Bachelor degree owners' employment in Italy and in other European Countries

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Abstract

Traditionally, Italy had just one long-cycle university degree; the two-tier system has been introduced as implementation of the Bologna Process (1999). We are interested in examining how the new first level degree, Bachelor in Europe and "Laurea **L**" in Italy, has worked in our country, mainly as far as employability is concerned. Our analysis has been framed in the European context, particularly looking at Bachelors in countries where traditionally there was only one level. The basic question is: has the new first-cycle degree been accepted by the labour market, or is it considered merely as an intermediate step in a route leading to a Master degree? As expected, there are differences in the countries under scrutiny, but there are also common indications. Answers for Italy are found analysing in detail existing surveys, which give precise indications about working and study conditions of 2007 and 2008 graduates, interviewed one year after graduation. Employment rate is not negligible, even if it is of course lower for **L** than from second level graduates; sometimes, work is combined with prosecution of studies. Effects of the crisis are present for both types of graduates. Some preliminary conclusions are drawn, and possible developments of the research are indicated.

1. The European framework and the Italian scenario (two-tier system, and surveys about graduates' employment)

1.1 The European framework

As it is well known, Italy has been one of the first European countries to introduce the Bologna Process in its higher education system, through a law passed in 1999 and made operative in 2001[1].

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[1] Because of this timing, the first level graduates came out in 2004, and graduates from the second level in 2006. From those years on, there has been a combination of new degree owners together with graduates who started their university studies in the old system and graduated according the *pre-Bologna long-cycle system*. In addition, we have graduates who transferred from the old pre-Bologna system to the new Bologna system and have got a *Bologna degree*. As a consequence, the analysis of the degree owners' careers has been rather complicated in recent time.

The Italian system had traditionally only one tear lasting four years (five for Engineering and few other programmes, six for Medicine). The introduction of two-tear system created a number of reactions both inside the academia and in the labour market, due to the difficulty in matching competencies provided by the university courses with those required by the economic sectors.

It seems worthwhile to consider these kind of problems in the framework of similar processes going on in other European systems of higher education in the same period of time.

The comparative reports available[2] show some common trends characterised by (i) a high percentage of students continuing their studies after the first level degree, and (ii) a general low level of salary for those entering the labour market with a first degree (Bachelor). The rather negative reaction of the labour market might have contributed to explain the high percentage of students' transfer to the second tear (Master), while it is relevant to notice the success of the first level professional degrees in several countries. The case of degrees in applied sciences, which have found a substantial success in Germany and Norway, here is a case in point.

In Italy, the reform introducing the Bologna Process has not been able to make clear the alternative for the first degree owners[3] between the prosecution to the master level or the professionalization for the entry in the labour market. On the other hand, the labour market in several professional fields has reacted with some negative *a priori* against the **L** graduates, not considered at the level of the old ones coming from four year courses. Just to give some figure referred to 2008 (details are in **§2**), according to AlmaLaurea survey, one year after having obtained the **L** degree, 46% of degree owners were enrolled in Master (**LS/M**) courses, while 42% was employed (out of these, 44% with a temporary job); about 15% of the whole population was combining university studies with working activities. The percentage of those continuing their studies at **LS/M** level has always been different according to the disciplines. Besides, a peculiarity of the Italian case is related to the different level of economic development affecting different regions. As a result, in the South, where the economy is traditionally rather weak, **L** degree owners –due to shortage of available professional positions– are inclined to continue their studies at level **LS/M** than their colleagues of the Northern part of the country, who are experiencing a richer labour market.

At the time in which the research has been carried on, in all European countries the economic conditions were deteriorating, and in many of them the impact of the crisis was affecting apparently more the first level degree owners. Combination of working activities with university enrolment was rather common among students of both first and second level of study. In many cases this combination turned out to be convenient for a considerable amount of students, who after the graduation were able to keep their job. It is the more and more clear that in many countries, including Italy, there are several combinations of working and study activities which have created basically three categories of (i) first degree owners full time employed, (ii) first degree owners employed and following professionalizing courses (especially from the applied sciences areas), and (iii) first degree owners regularly enrolled in second level courses (Master, i.e. **LS/M** in Italy) who are also regularly employed in working activities.

