichler (2006, 2011), Teichler (2007). Sometimes, issues of graduate performance are also a topic for research commissioned by the labour market administration, like in Austria by the AMS (Mosberger et al. 2007, Putz et al. 2008 or respectively Leuprecht et al. 2009b commissioned by BMWF) or the work done by the IAB in Germany.<sup>2</sup>

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<sup>1</sup> With contributions from Bianca Thaler and Lukas Dünser.

<sup>2</sup> See: <http://www.iab.de/377/section.aspx/Search?q=akademikerbesch%C3%A4ftigung>

Apart from single initiatives of some University departments, higher education institutions in Austria show only interest in the performance of their graduates since the establishment of the new “Fachhochschul”<sup>3</sup>-Sector in 1994. An accreditation of studies was obligatory in this sector from the beginning on which included analysis of the demand of the labour market. Universities started only recently to research systematically their graduates’ performance following more autonomy gained in 2004. In Germany, currently around 60 higher education institutions co-operate in the KOAB project coordinated by INCHER where they agreed on a common core questionnaire for graduate surveys done by the institutions themselves, but enabling supra-institutional analysis on the same time.<sup>4</sup>

The need for research about the situation of graduates on an institutional level follows also increasingly from the Bologna-Process. For example, the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ENQA 2009) demand from each institution knowledge about the “employability” of their graduates. Within the Bologna-Process, “employability” is mentioned e.g. in the following manner:

“With labour markets increasingly relying on higher skill levels and transversal competences, higher education should equip students with the advanced knowledge, skills and competences they need throughout their professional lives. Employability empowers the individual to fully seize the opportunities in changing labour markets.” (Preamble of the Leuven-Communiqué, April 2009).

Following from that, the central higher education requirement is the offer of skills and competencies relevant for the labour market. Curricula should be structured in a way to ensure best possible preparation for the labour market of their graduates. Competencies gained during studying should be compatible as far as possible with the skills demanded from the labour market. Main objective is therefore, to increase the “employability” of graduates (see Leuven-Communiqué 2009 and similar Commission of the European Communities 2006).<sup>5</sup>

Research about graduates is usually done with surveys and dominated by two topics: Transition into the labour market and reflection of the study period. Transition into the labour market and “employability” are commonly used interchangeably, however, the entrance into the labour market is only one part of the employability concept. The mid- and long-term performance and, moreover, the preservation of the aptitude to be employed, are of similar importance (see e.g. Working Group on Employability 2009).

However, this long-term perspective can only hardly be analysed with surveys, because getting in contact with the graduates gets more and more difficult as longer the graduation dates back. In Germany e.g., this problem is addressed with panel surveys (Fabian, Briedis 2009). However, panel mortality (43% over 10 years) allows at best only mid-term analysis. This gap can only be closed using administrative data – which unfortunately is not available in most countries. Nevertheless, in Austria such data is available and might be used for research purposes. This paper reports a few results from

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<sup>3</sup> Fachhochschulen are now named “Universities of Applied Sciences”.

<sup>4</sup> See: [http://www.incher.uni-kassel.de/index.php?option=com\\_content&task=view&id=44&Itemid=85](http://www.incher.uni-kassel.de/index.php?option=com_content&task=view&id=44&Itemid=85)

<sup>5</sup> This central view on the labour market orientation of higher education is also criticised heavily as being too one-sided. However, the intention of this paper is not the discussion of these opinions.

one of the first projects working with this data in graduate research, and moreover, focuses on the consequences to be drawn from these results for future research on the situation of higher education graduates.

## 2 Graduate tracking of the University of Graz

Nearly all inhabitants in Austria are members of the public social security system and in any case, the whole working population (employed and self-employed persons) is integrated into that system. Since a few years, the database of the social security system is (in an anonymized version) accessible for research purposes. Moreover, it is also possible to merge these data with external data via a neutral institution of the labour market service (to ensure privacy). Hence, it is possible to merge anonymized student data from an university with the anonymized data from the social security system for example to track the careers of their graduates.

During the last three years, the University of Graz and the Institute for Advanced Studies in Vienna co-operated in a project to develop a monitoring system of the university's graduates using the data from the social security system. This database contains lifelong data on a daily basis (!) from all residents in Austria. It covers the labour market status (e.g. employed, various forms of self-employment, civil servants, unemployment, and different forms of out of labour force, like maternity leave or pension), the income relevant for the social security (i.e. up to a maximum level for social security contribution – currently 58.800€/year), received social transfers and anonymous information of the employer (e.g. number of employees, branch, industrial sector, region, average income paid by the firm). We merged this information with data from the University's student databank using gender, age, nationality, the field of study, duration of studying, degree(s) earned, drop-outs, data of graduation and so on. Hence, we are able to track the performance of all graduates of the University of Graz on a daily basis on the Austrian labour market (i.e. excluding all graduates migrated to a foreign country).

In this paper, we are focussing exemplified on considerations following the results of the project concerning the labour market status of graduates. On the one hand, these are methodological considerations for graduate surveys and on the other hand, these are consequences for the internal work of the University.

### 2.1 Short presentation about Univ. of Graz

The University of Graz – founded in 1585 – is one of the largest institutions of higher education in Austria. With approx. 30.000 students and 3.500 employees, it makes an essential contribution to the vibrant life of the city of Graz. Its geographical situation promotes lively scientific, economic and cultural exchange with South-Eastern Europe – a benefit for both the city as well as its educational institutions.

