

# Employment condition of Graduates

**2006 Experimental Survey**

**First level Graduates from the class of 2005**

This experimental survey of employment conditions among first-level graduates interviewed one year on from graduation is the result of the collaboration work among the following universities: Bari, Basilicata, Bologna, Bolzano, Calabria, Camerino, Cassino, Castellanza, Catania, Catanzaro, Chieti-Pescara, Ferrara, Florence, Foggia, Genoa, Lecce, Messina, Milan-IULM, Modena and Reggio Emilia, Molise, Padua, Parma, Perugia, Eastern Piedmont, Rome-La Sapienza, Rome-LUMSA, Rome-Tre, Salerno, Sassari, Siena, Turin, Turin-Polytechnic, Trento, Trieste, Tuscia, Udine, Valle d'Aosta, Venice-Ca' Foscari, Venice-IUAV and Verona.

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# AFTER THE FIRST LEVEL DEGREE: AN EXPERIMENTAL SURVEY OF GRADUATES FROM THE CLASS OF 2005

by Andrea Cammelli

## 1. CHARACTERISTICS OF THE SURVEY

*The survey of employment and further training conditions involved all first-level degree holders from the whole calendar year 2005. These comprise almost 80 thousand graduates from 41 Italian universities. The Research Project - the first in this sector to cover all the graduates within one solar year – was initiated with the aim of monitoring the progress of the reform and the labour market's reaction. Special attention was paid to the work and training experiences gained by graduates in the first year after attainment of university degree. The participation of graduates turned out to be extremely high, the return rate exceeding 86 percent.*

The first survey of the employment conditions of graduates from the class of 2005 in the universities members of the AlmaLaurea Consortium involved almost 80 thousand graduates about one year on from graduation. The innovativeness of the investigation – which, as described thereafter, was conducted at three different times in order to guarantee that the same amount of time had elapsed between graduation and interview – is the result of an experimentation entailing a mixed surveying technique (CATI and CAWI) aimed to monitor larger cohorts of graduates with a progressively increasing number of individuals, while reducing costs at the same time. The experiment was performed without any additional charge for the consortium members.

The survey still has a very experimental nature and was conducted to provide information to the relevant Ministry –

especially in the light of what is underway in the university system, which is focussed on the reorganization of degree course groupings – as well as to meet the requests made by universities, especially the smaller ones, that have long asked for clear documentation, even at degree course level, which is not readily available due to the small populations of graduates from the summer session alone<sup>1</sup>.

The survey involved 41 of the current universities that are members of the Consortium – including, for the first time, Camerino, Castellanza-LIUC, Lecce, Tuscia and Valle d'Aosta.

More precisely, on the whole, the survey involved 79,761 graduates from the class of 2005, broken down as follows among the three degree sessions: 23,799 from the winter session (January to April), 17,013 from the summer session (May to August) and 38,949 from the autumn session (September to December). This is still an extremely heterogeneous cohort. Indeed, as further explained below and repeatedly underpinned in recent AlmaLaurea surveys, only a small part of the cohort can be considered to be entirely comprised of the “children of the reform”, i.e. those who fully and exclusively completed the course prescribed to gain the first level degree.

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<sup>1</sup> A number of interesting considerations on the reasons why the survey was limited to the graduates from the summer session alone can be found in A. Cammelli, IX rapporto sulla condizione occupazionale dei laureati, Il Mulino, Bologna (available in English at <http://www.almalaurea.it/eng/universita/occupazione/IX> Survey of graduate employment).

### **1.1 Survey methodology**

To guarantee the maximum possible level of comparability of the collected data, graduates were interviewed after the same amount of time had elapsed since attainment of the qualification. The analysis was therefore conducted with three different survey periods, varying according to the different graduation session; therefore, in June and July of 2006 graduates from the winter session were interviewed, while those from the summer session were interviewed from September to November and those from the autumn session in January and February of 2007.

Graduates from the summer session were interviewed by telephone with the CATI methodology (*Computer Assisted Telephone Interview*), in the framework of the traditional survey of employment conditions of graduates who are interviewed at one, three and five years from graduation. Those from the other two sessions were interviewed with a mixed methodology involving both the CAWI (*Computer Assisted Web Interview*) and the CATI methods<sup>2</sup>. In particular, all graduates with an email address (82 percent) were contacted via email and invited to fill in the questionnaire available on the AlmaLaurea website. The survey procedure also envisaged that a reminder be sent one week on. Subsequently, all those who had not compiled the online questionnaire were contacted by telephone in order to raise the return rate up to AlmaLaurea's usual standards.

In the light of the elements above it can be inferred that graduates from the summer session were asked to fill in a wide-ranging and articulate questionnaire, consisting of a

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2 As the universities of Castellanza-LIUC, Tuscia and Valle d'Aosta have only recently become members of the AlmaLaurea Consortium, they were subjected to the CATI methodology alone.

large number of questions. Conversely, for the others, in order to make the questionnaire more attractive and suitable for the web procedure, an abridged version was prepared, which managed, however, to collect the main information items on employment and further training conditions.

### **1.2 Extremely high return rate: 86 percent**

In spite of the double survey methodology, or perhaps just because of this specific feature, the return rate achieved in the three survey phases was very high, totalling 86.4 percent overall. The total return rate is obviously diversified according to the way in which the questionnaire was presented. Whereas the response rate for graduates contacted by telephone was 83 percent, only 37 percent of those contacted with the CAWI methodology responded (although this is still an exceptionally high rate). For these latter it was necessary to resort to the telephone interview methodology to raise this percentage. The role played by this second type of contact (CATI) was crucial, since it retrieved 82 percent of graduates who had not responded to the web-based survey.

It is however plausible that the very high return rate, as already pointed out in previous AlmaLaurea reports, is a result of the interest elicited among graduates, of the accuracy in conducting the survey and the constant update of the database.

### **1.3 Main characteristics of post-reform graduates**

The assessment of the characteristics of post-reform graduates is a prerequisite for an articulate analysis of employment-related outcomes. Indeed, graduates under the new system show structural features and educational performances that very often differ profoundly from those of their counterparts from the old system, who have so far

deeply influenced the national situation. Such diversities can also be found among first level graduates, given that this cohort includes those who completed their studies entirely and exclusively under the new system -defined in this volume as "pure graduates" - and those who achieved their qualification completing a course of studies initiated under the previous system – defined as "hybrid graduates". These differences affect significantly the employment and further training conditions of the diverse cohorts. More specifically, this is the case for the earliest post-reform "pure" graduates, whose performances are the best in absolute terms just because they were the "first" to achieve this degree.

Out of the generation of post-reform graduates under consideration, i.e. those from the class of 2005, "pure" graduates amount to 47,887 and represent a considerable share - 72 percent – of first level degree holders. Consequently, 18,759 graduates come from the old system.<sup>3</sup>

"Pure" graduates are significantly more numerous particularly in the law grouping (85 percent), and the political and social sciences and languages groupings (both with a 75 percent). Conversely, "hybrid" graduates are considerably more numerous in the medical, engineering, teaching, chemistry and pharmacology, sciences and agriculture groupings, with percentage values ranging from 31 to 40 percent.

As far as the medical grouping is concerned (this group being comprised of graduates from degree courses in the

healthcare and nursing professions, obstetrics, rehabilitation and prevention), it should be pointed out that these are people with a higher-than-average age, who often achieved their first level degree having previously obtained a university diploma. Furthermore, in general, these graduates were already working at graduation, even though they did not continue in the same job after completion of their three-year degree. Employment outcomes for this cohort, given its peculiar features, should therefore be analysed taking into account such considerations and keeping in mind that the overall employment results too are affected by this cohort (which totals 13.5 percent of the overall number of graduates).