Stable jobs can be found more easily by the degree owners from Applied Sciences, while the opposite occurs for degree owners in Humanities and Social Sciences.

Another aspect of the relation between university studies and professional activities is represented by the usefulness of acquired competences in the professional occupation. In several cases it seems

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[2] See the volume "Employability and Mobility of Bachelor Graduates in Europe", Country Reports at Berlin Conference (September 30-October 1, 2010).

[3] It is worth to note that in Italy the first level degree is named "Laurea-**L**" (obtained with 180 ECTS credits), while the second level degree was at first named "Laurea Specialistica-**LS**", and then "Laurea Magistrale-**LM**" (120 ECTS credits). In the Italian H.E. system there are also courses, under the name of "Master", which can be activated by individual universities; these programmes aim at providing specific professional training to **L** or **LS/M** graduates, but do not lead to any recognized degree.

that competences turned out to have little relevance in exerting job activities, especially for first degree owners in Humanities.

In almost all countries first degree owners encountered rather severe difficulties in finding an appropriate job (in many cases a job whatsoever). The reasons for this phenomenon appear to be more than one.

(i) From the supply side, university courses not always have been oriented toward the professionalization, and more generally toward the existing labour market.

(ii) From the demand side, employers either have not grasped the difference between competences acquired at first and second degree level, or they have taken advantage of the weakness of the labour forces in an economic situation of crisis.

A symptom of the latter explanation could be found in Italy, where recent researches have shown that average initial salaries of **L** degree owners are in many cases equal to those of the **LS/M** degree owners.

Interesting enough, the majority of degree owners in all European countries seem to be rather satisfied of their professional position. Particularly the owners of a master degree in applied sciences apparently have been able to find jobs where their acquired competences obtain recognition. This is particularly true in some fields and in a country like Germany, while in other cases economic rewards can be the main reasons for satisfaction. In the Italian case, the level of satisfaction seems slightly lower than in other countries, perhaps because the economy in recent years has slowed down more than elsewhere.

A general overview, "Looking back on ten years of Bologna Reforms", has been presented by EUA, the European University Association, in Vienna on March 11, 2010. Out of the Three Main Challenges singled out in Winckler's Report, "Sharpen the profile of the Bachelor" was the first one; various points which are going to be discussed here were emphasized[4].

1.2 The Italian scenario

In Italy, in particular, both in the university milieu and on the media there are many disputes about the real location in the labour market of the graduates of the new University degree system. Several agencies analysed the subject quite deeply; however, since each result has been presented independently, a fully composed framework of results could not be established, and this has contributed to the spread of incomplete and sometimes incorrect information.

On the theme, the Centre of the University of Genoa for Didactical and Educational Research (CARED) has developed a research project (Coordinators: Giunio Luzzatto, CARED and Roberto Moscati, University of Milano Bicocca), which has had support from the Italian Education Ministry and from the Agency Lifelong Learning Programme (LLP), and of which we present here some of the first results.

As a starting point, it is relevant to consider the fact that **L** graduates' employment, while less than that of **LS/M**, is for nothing negligible, unlike what is often said by observers, including academics, who are not documented and sometimes, for various reasons, want to suggest that **L** is unproductive. An overview of the situation, a year after the acquisition of the degree, is displayed in **§2** (**Tables 3** and **4**).

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[4] Items : -Master, PhD are accepted degrees, yet in many countries the Bachelor is still an "unknown creature"; -understand/communicate the rationale for first-cycle degrees within institutions; -implementing the shift to student centred and outcomes-focussed learning requires a cultural shift and greater human/financial resources; -intensify the communication with parents and schools; -allow for more diversity within the System: some HEIs may stress (short-term) employability, some general education ("Bildung"); -introduce career models for the Bachelor in the public sector, serving as signals for the labour market; -more public debate and dialogue needed with employers, to explain the reforms.

The surveys on graduates' employment are carried out, through interviews to the whole population or to very broad samples, by the National Institute of Statistics (ISTAT) for all Italian universities, and by two inter-academic organizations, the Consortium AlmaLaurea and the project STELLA (Statistics on graduates' employment), for specific groups of Universities.