The Catholic -Theological faculty is committed to the tradition of the Second Vatican Council. It promotes the dialogue between theology and its cultural, social and political environment by way of research activities and teaching programmes. Current and basic questions on society and economy are at the centre of research and teaching in Law. The study programme offers a sound basic educa-

tion and provides students with knowledge and an understanding of Law. Our social and economic scientific subjects are characterised by intellectual independence, critical discussions and cutting-edge research. The trendsetting study programs are designed to provide answers to practical questions. In the Humanities we offer about 20 disciplines. All these individual scientific disciplines have one thing in common – their multifaceted approaches to discussing Culture, society and cultural heritage. Graduates of the natural sciences acquire distinct analytical capabilities, specific approaches to solving problems and a skilful use of modern technologies. With the faculty for Environmental and regional Sciences and Education actively engages in societal relevant topics like climate and the environment and pools important aspects for the development and future of the region.

## 2.2 Why this project?

The universities in Austria have to educate their students and give them academic training and competencies for professional work (University act, § 3). Therefore the universities can develop and decide on curricula by their own responsibility (University act, § 54) and there is no obligation for external accreditation of these programs.

Out of more than 100 study programs about 2.650 graduates leave the University of Graz each year at bachelor-, master-, diploma- and doctoral level as well as from teacher training (for ISCED 3)<sup>6</sup>. At the Austrian universities, career services and alumni organizations are set up, but there is a huge lack of information about the professional career of graduates.

At the University of Graz all curricula have – beginning in 2002 – a chapter about learning outcomes, qualification profile, possible branches and the relevance for the job market<sup>7</sup>. So it was necessary to check these ex ante-specifications with the real situation after graduation.

The rectorate of the University of Graz conducted in 2005 some strategic analysis to get more information about their graduates: a questionnaire-based online graduate survey (Universität Graz 2006a), a data analysis of the Styrian job market (Universität Graz 2006b) and interviews with representatives of employers (Universität Graz 2006c). In analyzing these helpful results, but facing the enormous effort (and costs) of a survey covering all fields of study, the rectorate decided in 2007 to develop another kind of tracking system. The aim was to built up a long-term monitoring system of graduates about their development in the job market, which allows a deep insight in graduate's professional career. After a phase of exploring possible ways to realize this challenge, the joint project between the University of Graz and the Institute for Advanced Studies started in spring 2008, scheduled for three years.

By the way, this tracking fits with the “European Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ENQA 2009), where standard 1.6 an information system recommended, which should cover information among others about the employability of graduates.

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<sup>6</sup> [http://www.uni-graz.at/en/ains2www\\_facts.htm](http://www.uni-graz.at/en/ains2www_facts.htm)

<sup>7</sup> [http://www.uni-graz.at/en/verawww/verawww\\_informieren/verawww\\_informieren-4/verawww\\_studien.htm?="](http://www.uni-graz.at/en/verawww/verawww_informieren/verawww_informieren-4/verawww_studien.htm?=)

### 3 Labour market status of graduates

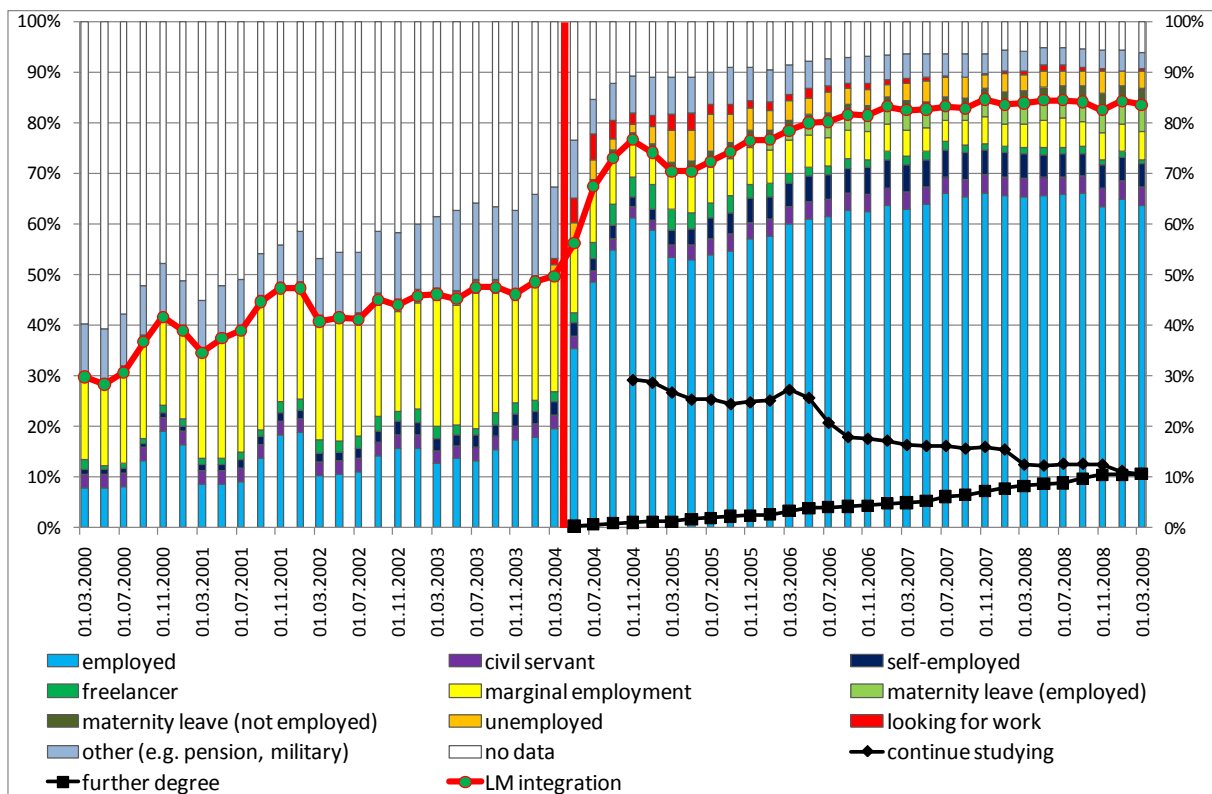
The social security system collects several hundred different statuses on the labour market. For simplification, we aggregated them into the following 11 categories: 1) employed, 2) civil servant, 3) self-employed, 4) freelancer, 5) marginal employment (up to ca. 360€/month), 6) maternity leave (employed), 7) maternity leave (not employed), 8) unemployed (with unemployment transfers), 9) looking for work (without unemployment transfers), 10) other (e.g. pension, military service), and 11) no data available. In a further aggregation, we count the categories 1 to 6 as integrated into the labour market ("LM integration"). "No data" during study time indicates mostly a co-insurance with the parents, after graduation, "no data" is available from persons who left the country (or are co-insured with parents/partner, or are deceased).