As expected in the light of the reflections above, indicators show that first level graduates achieved high performances especially with reference time-to-graduation. Indeed, over 50 percent of first level degree-holders completed their course within the allocated time-to-graduation, even though a significant share (28 percent) completed their studies within one year of expiration of the prescribed degree completion time. This latter group amounts to 34 percent of "pure" graduates and 18 percent of their "hybrid" equivalents. Among these, 62 percent completed their degrees at least two years after prescription time. Consequently, average age at graduation is considerably different between the two cohorts – 24 years for "pure" graduates vis-à-vis 28 for their "hybrid" equivalents.

As regards degree grades, "pure" graduates performed very well, almost one-fifth of them achieving maximum grades as against 12 percent of their "hybrid" colleagues. The average mark is 103 out of 110 among "pure" graduates and 100 among "hybrid" degree holders.

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<sup>3</sup> These considerations do not apply to 16.4 percent of graduates whose university study experience could not be traced, given that information on their previous university experiences was not available. As a result, it was not possible to draw a distinction between "pure" and "hybrid" cohorts.

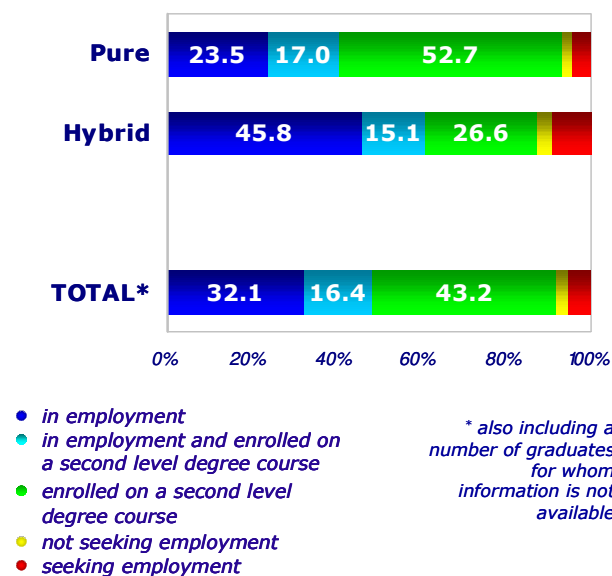
## 2. EMPLOYMENT AND FURTHER TRAINING CONDITIONS AMONG FIRST LEVEL GRADUATES

One year on from degree completion, a high number of graduates choose to pursue postgraduate training enrolling on a second level degree course, and this is particularly the case with “pure” graduates, who are the very children of the reform.

In comparison with pre-reform graduates, gender differences are very small with reference to both entry in the labour market and pursuance of studies with a master’s degree course. Conversely, as far as the geographical location is concerned, significant differences emerge from the very first year after completion of the three-year degree, thus confirming that degree-holders have a different approach to the labour market.

One year on from completion of the bachelor’s degree, first level graduates show a 48.5 percent employment rate. Alongside a 32 percent of graduates who are exclusively working, there is a significant share of three-year degree holders – 16.4 percent – who have the ambitious goal of combining study and work. Similarly, 43 percent of first level degree holders are totally devoted to the completion of a second level degree. Finally, only as few as 5 first level graduates out of one hundred are not working and are not enrolled on a second level degree, declaring that they are seeking a job. The remaining 3 percent are graduates who are not working or seeking employment, nor are they enrolled on a second level degree, generally because they are involved in different training activities.

Figure. 1 First level graduates: employment and further training conditions at one year by “pure”/“hybrid” populations



The overall employment outcomes are however deeply influenced by the unevenness of the post-reform graduate cohort (Figure 1); “pure” graduates are generally more inclined to go on to a second level degree than their “hybrid” counterparts. Indeed, 70 percent of “pure” first level graduates enrol on a master-level degree course as against 42 percent of their “hybrid” equivalents. Consequently, these latter are more frequently in employment (61 percent) than their “pure” counterparts (40 percent). In addition, also the share of those who are not working nor enrolled on a second level degree and seeking employment is larger among “hybrid” graduates (9 percent) than among their “pure” equivalents (4 percent).

## 2.1 Degree course groupings<sup>4</sup>

Employment and educational conditions one year on from graduation are considerably diversified among the different courses of studies. First level graduates in the technical-scientific area<sup>5</sup> have an employment rate of 53 percent, thus exceeding by eight percentage points that of their colleagues in the human and social sciences area (45 percent). This share includes both those graduates who are only working (42 and 25 percent, respectively) and those who combine study and work (11 and 20 percent, respectively). The rest are for the vast majority engaged in full-time studying activity, therefore they do not carry out any work activity and are enrolled on a second level degree course (40 and 45 percent).

More specifically (*Figure 2*), the vast majority of graduates in the medical grouping are already employed one year on from graduation (88 percent are working and, out of these, 3.5 percent are working and studying). The weight of this cohort (totalling 13.5 percent, as underlined above) also conditions the overall employment results. If, for example, this cohort were excluded from the analysis,

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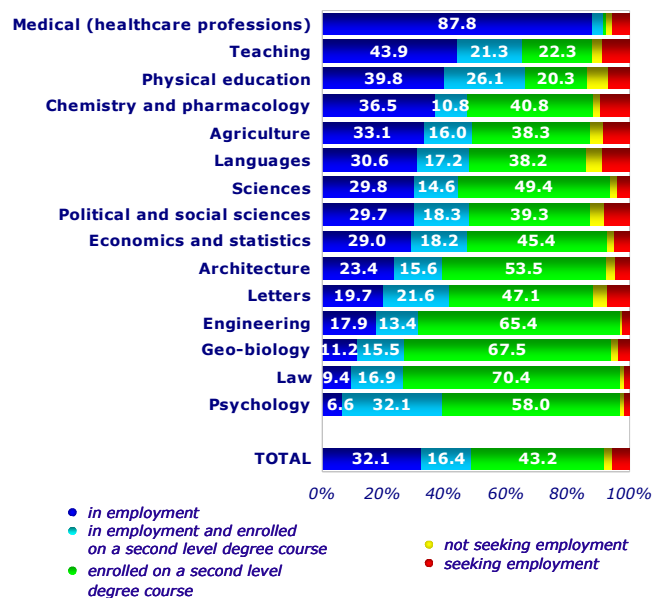
<sup>4</sup> The classification utilized here is the one adopted by the Italian Ministry for University and Research (MiUR) and the Italian Statistical Board (ISTAT).

<sup>5</sup> Following the breakdown made by Catalano and Figà Talamanca, the technical-scientific area includes the following degree courses: agriculture, architecture, chemistry and pharmacology, physical education, geo-biology, engineering, agriculture, medicine and sciences. Whereas the area of human and social sciences includes the following groupings: economics and statistics, law, teaching, letters, languages, political and social sciences and psychology. For further studies, cf G. Catalano and A. Figà Talamanca, *Eurostudent. Le condizioni di vita e di studio degli studenti universitari italiani*, Bologna, il Mulino, 2002.

the total employment rate would fall to 42 percent (18 percent combining study and work). Similarly, the share of first level graduates going on to a second level degree course would rise to 67 percent. As previously explained, the medical grouping consists of graduates in the healthcare professions, who obtained their qualification while already carrying out a working activity. For fairly similar reasons, the employment outcomes of graduates in the teaching group are also very good, their employment rate amounting to 65 percent (out of these, 21 percent are working and at the same time enrolled on a second level degree course). The degree course groupings with the higher numbers of first level graduates going on to a second level degree are the psychology grouping (90 percent, out of which 32 percent combine study and work), the law grouping (87 percent, with 17 percent studying and working) and the geo-biology grouping (83 percent, with 15.5 percent combining study and work).