ISTAT, with intervals of three years, challenges the graduates about their work **three** years after acquiring the degree; the survey on graduates 2007 is carried out now, the previous one covered graduates 2004. To assess the situation concerning recent graduates, we have therefore preferred to examine, in this phase, the results of AlmaLaurea and STELLA surveys **one** year after the attainment of the degree **(§ 2)**; they are available for graduates 2007 and 2008[5].

Unioncamere, which is the National Association of Chambers of Commerce, carries out a different kind of survey (**Excelsior**). It contacts the companies that employ graduates; starting from its results, we can compare **(§ 3)** the forecasts of recruitment for all the years from 2006 to 2010.

On the basis of what emerges from these sources, we draw **(§ 4)** some conclusions.

2. The employment after a year from acquiring the degree (AlmaLaurea and STELLA surveys)

As already mentioned, in this paper we collect, we process, and we compare existing materials concerning the employment situation of Italian graduates, in order to have a picture, as complete as possible, of the entire Italian situation.

To this end, it was necessary to verify that the surveys to be considered had at least the following common features:

1) data collected for two-tier graduates;
2) reference possibly to the entire year, or at least to the same graduation session;
3) reference to the same time elapsed from graduation: one year or three years.

Surveys satisfying for at least two subjects the requirements outlined above, were available for years 2007[6] and 2008.

With respect to graduates in those years, AlmaLaurea and STELLA surveys on first-level graduates at one year after graduation are available for "pure" graduates[7] of the entire year; these surveys are discussed in this §.

As there are some differences in survey's methodologies, we made a careful examination of the meaning of various items used by the two subjects, in order to guarantee that the elements being compared, despite the different terminology, were the same.

Some aspects pursued in AlmaLaurea and STELLA studies (such as those relating to employer's characteristics, to the real use of the degree in the current job, to the effectiveness of the degree, etc.) could not be considered, because it was not possible to identify precise correspondences between the categories used by the two subjects.

Out of 84 Italian universities (year 2008; 83 in 2007), the universities involved are: 49 universities in AlmaLaurea survey (year 2008; 47 in 2007), 12 in STELLA (year 2008; in 2007, 11 for **L** and 12 for **LS/M**) .

The following **Table 1** and **Table 2** show the data inferable from both studies[8].

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[5] In their respective sites, http://www.almalaurea.it/ and http://stella.cilea.it/opencms/opencms/, there are materials much more extended than those used here.

[6] It should be noted that 2007 is a particularly interesting year, as in the near future further comparisons are going to be possible. The new ISTAT survey (February 2011) is just considering the graduates of that year, at three years after graduation. As a part of it, as ISTAT has done for graduates of 2004, it will be possible to deduce the employment situation also one year after graduation.

[7] "Pure" graduates are students who were enrolled from the beginning in programmes of the two-tier Bologna system.

Our specific interest is aimed at degrees **L** (1st level) of the new Italian university system; for appropriate comparisons we mention also data concerning **LS/M** degrees (2nd level, including "single cycle" programmes[9]), always referring to the new system. We do not consider students who still take pre-Bologna degrees. They are "appendixes" rapidly falling: in AlmaLaurea, they were 8,2% of the graduates in 2007, and they are not considered any more in 2008. Graduates were asked a year from the acquisition of the degree, achieved in 2007 and in 2008. AlmaLaurea surveyed all graduates[10], and among them differentiated pure ones; STELLA surveyed only "pure" graduates for **L**, all graduates (without differentiation) for **LS/M**.

Before going to the data concerning the employment, we produce some general data about the cohorts which have been analysed.

Table 1: Investigated Graduates

	L		LS/M*	
	2007	**2008**	**2007**	**2008**
AlmaLaurea				
Pure in the selected cohort	78.402	89.056	25.341	39.258
Total Selected cohort	105.439	108.117	38.070	51.120
STELLA				
Pure in the selected cohort	25.579	33.427		
Total Selected cohort			14.419	16.388
AlmaLaurea + STELLA (Total)	**131.018**	**141.544**	**52.489**	**67.508**
Total Italy	**173.668**	**173.054**	**62.154**	**80.833**
% AlmaLaurea + STELLA on Total Italy	**75,4**	**81,8**	**84,4**	**83,5**

Source: own elaboration based on AlmaLaurea (2010), STELLA (2010) and MIUR (2010) data.
*Here, and in all the following tables, **LS/M** includes second cycle degree and single cycle degree.