Chart 1 shows, as an example, the labour market performance of all diploma graduates of the University of Graz (i.e. all fields) who have graduated during winter term 2003/04. These are 563 persons. The time of graduation is indicated by the red vertical line (end of the term, March 2004). The chart shows the labour market status four years before graduation till five years after graduation in steps of two months. However, not all graduates left the University after graduation. This is indicated by the black line with diamonds, showing that one year after graduation around 30% of the graduates were still enrolled at the University, and five years after the first degree around 10% were still studying. The black line with boxes shows the proportion of the graduates having finished another degree (mostly, but not always, a doctoral degree). This share amounts to 10% five years after graduation.

In general, the chart shows that during studying, around 30-50% of the students were integrated into the labour market, however, half of them with only a marginal employment. Peaks are visible during holidays. After graduation, the red horizontal line, indicating integration into the labour market, increases to around 80% (8 months after graduation), shrinks to 70% (around 1 year after graduation) and increases again to around 85% (3-5 years after graduation). Hence, we see a peak during the first year after graduation and a dent in the second year. However, this peak is only caused by graduates from certain fields of study and has field specific reasons we will refer to further below.

Between 2% and 4% of the graduates are officially registered as unemployed during the first months after graduation. This ratio reaches a peak of 7% at 16 months after graduation, shrinking to around 3-4% from months 20 onwards. In general, unemployment of graduates is quite low in Austria, namely between 2% and 4%. However, it should be kept in mind that about 20% (after graduation) and 10% (three years after graduation onwards) of the graduates have either a special status (e.g. pension, military service) or no data is available from them. Around graduation day, no data is mainly available because of co-insurance with the parents (e.g. those students continuing to study), later on, "no data" is mainly caused by graduates having left the country. Five years after graduation, one can sum up, that 84% are integrated into the labour market, 10% are out of labour force for several reasons (from unemployment till pension) and from 6% no data is available. However, 11% are still studying and around 10% gained a second degree meanwhile.

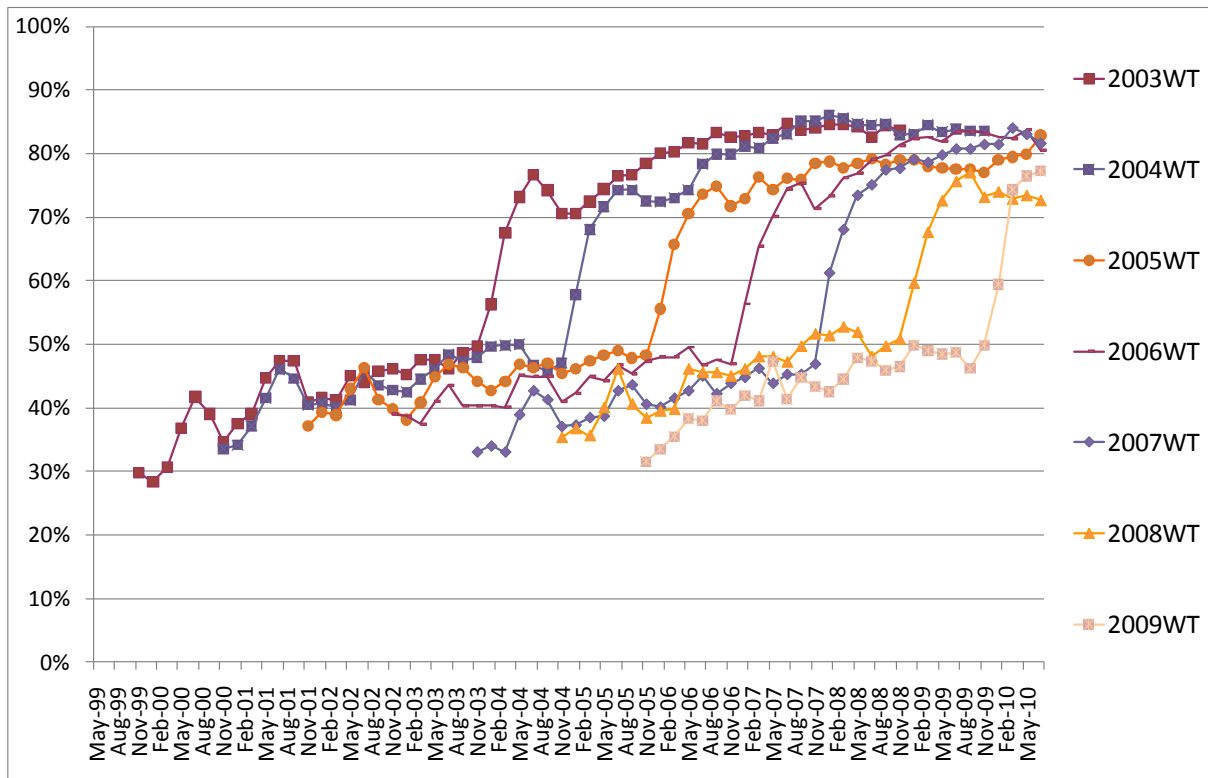
**Chart 1: Labour market status**  
**Graduates of diploma programmes, winter term 2003/04, all fields**