Unlike what might have been expected, even among “pure graduates”, there is a significant share of those who, after obtaining their first level degree, continue in the job held prior to graduation. This share amounts to 35 percent of graduates (especially in the law, psychology and physical education groups); these are mostly occasional and seasonal jobs held during university studies and continued also after completion of the first level degree. The share of graduates continuing in the same job is however lower than what can be observed among “hybrid” graduates (42 percent).

Figure 2 First level graduates: employment and further training conditions one year on from graduation by degree course grouping



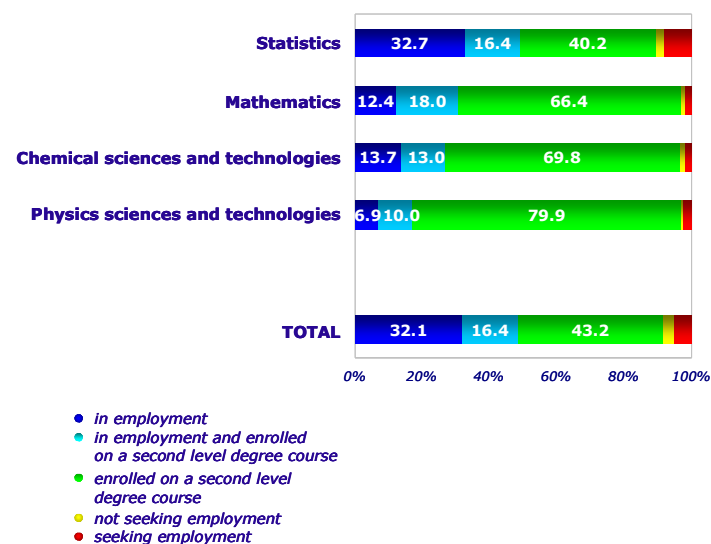
## 2.2 Scientific-area degree courses supported by the Italian Ministry for University and Research (MIUR)<sup>6</sup>

The survey that was carried out resulted in an in-depth assessment of graduates from a number of degree courses (including chemistry, physics and mathematics) that were

<sup>6</sup> For more in-depth information, cf. A. Cammelli, *Le lauree scientifiche e tecnologiche: dall'accesso all'Università alla prova del mercato del lavoro*, available at [www.almalaurea.it/universita/altro/lauree\\_scientifiche](http://www.almalaurea.it/universita/altro/lauree_scientifiche) and S. Ghiselli, *I laureati nel settore chimico: caratteristiche ed esiti occupazionali*, available at [www.almalaurea.it/universita/altro/chimica2006](http://www.almalaurea.it/universita/altro/chimica2006).

involved in specific projects aimed at drawing young people to scientific studies and encourage them to enrol on such degree courses<sup>7</sup>. This is a very topical issue, since in recent years the need has arisen to assess and gain insight into the reasons for what is known as the crisis in the vocation for sciences.

Figure 3 First level graduates employment and further training conditions one year on from graduation in ministry-supported scientific-area degree courses



One year from graduation, continuation of postgraduate training with a second level degree involves in particular graduates from the sciences, physics technologies, mathematics and chemistry groupings

<sup>7</sup> Cf Ministerial Decree of October 23rd 2003, *Fondo per il sostegno dei giovani e per favorire la mobilità degli studenti* e il *Progetto lauree scientifiche* in [www.progettolaureescientifiche.it](http://www.progettolaureescientifiche.it).

(students enrolled on a second level degree are respectively 90, 83 and 84 percent of first level degree holders in each group under consideration). Within these groupings, respectively 10, 18 and 13 percent of graduates succeeded in combining work and study (Figure 3).

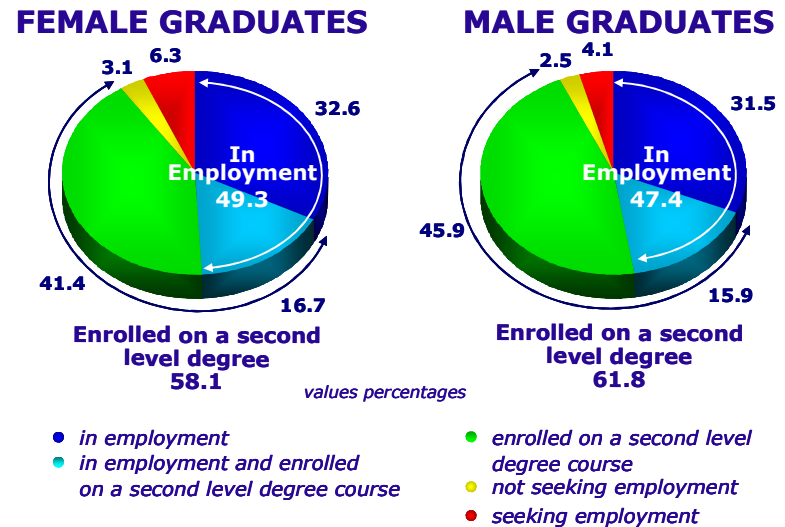
Significantly, fewer graduates from the fourth ministry-supported degree course grouping (i.e. statistics) pursued a second level degree (57 percent of graduates, and 16 out of one hundred managed to combine work and study). Consequently, employment rate at one year from graduation is much higher among graduates in statistics (49 percent) than among their counterparts in mathematics (30 percent), chemical sciences and technologies (27 percent) or physics sciences and technologies (17 percent).

### 2.3 Gender differences

The choices actually made by male and female graduates during the transitional phase of the university reform under consideration do not seem to differ significantly both with reference to graduates' entry into the labour market (31.5 percent of male graduates are only working vis-à-vis 33 percent of women graduates) and regarding pursuance of further studies with a second level degree (those who are exclusively studying are 46 and 41 percent, respectively; Figure 4).

Differences are minimal and trends are not yet well defined: women graduates present with an employment rate which is higher by two percentage points than their male counterparts' (49 versus 47 percent), but are more frequently in search of employment than men (6 females and 4 males out of one hundred). This trend is not consistently confirmed at degree-course grouping level, thus confirming that the current situation is still far from being well defined.

Figure 4 First level graduates: employment and further training conditions at one year by gender



The breakdown between "pure" and "hybrid" graduates shows that women are slightly ahead of men: among "hybrid" graduates, 46 percent of women as against 45 percent of men are only working, whereas among "pure" graduates there is a difference of 4 percentage points (the employment rate being 25 and 21 percent, respectively).

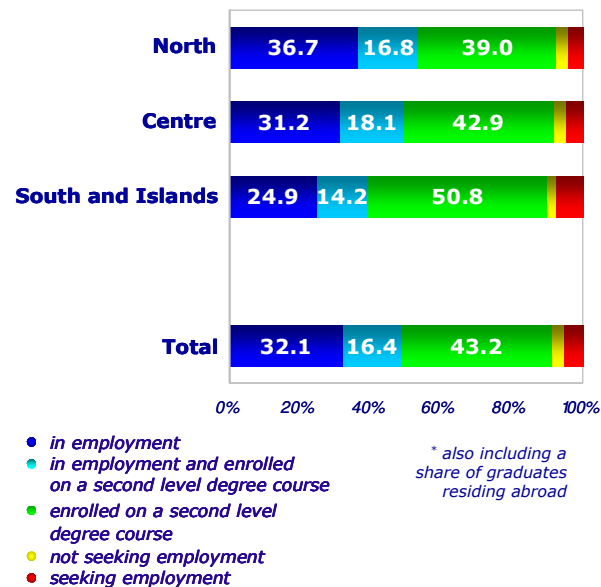
The first level degree would therefore seem to nullify or at least reduce significantly gender differences that had long been observed on pre-reform graduates and further confirmed by all official surveys of the labour market. Doubts arise therefore that the new university system, envisaging courses on two different levels, has postponed the impact with the labour market. If this was to be confirmed, gender differences would emerge again only after completion of the second level degree, which is certainly not desirable.