Together, AlmaLaurea and STELLA surveys look at a population that represents more than 80% of Italian graduates in 2008.

In AlmaLaurea, for **L** the incidence of pure graduates compared to total rose from approximately 74% in 2007 to more than 82% in 2008. For **LS/M**, this incidence goes from 66,6% in 2007 to 76,8% in 2008. This means that the phase of transition that started in 2001 is now almost completed, and that therefore the indicators analysed tend to become stable[11].

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[8] If a variable is expressed in AlmaLaurea through a mean value, and is presented in STELLA through classes corresponding to various ranges of values, to make the comparison possible we calculated, on STELLA data, the weighted average (for example, in **Table 2**).

[9] "Single cycle" programmes (mainly 300 ECTS credits) lead directly to **LS/M**. In the surveys, programmes of study are usually aggregated in subject groups, on the basis of groupings defined by ISTAT. Single cycle courses are present in the following subject groups: architecture, chemistry and pharmacology, law and medicine.

[10] Total graduates include, in addition to pure ones, those who have passed from the pre-Bologna system ("hybrids"), plus the small number of those who, for lack of information, may not be allocated neither in one nor in the other category.

[11] This applies, in particular, for the data on the average length of studies of "pure" graduates (**Table 2**). The slight increase of length has been wrongly interpreted by many Italian media (and even by some academics hostile to Bologna) as worsening of efficiency in didactics, whereas it is merely a result of the fact each year one more cohort comes to graduation; consequently, the graduates belonging to the oldest cohort have a delay that nobody could have in the previous year. As the new system started in 2001, in 2004 –and in the years immediately following 2004– the duration was necessarily just slightly more than three years, because the graduates were only the regular ones or those with a mild delay.

On the same cohorts of graduates, some relevant data are shown in **Table 2**. Several differences between AlmaLaurea and STELLA populations may be observed. For example, **L** graduates of STELLA show lower final marks compared to those of AlmaLaurea, both for pure graduates and totals. In the case of **LS/M** graduates, differences are even more pronounced. Note, however, that **L** graduates of STELLA, while having a lower mean mark, are characterized by a shorter duration (average years) compared with AlmaLaurea[12].

The age at graduation, as could be expected, is much greater, on the total AlmaLaurea, compared to that of pure students. Age of STELLA graduates is below AlmaLaurea (referring to the pure graduates for **L**, to the total for **LS/M**); this confirms previous data on duration of studies.

Table 2: General information on **L** and **LS/M** graduates

	L			LS/M		
	ALMALAUREA		STELLA	ALMALAUREA		STELLA
	Pure	Total	Pure	Pure	Total	Total
2007						
Number of graduates	78.402	105.439	25.579	25.341	38.070	14.419
Female	62,1%	60,4%	62,9%	59,2%	58,9%	55,1%
Male	37,9%	39,6%	37,1%	40,8%	41,1%	44,9%
Graduation mark	101,7	101,5	100,1[1]	109,0	108,3	104,6[2]
Duration (average) [3]	3,9	4,3	3,6[4]			
Age at graduation (average)	24,5	26,0	24,3[5]	25,9	27,2	26,1[6]
2008						
Number of graduates	89.056	108.117	33.427	39.258	51.120	16.388
Female	60,9%	59,9%	61,5%	59,8%	59,0%	60,9%
Male	39,1%	40,1%	38,5%	40,2%	41,0%	39,1%
Graduation mark	101,3	101,2	99,7[1]	108,6	108, 0	105,4[2]
Duration (average) [3]	4,1	4,4	3,8[4]			
Age at graduation (average)	25,0	26,1	24,5[5]	26,1	27,1	26,3[6]

Source: own elaboration based on AlmaLaurea (2009, 2010) and STELLA (2009, 2010) data.