Source: Unger et al., AbsolventInnen-Monitoring Univ. Graz, 2011.

Chart 2 shows the curve for labour market integration for all cohorts of graduates between 2003 and 2009. Indicated is the labour market performance for each quarter. The line of the first cohort is identical with the red horizontal line in Chart 1. In nearly all cohorts, we see the same pattern: a quick integration reaching a peak around 8 months after graduation, a dent at around 12-15 months, followed by an increase later on. However, some differences between the cohorts are noticeable: the cohort graduating 2005/06 shows a mid-term integration into the labour market which is around 10%-points lower than for other cohorts, the dent is not visible with the cohort graduating 2007/08, and the cohort 2008/09 seems not to recover quickly from the usual dent 15 months after graduation. At least the last two phenomenon can be explained by the overall economic performance, which was in a boom phase in 2008 (hence no dent for the 2007/08 cohort) and in recession 2009/10 (hence no quick recovery from the dent for the 2008/09 cohort).

**Chart 2: Labour market integration of different cohorts over time**  
**Graduates of diploma programmes, winter term 2003/04 – 2009/10, all fields**

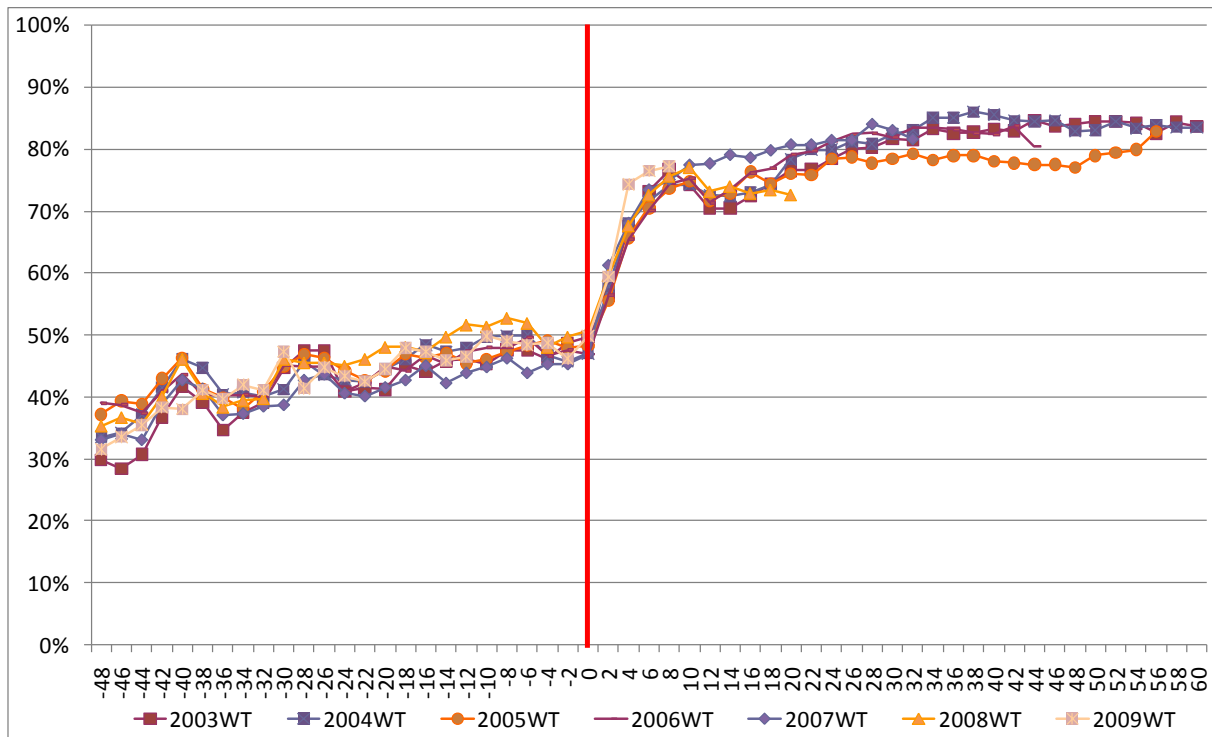


Source: Unger et al., AbsolventInnen-Monitoring Univ. Graz, 2011.