## 2.4 Differences by geographical area

One year on from completion of the first level degree, differences by geographical area are evident as has always been well known across the whole nation and observed down the years in the AlmaLaurea reports on employment conditions of pre-reform graduates.

The analysis, which was conducted considering the geographical area of residence, regardless of the university where the first level degree was gained, shows that employment rate ranks at 53.5 percent among residents in Northern Italy (17 percent combine work and study), and 39 percent in the South and the islands (14 percent study and work at the same time). Therefore the difference in terms of employment rate exceeds 14 percentage points (Figure 5).

Figure 5 First level graduates: employment and further training conditions at one year by geographical area of residence



It should be pointed out, however, that employment and further training conditions are closely related to work experiences made during university studies and to the inclinations of graduates, that is their intention to pursue further training after the bachelor's level degree. Such conditions are likely to be even more correlated to the graduates' need to go on to postgraduate studies. Indeed, the dynamism of the different local markets conditions the choices made by young people, who implement all the strategies that are necessary in order to increase their opportunities for employment, including enrolment on a master's degree. All these elements play different roles across the nation: in Southern Italy, for example, work activities performed during university are less frequent (the share of graduates working at the time of graduation amounts to 37 percent in Northern Italy as against 24 percent in the South). In addition, partly as a result of difficulties in finding employment, in Southern Italy there is a larger share of graduates who declare that they are willing to pursue postgraduate studies after the first level degree (73 percent vis-à-vis 64 percent in Northern Italy).

It is therefore evident that employment outcomes should be assessed taking into account these important elements and trying as much as possible to place all graduates in the same conditions. Only thus is it possible really to evaluate the actual impact of graduates with the labour market and this latter's attractiveness. By isolating graduates who were not working at the time of graduation and had not expressed their intention to pursue postgraduate training after the bachelor's degree, differences in employment conditions by geographical area become more evident and exceed 22 percentage points, achieving values similar to those obtained in the latest survey of pre-reform graduates at one year from degree completion. 74 percent of residents in the North and 51 percent of residents in the South stated that they were working - in either case the

share of graduates combining work and study is minimal, ranking at 2 to 3 percent. These elements suggest that local labour markets have different impacts and different levels of attractiveness; in-depth studies have enabled us to ascertain that graduates resident in the South who moved to Northern Italy to attend a three-year degree course take on a behavioural pattern towards job seeking strategies that is very similar to that of their colleagues residing in the North, probably because they are supported by wealthier families. The picture that is outlined indicates that there is a brain drain phenomenon within the nation whereby the South is progressively deprived of its best resources

### 3. FURTHER STUDIES <sup>8</sup>

*The supply of postgraduate training directly influences the choices made by first level graduates, who reveal in general a propensity to pursue postgraduate training, in particular in order to complete and enrich their education but also as a result of the difficulties in finding their way into the labour market. It is also interesting to notice that there is a high level of consistency between the chosen master's degree courses and the completed first level course since the vast majority of first level graduates are orientated to courses that are considered to be the natural continuation of their first level degrees. And what about those who do not pursue postgraduate studies? Usually, this choice is the result of work-related hindrances (graduates were already working at completion of their bachelor's degrees or subsequently found a job that distracted them from postgraduate studies).*

The choices made by graduates after completion of their bachelor's degrees are influenced by the labour market's level of dynamism and also directly proportional to the increasingly wide range of postgraduate training supply. This includes master's degrees, three-year degrees as well as university and non-university postgraduate training courses and other training activities. Hence the difficulty in outlining a comprehensive and accurate picture.

If university degree courses alone are taken into consideration, what emerges is that at one year from

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<sup>8</sup> For more detailed information, please refer to M. Gallerani, S. Ghiselli, C. Girotti, *Le scelte dopo la laurea di primo livello: i dati dell'indagine ALMALAUREA sulla condizione occupazionale dei laureati*, in Consorzio Interuniversitario ALMALAUREA (edited by), *VIII Profilo dei laureati italiani. I primi figli della riforma*, 2006, op. cit.

completion of the bachelor-level degree, 60 percent of interviewees are enrolled on a master's degree course<sup>9</sup>. This share should be further corrected taking into account those who, after one year only, have already quit their second level degree course (1.7 percent) or those who have already completed it (0.7 percent). These are minimal values, partly originating from specific university study experiences (accreditation of previous training experiences) which do not affect the considerations made in this context.

43 percent of first level degree holders, as previously mentioned, are exclusively devoted to study whereas a significant share attempt to combine study and work (over 16 percent).

#### 3.1 Previous educational background

Pursuance of postgraduate training, as underpinned above, is deeply conditioned by the first level degree course. This is indeed the case for 90 percent of graduates in the psychology grouping, 87 percent of those in the law grouping and 83 percent of their counterparts in the geobiology grouping. Conversely, minimum although significant values are achieved among graduates in the teaching (44 percent) and physical education groupings (46

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<sup>9</sup> Actually this value also includes a very small proportion of students enrolled on a four-year degree course under the old system (totalling 0.6 percent, mostly in the teaching grouping). Finally, an additional equally small share (1.3 percent) should be taken into consideration which is comprised of graduates going on to another first level degree course; this is especially the case among degree holders in the political and social sciences, letters and teaching groupings. The considerations made with reference to the characteristics of second level degree courses do not take into account the share of graduates enrolled on a three- or four-year degree course.

percent). Actually, the absolute minimum (4.5 percent) is found among graduates in the healthcare professions in the medical group, whose specific features are outlined in the previous chapters.

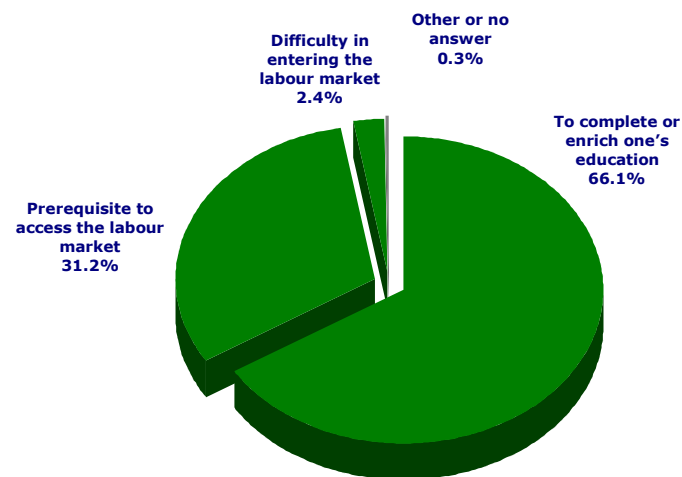
“Hybrid” graduates, who are older than average, as already specified, are less prone to moving on to postgraduate studies in comparison with those who have completed their studies entirely and exclusively under the new system: 42 percent among the former versus 70 percent among the latter. This is the case for all degree course groupings, particularly for law and psychology, where almost all “pure” graduates (94 and 93 percent, respectively) are enrolled on a master’s degree.

This different propensity to pursue postgraduate studies had already become manifest on the eve of graduation, when over 69 percent of “pure” graduates had declared that they intended to enrol on a second level degree, as against 45 percent of their “hybrid” equivalents. Among these latter, at the other end of the scale, one-third had stated that they were not interested in any kind of postgraduate studies (vis-à-vis 16 percent of their “pure” counterparts).