In the next step, we regard all those cohorts (2003/04 till 2009/10) together, to increase the number of cases enabling us to look at subgroups of students by gender or field of study. Furthermore, this “average” performance picture of five cohorts flattens the seasonal economic effects, allowing a stricter focus on effects caused by the respective subgroup. We name this the “relative perspective”, because we consider the date of graduation as month 0 and regard all other points in time relatively to this 0-point. For example, month 12 indicates a year after graduation, which can actually be spring 2004 or 2005 or 2006 and so on, but it is always 12 months after the time of graduation. Hence in the next charts, the different cohorts as shown in Chart 2 are “pushed together” from right to left till they overlap at the point of each cohort’s graduation, which is regarded as month 0. This picture is shown in Chart 3. The time axis is now numbered in months relatively to the date of graduation, from -48 till +60 months. However, it is important to notice, that the number of cases shrinks after graduation, because not all cohorts can already be covered for the full period. Hence, in some subgroups, the low number of cases four or five years after graduation should cause a cautious interpretation of the data, even if only data containing at least 30 cases is plotted. Chart 3 shows also the different performances of the cohorts after graduation quite well.



**Chart 3: Labour market integration of different cohorts over time, “relative perspective”  
Graduates of diploma programmes, winter term 2003/04 – 2009/10, all fields**



Source: Unger et al., AbsolventInnen-Monitoring Univ. Graz, 2011.

### 3.1 Labour market status by field of study (examples)

In this chapter, we focus on four different fields of study, namely Pharmacy, Biology, Law and German Literature. These fields have been chosen, because on the one hand their pattern of integration into the labour market differs widely and on the other hand, because the number of graduates in these fields is high enough for sound conclusions. The following charts are simplifications of Chart 1, showing only the aggregated integration into the labour market without showing the different statuses. Because curricula and content of studies change over time, we combined only five cohorts, namely graduates from winter term 2004/05 till 2008/09. Again, we cover only diploma graduates; however, some of them continue studying after graduation. The first line of the X-Axis indicates the months relatively to the time of graduation; the second line indicates the number of cases covered.

The four selected fields of study show very different patterns of labour market integration: Pharmacy is a field, where most of the graduates are very quickly integrated into the labour market. Integration reaches 94% one year after graduation, followed by a small dent and a more or less firm ratio between 90% and 95%. A few graduates left the country; hence, these 95% indicate roughly full employment. Law on the other hand, is mainly responsible for the overall peak one year after graduation, followed by a dent in the second year. Law graduates have the right to do an internship at a court of justice, which is obligatory for most of the judicial professions. This internship takes nine months and trainees earn around 1.300€/months, that's why they are regarded as integrated into the labour market. Law graduates are a very large group of recent diploma graduates and hence dominate the overall picture of the University as shown in Chart 1. The dent in the picture of law graduates might also be caused by a comparatively high ratio of graduates continuing their studies.



However, on the other side, the unemployment ratio of law graduates is at this time the highest of all major subjects.

A similar group (not shown in charts) are teachers. Graduates of a teacher training have to do an internship in a school, which takes one year, but starts usually only in September. Hence, depending on the time of graduation, these graduates may face a gap in training of several months. The result in our charts is a somehow flattened peak and dent pattern, if regarded *relatively* to the time of graduation.<sup>8</sup>

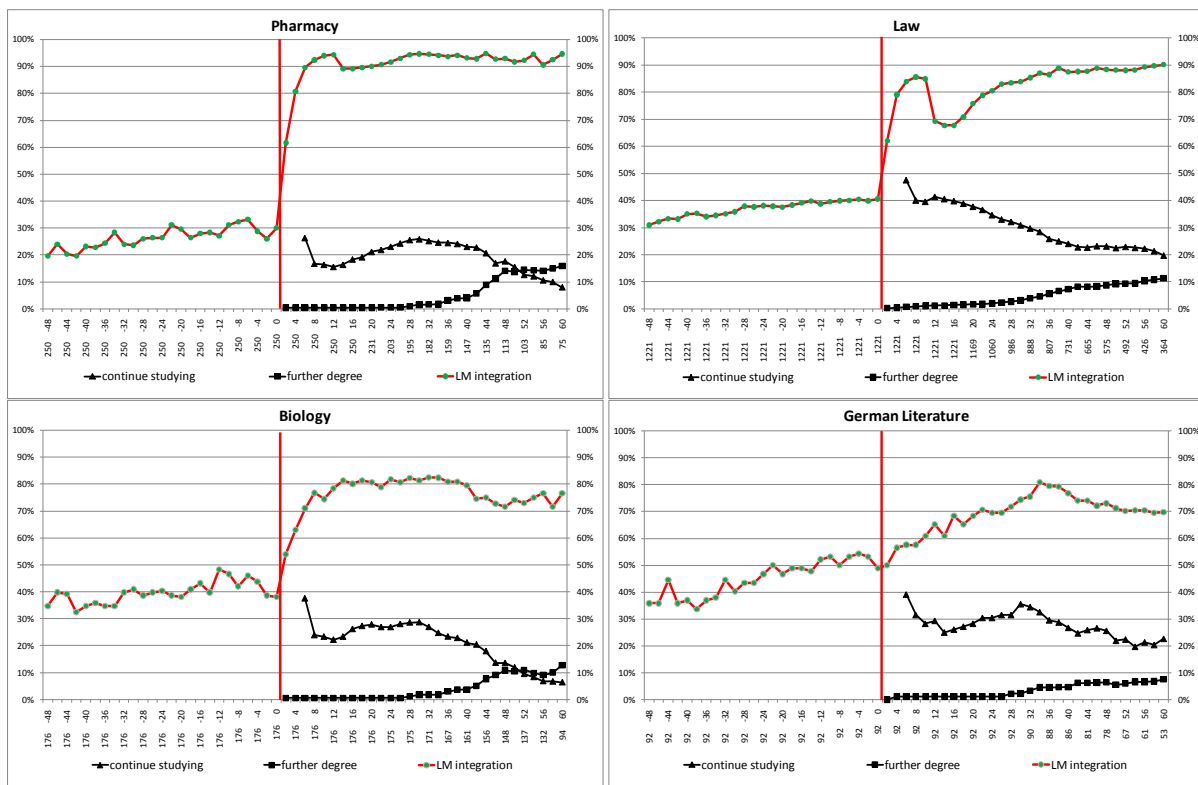
Graduates of Biology on the other hand show a rather stable and quick integration into the labour market during the first months after graduation. Between the first and the third year after graduation, around 80% of the graduates are integrated into the labour market. However, the noticeable issue regarding the pattern of Biology is shrinking labour market integration after three years of graduation by around 10%-points. As many of the graduates in this field are females, the proportion on maternity leave is quite high during this period. However, in contrast to other fields, many of the graduates are nowhere employed when being on maternity leave. So far, our data does not cover a period long enough to say, if they will re-integrate to work after a certain period. One of the reasons for this pattern could be that a remarkably high number of graduates stay as a research assistant at the University (with or without continuation of studying). However, many of the research projects in this field last several years. It might be, that a lot of temporary contracts in this area are not prolonged, causing a raise in unemployment or out of labour force around three years after graduation.