### 3.2 Reasons for pursuing postgraduate studies

The main reason for pursuing postgraduate training with a second level degree is the desire to *complete and enrich one’s education* (66 percent), whilst almost one-third of graduates felt that this was almost a *prerequisite to enter the labour market* (Figure 6). This trend is confirmed in all groups, with the sole exception of the law grouping, even though the desire to improve one’s education is very high among graduates in the medical (87 percent), engineering (76) and scientific (73) groupings. As anticipated, graduates in the law group perceived the master’s degree as a prerequisite to enter the labour market (55 percent).

Figure 6 First level graduates: reasons for enrolling on a second level degree



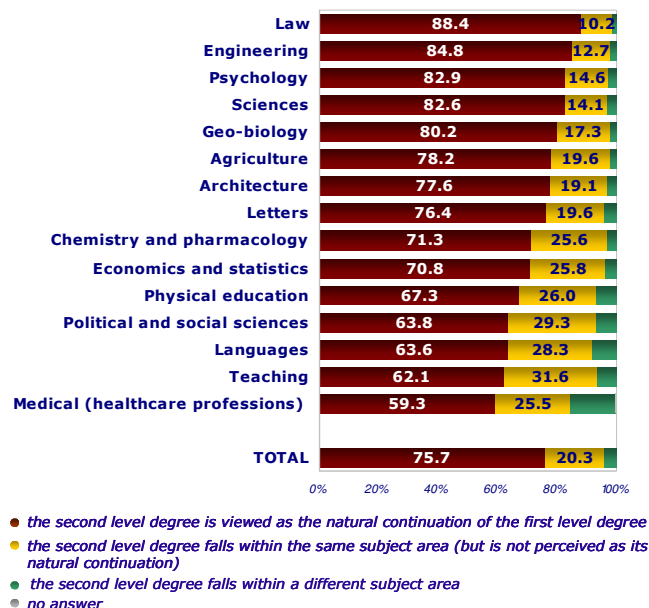
### 3.3 Relevance to first-level degrees

The choice of postgraduate training appeared to be largely consistent with the completed bachelor’s degree (Figure 7), since over three-quarters of graduates chose second level degree courses that were considered to be the natural continuation of their first level degree. Relevance is higher among graduates in the law (88 percent), engineering (85 percent), psychology and sciences groupings (grazing 83 percent). A lower degree of consistency appears in the medical, teaching, languages and social and political sciences groupings, where the share of graduates who believe that the master’s degree is the natural continuation of their first level qualification ranges from 59 to 64 percent.

Additionally, one fifth of graduates enrolled on a course within the same subject area even though they did not

believe that this was the natural follow up to their bachelor's degree. The remaining share (4 percent) chose a different subject area, and this is the case especially for the medical and languages groupings (15 and 8 percent, respectively).

Figure 7 First level graduates: relevance to first level studies by degree course grouping

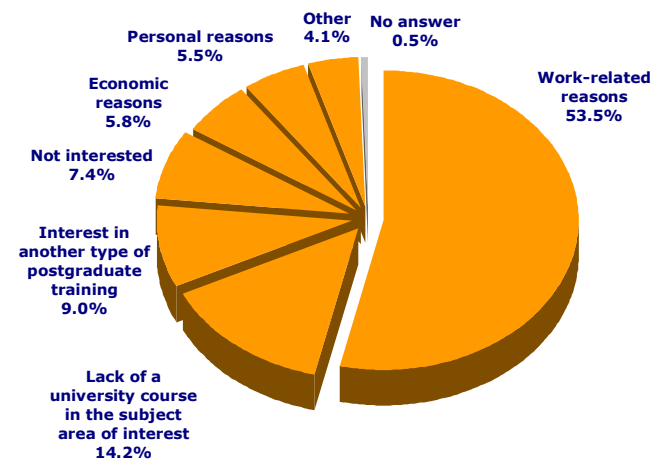


### 3.4 Beyond the first level degree: the reasons for not pursuing postgraduate studies

Thirty-nine graduates out of one-hundred completed their university education with a first level degree. Of these, 4 out of 5 appeared to be already employed at one year from graduation, usually continuing in the working activity already held before completing their bachelor's degree.

Over half the graduates (53.5 percent) did not further their university education, regardless of the type of degree that was completed, for *work-related reasons* (for instance, the graduate is or was already working at the time of graduation or subsequently found a job that discouraged him or her from enrolling; *Figure 8*); the second reason is the lack of a degree course in the subject area of interest or the failed activation of the chosen degree course (14 percent).

Figure 8 First level graduates: reasons for not enrolling on a second level degree course



This trend was confirmed across all groups, even though with different incidence. In particular, among graduates in the engineering, sciences and economic and statistics groupings, there was a very large share of those who had chosen not to enrol for work-related reasons (66, 65 and 63 percent, respectively), whereas this reason was found

to have a lower-than-average significance in the physical education and letters groupings (38 percent) and in the languages grouping (39 percent). Among these latter, about one-quarter of graduates do not further their university education as a result of the absence of a degree course in subject area of interest or the failed activation of the chosen degree course. Finally, a considerable share of graduates opted for activities other than postgraduate training. On average, this corresponds to 9 percent, rising to 17 percent among graduates in the letters grouping, 15 percent among their colleagues in the political and social sciences grouping, 14 percent in the languages grouping and 13 percent in the physical education grouping.

## 4. CHARACTERISTICS OF THE JOBS HELD BY GRADUATES

*In line with other AlmaLaurea surveys conducted on first level graduates, there appears to be still a large share of employed graduates who continue the in job they held before graduation. These graduates obviously present with characteristics that differ considerably from those of their colleagues who face the labour market for the first time after completing their studies. Indeed, continuing in the previously held job or choosing to devote oneself completely to the work activity, without pursuing postgraduate studies, results in more stable employment contracts, higher earning and increased degree effectiveness in the work carried out.*

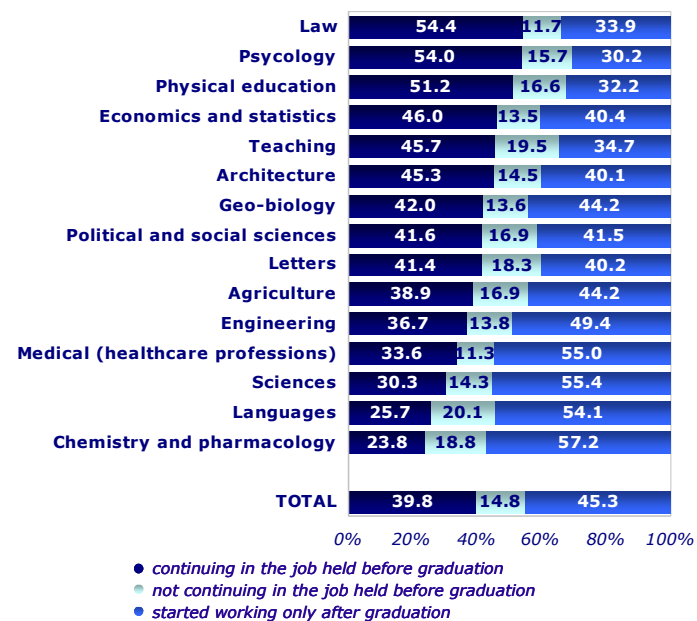
The complexity of the current labour market, alongside the transitional phase that the university system is experiencing, which is still underway, hampers any analysis of the characteristics of employed graduates. The general picture that we are outlining needs to take into account the multifaceted structure of the cohort of first level graduates, comprised not just of those who are only working but also of a significant share of graduates who combine study and work. Additionally, beside those who continue in the job held before completion of the three-year degree, there are graduates who enter the labour market only after completing their university studies.