Another very interesting group are graduates of German literature as an example of a larger group of graduates in Humanities. They seem to integrate quite slowly into the labour market, reaching a peak of around 80% nearly three years after graduation. Similarly to the Biologists, the ratio of working graduates shrinks after the peak down to 70%. However, in general, the labour market performance of these graduates in Humanities is not remarkably lower than that of graduates in other fields, taking into account the high share of graduates continue studying after graduation.

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<sup>8</sup> Another reason for not showing graduates of teaching here is that they are splitted over many disciplines; hence the number of cases is in most cases too small for further analysis.

**Chart 4: Labour market integration by field of study, “relative perspective”  
Graduates of diploma programmes, winter term 2004/05 – 2008/09**



Source: Unger et al., AbsolventInnen-Monitoring Univ. Graz, 2011.

## 4 Some conclusions for graduate surveys

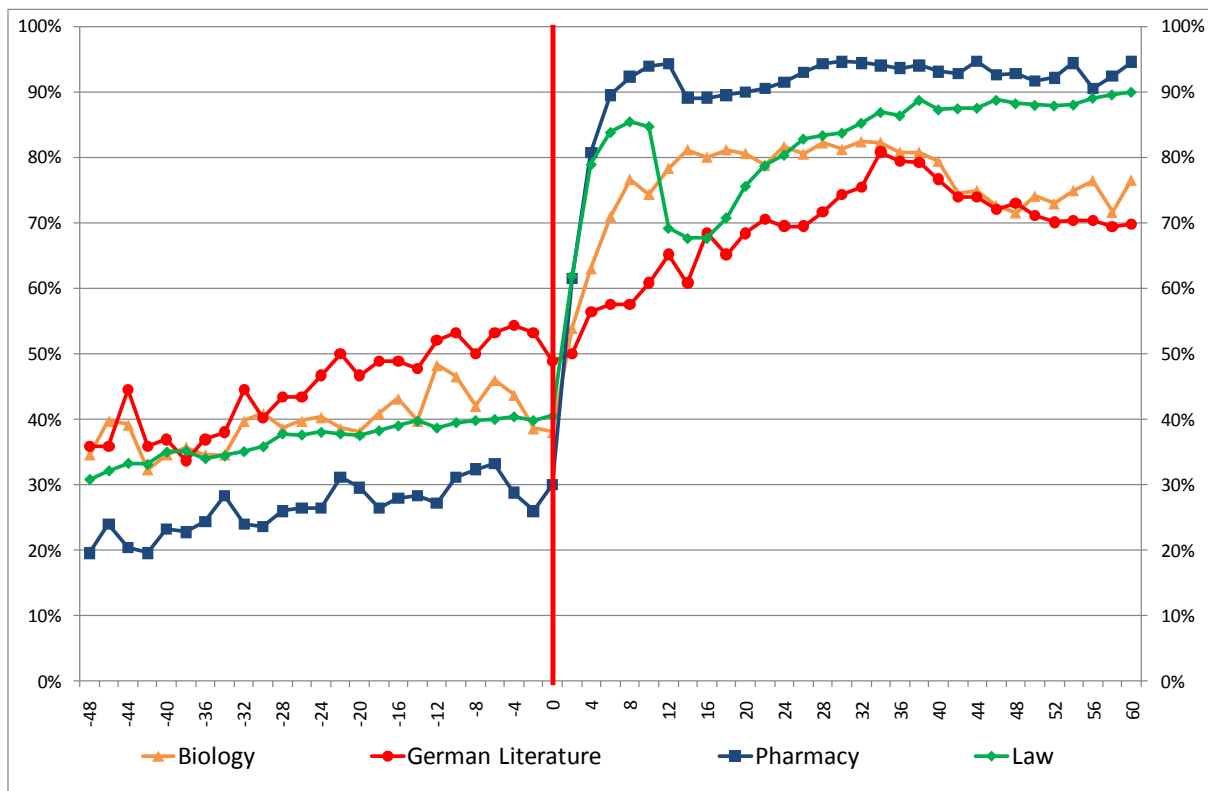
The short examples in the previous chapter show clearly, that performance on the labour market of University graduates depends strongly on at least the following facts:

- **Cohort of graduation.** The time of graduation within an economic cycle resulted on the Austrian labour market (which in general is a rather good one for graduates) in a deviation of around 10%, depending if the graduation took place during a boom or a recession.
- **The field of study.** Graduates of different fields of study show very different performance on the labour market during the first years after graduation. Sometimes this might be influenced by regulations (such as an obligatory further training outside the university), but in any case, the way of integration into the labour market takes place differs widely. Chart 5 below sums this up by showing all our four examples in one chart.
- **Continuation of studies.** In different fields of study, a different share of graduates continues studying. This might be caused by the demand of the labour market, either because the demand is for higher qualifications (doctorate, PhD) or because there is a small demand for graduates at all and while looking for a job, graduates decide to continue studying. Moreover, this might be an Austrian speciality to a certain degree due to the mostly still completely free access to studies. We observe not only consecutive studies, but several diploma graduates continue e.g. with a Bachelor or Bachelor graduates starting a second bachelor programme instead of continuing with a Master.

However, at least the share of graduates continuing with a consecutive programme will differ in other countries as well.

- **Point in time of observation.** Research on graduates is mostly based on a cut-off day or a short cut-off period. However, at whatever point in time one looks on Chart 5, one receives completely different results – usually without knowing anything about the performance shortly before or after the cut-off period when common research methods are being used. Moreover, that is not only a matter of a quantitative indicator like “integration into the labour market”, but it will have an influence on all issues usually covered in graduate research. At different points in time, i.e. at different stages of the cohorts’ labour market integration, the graduates (and on average the whole cohort) will provide different answers on questions like time span between graduation and first job (if an obligatory internship is regarded as a first job at all), job application behaviour, retrospective evaluation of the competencies learned during studying, income, precarious jobs, and so on.

**Chart 5: Labour market integration by field of study, “relative perspective”  
Graduates of diploma programmes, winter term 2004/05 – 2008/09**



Source: Unger et al., AbsolventInnen-Monitoring Univ. Graz, 2011.

In general, there are three big advantages of doing graduate research with such an administrative data as presented exemplary in this paper:

- **Full coverage.** All graduates staying in the country are covered by this research. In graduate surveys, one never knows if e.g. the most successful graduates are overrepresented or if, in contrast, the most discontent graduates are overrepresented because they want to communicate their anger about their studies. Only a very good non-response analysis could let on about that dilemma. However, such a non-response analysis is very seldom done.

- **Long term tracking.** Once matched with the social security data, we can track the graduates' performance over their life-time. Such long-term studies would only be possible with graduate surveys, if addresses are continuously updated. However, in most cases, this is very difficult to achieve.
- **"Correct" data.** The database collects all information on a daily basis. Hence, the duration of all events (e.g. employment, unemployment, and maternity leave) can be calculated exactly. In a retrospective survey, graduates may over- or underestimate the duration of certain events or even "forget" some events at all. Moreover, the database contains income data in the form used by the tax and the social security system. In contrast, income is very difficult to survey, on the one hand because its dealing with sensitive privacy issues, on the other hand, because respondents might not know their real income yet at the time of the survey or might not remember it if asked for the past. In addition, income does not equal income, if one considers different ways of calculating it for employees and self-employed persons, in- or excluding bonuses, gross or net, and so on and apart from social transfers which could be considered as income as well. It is very difficult to include all these "specialities" in a survey and seldom tried at all.

Apart from these advantages, there are also several issues which cannot be researched with this instrument. Especially the following information is not covered:

- Further education obtained from other institutes then the one in research.
- Explanations for any behaviour observable in the data base. E.g. explanations for gaps, like: Was a graduate actually looking for a job or was he/she travelling around the world?
- Subjective information by the graduates, like opinions about their job situation or retrospective assessment of their studies or evaluation of the job situation in their current position for future graduates of his/her studies and many more.

The conclusion of these advantages and disadvantages is that we will obtain best results by using both methods, tracking by administrative data and surveying graduates. An optimal research setting would furthermore allow matching of survey and administrative data. However, this is a serious privacy issue and needs very special settings to ensure anonymity. Moreover, as mentioned in the beginning, such administrative data is not available in many countries. Hence, in any case, we still need to do graduate research by surveying them.

But, if graduates are surveyed, one should carefully consider what period after graduation is best for surveying them. However, if one looks back on Chart 5, we can say that at any time, e.g. six months, a year, and three or five years after graduation, we would catch graduates from different fields in different stages of their cohorts' performance line. This has to be seriously taken into account when surveying graduates and interpreting the data. The share of different fields in the sample will then have a big influence on the overall results. Another conclusion from our research is that detailed analysis on subject level should be a "must". Following from that, sample sizes must be chosen big enough to allow for such detailed analysis – if the school under research produces enough graduates at all and the return rate is high enough allowing detailed and still statistically valid analysis.

## 5 Use of results by the University

The results coming from the Institute for Advanced Studies were edited by the office for “Performance and Quality Management” for all study fields and the University in total, then the reports are deployed to the study-management (paper based, the integration into the electronic data warehouse is planned).

The University of Graz uses the results at two different levels:

- Strategic decisions
- Curricula and service improvement

At the strategic level, the results are part of the information package for strategic decisions, discussions about the study portfolio and profile of subjects. It is also planned to initiate debates between the University, graduates and employers to improve the curriculum contents.