### 4.1 Employment conditions at graduation

40 percent of first level graduates in employment continue in the job held before graduation (another 15 percent declared that they changed job after completion of studies; *Figure 9*). The share of those who continued in the former job is significant among graduates in the law and psychology groups (both ranking at 54 percent), as well as

among physical education graduates (51 percent). At the other end of the scale, there are the graduates in the languages and chemistry and pharmacology groupings, among whom the share of those continuing in the job held before graduation falls short of 30 percent. It therefore appears to be natural that the characteristics of the work activity performed are tightly correlated to the different incidence levels of continuation in the former job for each degree course grouping.

*Figure 9 First level graduates at one year: employment conditions at graduation by degree course grouping*



### 4.2 Type of working activity

One year on from graduation, 43 percent of graduates held a secure job, especially thanks to the dissemination of

permanent employment contracts that involve one-third of employed graduates (*Figure 10*).

### **Job security and flexible employment**

Job security as a category includes those in permanent employment and the self-employed (entrepreneurs, professionals and own-business owners). The decision to include self-employment in the job security category was based on the finding that this type of work is not considered a “fall-back” by graduates, a temporary situation accepted in the absence of other possibilities.

This assessment was carried out as part of the AlmaLaurea survey over the past few years and entailed investigation of job satisfaction, earnings and search for a new job.

The term “flexible” employment (also known as temporary or casual employment) includes a series of fixed-term employment contracts envisaged by the Italian law (coordinated ongoing collaboration contracts; ad-hoc collaboration contracts and project contracts), contract work/interim work, part-time work, “associate” employment contracts, and “occasional, accessory” work contracts that have been introduced on an experimental basis only in a few Italian provinces. The category also includes the so-called “socially useful” employment contract and contracts “of public usefulness” as well jobs made available under a special “professional insertion plan” that does not, however, envisage a true employment contract. Furthermore, for the purposes of this survey, we have decided to separate trainee employment/training contracts from apprenticeships which, had we adopted a broader set of parameters, could have been included under the flexible job category once findings indicated that these employment agreements were precursors of full permanent employment contracts (as was the case with the graduates under examination).

40 percent of those in employment stated that they were engaged in flexible work. In particular, 18 percent of graduates under employment had a collaboration contract and as many had a fixed term contract. It is noteworthy that 9 percent of graduates work with no contract at all.

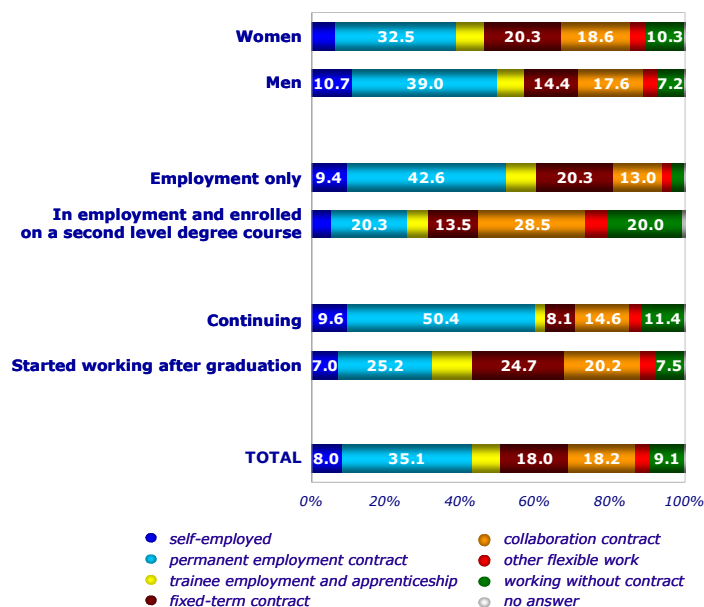
**Those who work, those who work and study and those who continue in their former job.** As previously mentioned, the cohort of first level graduates is extremely uneven; beside those who are only working (66 percent of those employed) there are those who combine study and work (34 percent). Furthermore, alongside those who continue in jobs held before graduation (40 percent of those in employment) there are those who entered the labour market only after completing their first level degrees (45 percent).

As expected, job security (and particularly permanent employment contracts) mostly involves those who are only working (52 percent of those employed as against 26 percent of those who combine work and study). A high level of job security is also to be found among those continuing in the job held prior to their graduation (60 percent, vis-à-vis 32 percent of those who started working only after completing their degree; *Figure 10*).

Conversely, flexible employment especially involves working students (48 percent, vis-à-vis 36 percent of those who only work) and those who entered the labour market only after graduation (49 percent, versus 26 percent of those who continue in the job held before completing their bachelor’s degree). This is almost exclusively due to the different dissemination of contract work, involving 28.5 percent of working students and only 13 percent of those who only work. Similarly, collaboration contracts can be found particularly among those who started working only after graduation (20 percent, as against 15 percent of those continuing in the previously-held job). These first-

time workers also showed to be largely under fixed-term contracts (25 percent versus 8 percent, respectively).

Figure 10 First level graduates in employment at one year after graduation: type of employment by gender, enrolment on a second level degree course and continuation in job held prior to graduation



**Degree course groupings.** Graduates in the technical-scientific area are more likely to obtain secure employment (53 out of one-hundred, 18 percentage points above their counterparts in the human and social sciences area). By contrast, those with degrees in humanities are more likely to have flexible contracts (44 percent, i.e. 9 percentage points above interviewees with a technical-scientific degree).

More specifically, first level graduates in the medical grouping present with the highest job security, achieving 70.5 percent. These are followed by their equivalents in the economics and statistics and law groupings with 44.5 percent and 40 percent, respectively.

This is not exclusively the result of the large share of graduates that continue in the job held prior to degree completion. This share indeed totals 54 percent in the economics and statistics group in comparison with the average value of 40 percent. Conversely, this share is below the average for the medical grouping (34 percent). Nevertheless, in this latter group there is more security also among those who started working only after completing their degree (reaching almost 60 percent as against the average 32 percent).

**Gender differences.** Job security is enjoyed more significantly by men (exactly 50 percent) than women (39 percent). This is due to the different gender makeup in self-employment and especially in permanent employment. More specifically, self-employment was observed respectively in 11 percent of employed men and 6 percent of employed women, while permanent employment concerns 39 percent of men and 32.5 percent of women.

Among first level graduates, flexible employment seems to be a specific feature of women (43 percent, as against 35.4 percent of men). This difference arises especially as a result of the different distribution of fixed-term contracts which concerns one-fifth of women and 14 percent of men. Finally, employment without any contract at all concerns almost 10 percent of women and only 6 percent of men. This finding is confirmed within each subject area with the only exception of chemistry and pharmacology, where fixed-term contracts involve 26 percent of men and 20 percent of women.

Job security is a privilege enjoyed more by men than women not only among those who continue in the job held prior to the degree (68 percent of men and 53 percent of women) but also among those who started working only after graduation (35 percent of men and 28 percent of women). Similarly, men graduates enjoy a higher level of employment contract security in the category of those who work only (58.5 percent of men and 48 percent of women) as well as among those who study and work (32 percent of men and 21 percent of women).