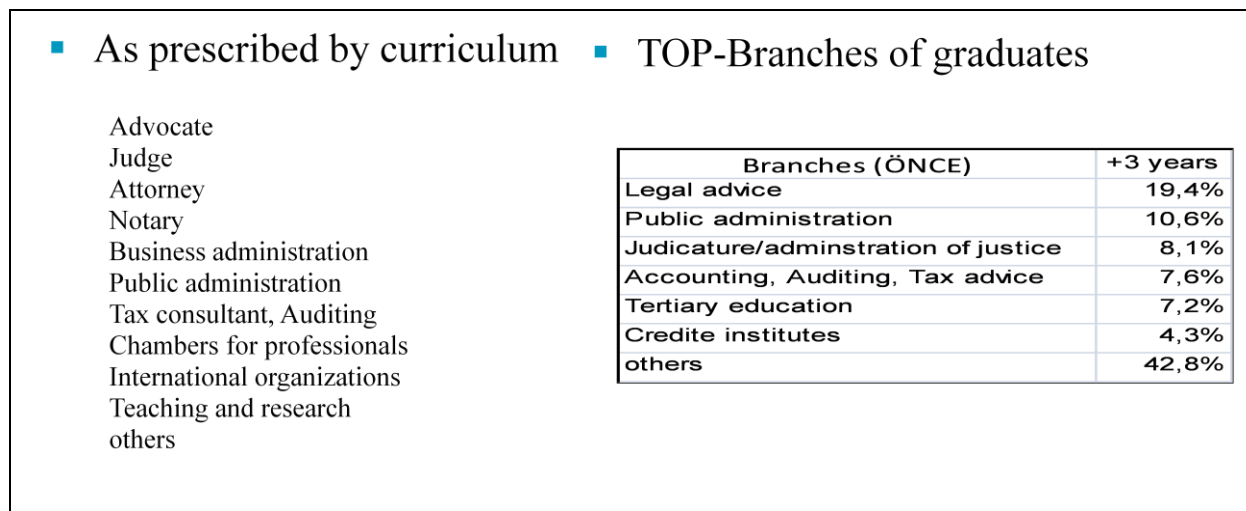
The tracking offers a great value for the curriculum development. For example, it is now possible to compare the targeted branches of a given curriculum with the real situation. All curricula of the University of Graz prescribe potential branches and/or professions for graduates relative to the contents of the study programme. The data from the social security system contain also information about business branches where graduates work as employees. The classification of branches is the ÖNACE-classification from the federal statistics agency of Austria<sup>9</sup>. The about 1200 branches were aggregated at the 4-digit level NACE-Classification. The status of branches is reported 6 month before graduation, at graduation and 6, 12, 18, 24, 36, 48 and 60 month after graduation. Branches with a share under 2,5% are summarized as “others”. For further discussions we focus on the status 24 or 36 month after graduation, because at that time the share of the branches are more stabile and they seem similar to the study content than in earlier stages, when “student job branches” are more dominant (like restaurants).

Chart 6 shows the situation for the law graduates 36 month after graduation. On the left side are the professions or branches listed as prescribed in the curriculum (in order of nomination) on the right side the six most frequent branches. Although the description in the curriculum don’t mean branches in the sense of the classification, a comparison seems possible. The most expected professions are in the classical administration of justice and legal advice (advocates), but the share of these branches in total is about 27,5%. On the other hand, the in the curriculum so called “other branches and profession” have a share of 42,8%. Hence, it may be that the most common branches and their needs are not in the focus of curriculum development. In the case of Business Administration e.g., the third frequent branch is “tertiary education” with a share of 8%, but this profession is not mentioned as potential branch for graduates in the curriculum.

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<sup>9</sup> <http://www.statistik.at/KDBWeb/kdb.do?FAM=WZWEIG&&KDBtoken=null>

**Chart 6: Profile of branches, graduates of law, cohort 2004/05 – 2008/09**



Sources: University of Graz, Studieninfokarte, 2010.

Unger et al., AbsolventInnen-Monitoring Univ. Graz, 2011.

Hence, the contents and competences of a curriculum can be adapted to common branches of the graduates and new labour market requirements using these results from the graduate tracking.

Another purpose concerns the consulting strategy of the career service office and the job agencies. These two institutions started some intensive workshops these days to develop new programs. At least some ideas came up to improve the student information at the beginning of a study.

## 5.1 Additional information required

Although the new graduate tracking delivers very interesting and useful information about the performance of graduates, there are some recommendations for the future. Summarizing the first discussions with the managers of curricula, some questions pop up more often and couldn't be answered by these data:

- In which position do the graduates work? Are these positions adequate to the study?
- Are the qualitative contents of the curriculum right?
- Are the acquired competences useful for the job?
- Some aspects may be interesting also 10 years after graduation (position, income).
- What are the reasons for some unexpected performances? Need for qualitative surveys in some specific cases

Doctorate studies are a special case. The needed information for the management is different from the tracking data: research positions held, positions abroad, professorships (long run). On the other hand, it seems that some graduates complete a doctorate for professional reasons (lifelong learning!) and could show other patterns in the job market as researchers do.

At the strategic level exist high interest in benchmark the results with other universities in Austria and international. A first comparison with similar data from the University of Vienna indicates remarkable differences in the branches and job status in a given study. But for a deeper benchmark, the methodology is too different for valid results.

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