### 4.3 Net monthly earnings <sup>10</sup>

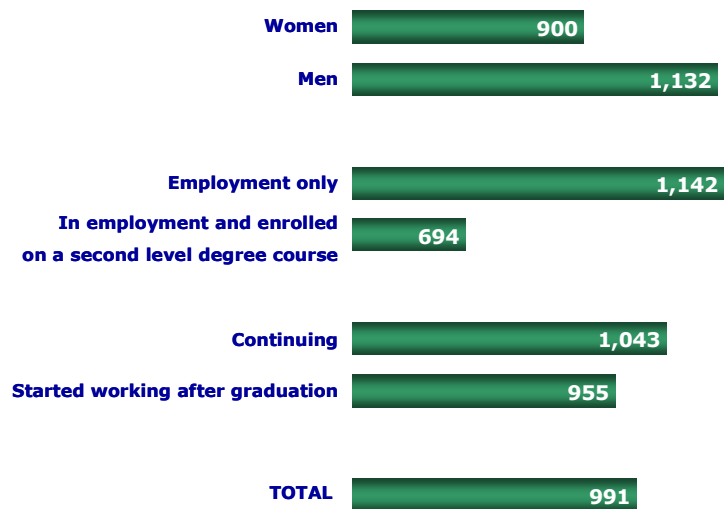
One year on from graduation, the net monthly earnings of first level graduates are on average 991 Euros with considerable differences between those continuing in the jobs held before their degree (1,043 Euros) and first-time workers (955 Euros). As expected, wages among “hybrid” graduates are higher than those earned by their “pure” counterparts (by 137 Euros): 1,038 Euros for the former and 902 Euros for the latter.

Continuation of further studies with a master’s degree, besides reducing the security of the employment contract, also results in lower wages than those earned by graduates who only work: 694 versus 1.142 euro, respectively (*Figure 11*). Such finding is confirmed across all degree course groupings.

However, wage differences are observed regardless of continuation of further training, including within the different courses. Indeed, higher earnings are observed in the technical-scientific area (1,114 Euros), where wages exceed by 225 Euros net those of graduates in the human

and social sciences area (889 Euros). Among graduates in the former area, continuation in the former job does not influence significantly earnings, the earnings of those continuing their former job exceeding only slightly (12 Euros) those declared by first-time workers (1,108 euro). In fact, differences are more considerable among respondents in the human and social sciences area; those who continue in the former job indicated net monthly earnings of 990 Euros, thus exceeding by almost 200 Euros those stated by first-time workers (793 Euros).

*Figure 11 First level graduates in employment one year on from graduation: net monthly earnings by gender, enrolment on a master’s degree and continuation in the former job*



*average values in euros*

At degree course group level, the highest wages are observable among graduates in the medical and economics and statistics groups (1,307 and 1,081 Euros, respectively) even though this is due, at least for the economics and

<sup>10</sup> In spite of the sensitivity of the subject, as many as 96 percent of graduates in employment answered the following question: “What are the net monthly earnings of your current job?”

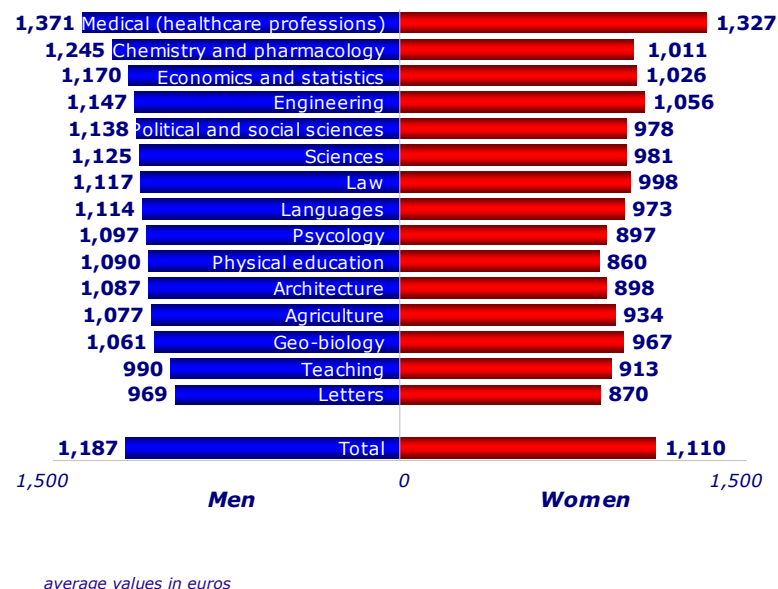
statistics group, to the large number of graduates continuing in jobs held before graduation. Far lower earnings are found among graduates in the psychology, geo-biology, letters and physical education groupings, whose wages range from 654 to 728 Euros per month. For such groups, lower earnings are partly due to the high percentage of graduates working and studying at the same time.

The analysis of the net monthly earnings also reveals gender differences: men receive 1,132 Euros vis-à-vis the 900 Euros earned by women.

These differences are confirmed across groups, especially among legal graduates, where men earn 60 percent more than women (1,107 versus 692 Euros, respectively). This is also due to the fact that men graduates in the law group continue in the job held before graduation. Significant differences (slightly exceeding 44 percent) are also noticeable in the architecture and economics and statistics groups.

Gender differences within each course of studies are less significant, although still noteworthy, especially if one considers only the graduates who started working after graduation and who are employed full time. For example, in the law group, the differential between men and women falls from 60 to 13 percent, in the architecture group from 45 to 23 percent and finally, in the economics and statistics group from 44 to 14 percent (*Figure 12*).

*Figure 12 First level graduates who were not working at the time of graduation and who are employed full time one year on: net monthly earnings by gender and by degree course grouping*



#### 4.4 Degree effectiveness as related to working activity

As early as at one year from graduation, degree effectiveness is, on the whole, good. It was considered at least *fairly effective* by 76 percent of first level graduates, particularly by those in the medical (96 percent), scientific (83.5 percent) and teaching group (82 percent; *Figure 13*).

As might be expected, degree effectiveness is higher among graduates who are only working than among their counterparts who are both working and studying. In fact, 84 percent of the former deemed their degree to be *fairly effective*, exceeding by 23.5 percentage points those who are also attending a second level degree course.

### Degree Effectiveness Index

The index is a combination of the usefulness of the skills acquired during university studies and the formal requirement that the graduate should hold the qualification in order to carry out a particular job. There are five levels of degree effectiveness:

- very effective for those in jobs where the graduate's degree is required by law or de facto necessary, and where the graduate makes wide use of the skills acquired at university;
- effective, for those in jobs not requiring a degree by law but where a degree is anyway useful and the graduate makes considerable use of the skills acquired at university, or where a degree is required by law but where graduates make only some use of their acquired skills;
- fairly effective, for those in jobs that do not require a degree by law but where, de facto, a degree is necessary or useful and where the degree skills are used only to some extent;
- not very effective, for those in jobs not requiring a degree by law and where the graduate's degree skills are not at all useful and which require little use of the skills acquired during university, or where a degree is not required but useful, but where graduates make absolutely no use of their university skills;
- not in the least effective, for those in jobs where the degree is not required by law, nor is it useful in any way, and where the skills acquired are not put to any use whatsoever.

The classes are mutually exclusive but not exhaustive since they do not include the no-answers and the respondents who do not fit into any of the above categories.

Finally, 81 percent of graduates who started working after graduation considered their university qualifications to

be at least *fairly effective*, whereas among those who stay in the job held before their degree this fraction falls to 71 percent.

The qualification is considered at least *fairly effective* by 79 percent of men (+7 percent compared to women). This can be observed within the majority of groups where the numbers are large enough to enable us to make comparisons regardless of the type of graduates (working student; in employment only; continuing in the job held before graduation; started working only after first level degree).

Figure 13 First level graduates in employment at one year: degree effectiveness by gender, enrolment on a master's degree and continuation in the job held before graduation



Graduates in the technical-scientific area made an assessment of degree effectiveness on the whole higher (the degree achieved is at least *fairly effective* for 86 percent of graduates, especially those in the medical group - 96 percent – and their colleagues in the scientific group – 83.5 percent) than that expressed by their colleagues in the humanities area (69 percent, with the highest percentages in the teaching - 82 percent – and economics and statistics area - 78 percent). The finding that respondents who are only working expressed a higher degree of effectiveness is observable in both subject areas under consideration and especially in the technical-scientific degrees; 91 percent of those who are only working stated that their degree was at least *fairly effective*, thus exceeding by 28 percentage points their colleagues who are also attending a master’s degree course.

#### 4.5 Pre- and post-reform graduates: an almost impossible comparison

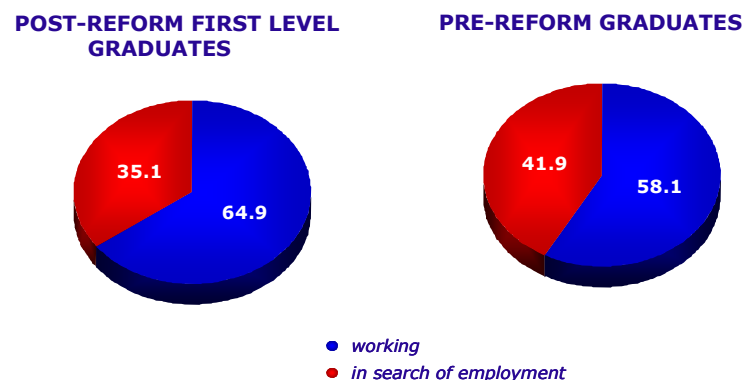
Although it is extremely interesting to assess the different reaction of the job market to graduates from the old and the new system and the main features of these graduates’ entry into the labour market, it should be borne in mind that this comparison is made between two graduate populations that differ in goals, training, duration of studies, age at graduation and also in terms of appreciation and exploitability of their degrees on the market.

Any accurate study should also guard against any possible element of distortion, above all against the different incidence of graduates continuing in the job held before graduation. This is not just a theoretical concern in the light of the fact that in the current transitional phase from the former to the present system, already outlined on a number of occasions, 40 percent of first level graduates

from the class of 2005 in employment one year on from graduation continue in jobs held before their degree. Among graduates in the old system from the same class, this is the case for 26.5 percent of graduates, a lower although still significant share. It should not be forgotten either that the incidence of continuation of postgraduate training differs between the two populations and therefore any indiscriminate comparison of the employment conditions would penalize especially post-reform graduates.

As a result, a rigorous in-depth study aimed at monitoring the reaction of the labour market should confine itself to considering the populations that started working only after graduation, and should be further limited to those who are interested in entering the job market, approximately representing the work-force, because graduates who are not working and stated that they are searching employment are excluded.

Figure 14 Pre- and post-reform "work-force" graduates who were not working at the time of graduation: employment conditions

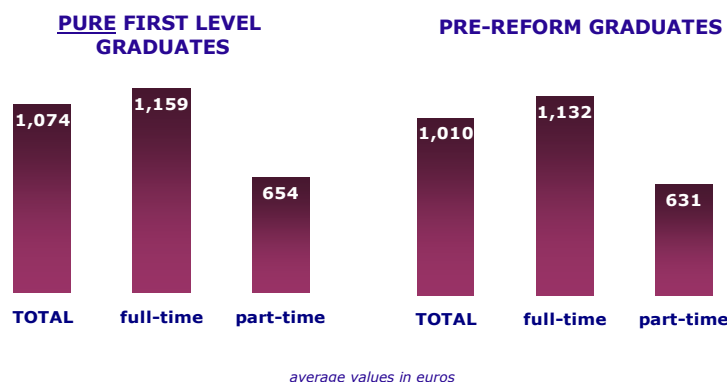


The employment rate, calculated on this sub-population alone, amounts to 58 percent of pre-reform graduates and 65 percent of their first level equivalents. Consequently,

the share of those seeking job is 42 and 35 percent, respectively (*Figure 14*).

If the same selection criterion is adopted considering only pure graduates who have decided to enter directly the labour market (therefore excluding from the analysis those who enrolled on a second level degree course), post-reform graduates perform better in terms of both labour-market entry time and earnings. With reference to the former aspect, post reform graduates take on average one month to find their first job (this is a median value calculated with reference to the beginning of the study) while their pre-reform colleagues take on average two months. As regards earnings, pre-reform graduates earn on average 1,074 Euros net as against the 1,010 Euros received by their pre-reform counterparts. Furthermore, this difference is observable among both part-time and full-time workers (*Figure 15*).

*Figure 15 Pre- and post-reform "work-force" graduates who were not working at the time of graduation: net monthly earnings for full- and part- time employment*



There is, however, a more general consideration to be made, especially with regard to the widely-held view that first-level graduates are harshly criticized or, in any event,

not appreciated by the labour market. The considerable criticism levelled at the reform, which also includes dissatisfaction on the part of young people and employers with the graduates of the reformed system does not consider that the vast majority of first-level graduates coming out of the new three-year system in the summer of 2004 furthered their studies with a master's degree, which they will complete in the best of hypotheses only in the current months. As a result, the only post-reform graduates that employers have come into contact with are almost exclusively those who crossed over from the old to the new system and whose university career was fraught with difficulties, and who often resorted to abbreviated courses. In fact, the reformed university remains largely a complex enigma for most of the business world and public opinion. AlmaLaurea s.r.l.'s examination confirmed this assessment. Among the numerous selection criteria available to search for and select from the 700,000 CVs on the graduate database, the distinction between the pre-and post-reform degrees has been one of the least frequently used by companies<sup>11</sup>.

<sup>11</sup> A. Cammelli, *La riforma alla prova dei fatti*, in Consorzio Interuniversitario ALMALAUREA (edited by), *VIII Profilo dei laureati italiani. I primi figli della riforma*, 2006, op. cit.

## 5. METHODOLOGICAL NOTES

### 5.1 ISTAT classification of degree course groupings

What follows is the classification adopted by the Italian Statistics Board (ISTAT) of the degree course groups and types available at Italian universities.

**Agriculture:** Agricultural; Agro-food and Forestry Sciences and Technologies; Animal Husbandry Sciences and Technologies.

**Architecture:** Industrial Design; Architecture and Construction Engineering; Town planning Land-Use and Environmental Planning.

**Chemistry and Pharmacology:** Chemical Science and Technology and Pharmaceutical Technologies

**Economics and Statistics:** Economics and Business Economics; Economics Sciences; Statistics

**Physical Education:** Motor and Sports Sciences

**Geo-biology:** Biotechnologies; Biology; Earth Sciences; Environmental and Natural Sciences and Technologies; Geography

**Law:** Legal services; Law.

**Engineering:** Civil and Environmental Engineering; IT Engineering; Industrial Engineering.

**Teaching:** Philosophy; Letters; Cultural Heritage Sciences; Figurative Art, Music, Performing Arts and Fashion Sciences and Technologies; History; Conservation and Restoration of Cultural Heritage.

**Languages:** Modern Foreign Languages and Literature; Linguistic Mediation (Translation and Interpreting)

**Medical:** Health Prevention Profession; Rehabilitation Professions; Health Professions, Nursing and Obstetrics; Technical Health Professions

**Political and Social Sciences:** Social Services;

Tourism; Administration; Communications; Political Science and International Relations; Social Sciences in the field of Cooperation, Development and Peace; Sociology

**Psychology:** Psychology Sciences and Techniques

**Sciences:** Navigation Sciences and Technology; Physical Sciences and Technology; IT Sciences and Technologies; Mathematics.