N.B. – For each year, the tables included in this report relate to all universities considered in AlmaLaurea and STELLA surveys. In 2008 there are two more universities in AlmaLaurea survey, with a limited incidence on the total. In STELLA there is one more university -of large dimension- for **L**, one less for **LS/M**. When this difference has a major impact, we will give appropriate details (cases A and B in **Tables 3** and **4**).
[1] The original data are presented for classes of graduation marks (STELLA, 2009 p. 42; STELLA, 2010 p. 41); the value shown here is obtained trough the weighted media. To each class we assigned the mean value.
[2] The original data are presented for classes of graduation marks (STELLA, 2009 pp. 118 e 185; STELLA, 2010 pp. 119 e 187); the value shown here is obtained through the weighted average. To each class we assigned the mean value.
[3] The data on average duration refer only to **L**. For **LS/M** those data are not considered, due to very different situations in the paths followed by graduates.
[4] The original data are presented for classes of delay in months (STELLA, 2009 p. 43; STELLA, 2010 p. 43); the value shown here is obtained trough the weighted average, then converted in years. The regular class corresponds to 36 months; a mean value, increased by 36, has been given to classes ranging between a minimum and a maximum value; the value 32, then increased by 36, has been given to the class "more than 24 months".
[5] The original data are presented for classes of age (STELLA, 2009 p. 41; STELLA, 2010 p. 40); the value shown here is obtained trough the weighted average. The mean value has been given to classes ranging between a minimum and a maximum value; the value 22 has been given to the age class < 23 years; the value 32 to the one > 30.
[6] The original data are presented for classes of age (STELLA, 2009 pp. 117 e 185; STELLA, 2010 pp. 118 e 187); the value shown here is obtained trough the weighted average. The mean value has been given to classes ranging between a minimum and a maximum value; the value 24 has been given to the age class < 25 years; the value 36 to the one > 32.

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[12] As second level cycle includes programmes with different durations (**LS/M** two years; single cycle 5 or 6 years), an average duration has not been considered because it would not be significant.

With regard to gender, the situation is rather similar in AlmaLaurea and STELLA: female incidence is close to 60% in both years and both types of degree.

Tables 3 and **4**, case A and case B, present the basic data on employment status. For the case **L**, we also consider possible enrolment in a **LS/M** programme.

From **Table 3** it appears that a rather high proportion of graduates, one year after graduation, are exclusively engaged in employment; the corresponding percentage varies from a minimum of 26,2% to a maximum of 33,9%, depending on the population under scrutiny. If one includes those who work and are also enrolled in **LS/M**, one has a minimum value of 37,2% for STELLA survey 2008, while all other values exceed 42%.

Both for **L** and **LS/M** (**Table 4**), between 2007 and 2008 one finds a decrease of employment, more significant for **LS/M** and especially relevant for STELLA. As, in STELLA, universities located in Lombardia are prevailing (8 out of 12), this decrease could suggest that the economic crisis of 2009 has been particularly heavy in Lombardia area; actually, Lombardia –the most dynamic Italian region, looking at economy– previously had the highest values both for **L** graduates who work without being enrolled in **LS/M**, and for graduates **LS/M** who work. Therefore, we examined the achievements of universities of Lombardia present in STELLA in both years. **Tables 3** and **4**, case C, show the results. They fully confirm that the very negative changes between 2007 and 2008 correspond precisely to the situation in Lombardia.

Employment status pre and post-graduation has been investigated. For **L** graduates, in both years the percentage of those who started to work after graduating exceeds 70% in STELLA; the value is much higher than the one found in AlmaLaurea, where it ranges between 40% and 48%, according to the different populations to be considered. Correspondingly, both the percentage of those who pursue a job started before graduation, and the percentage of those who have changed their job, are much more pronounced in AlmaLaurea. For **LS/M** graduates, while the incidence of those who began to work only after the degree is rather high even in AlmaLaurea (between 56 and 65%, according to different populations), it still remains rather far from STELLA values, which are above 80% in both years.

The data on the amount of *part-time jobs* show, referring to **L** graduates, a higher value among AlmaLaurea graduates (between 35,4% and 40,8%), compared to STELLA (between 24,6% and 30%). This finding may be related to the fact that among AlmaLaurea graduates there is a higher percentage of respondents who said they work and are also enrolled in **LS/M**; thus, this type of labour contract seems to be more suitable for AlmaLaurea population. Also for second level graduates there are meaningful differences: in AlmaLaurea 20% of jobs are part-time in 2007, 25,2% in 2008, in STELLA 11,2% in 2007, 21% in 2008. Especially in STELLA, the increase of part-time work between 2007 and 2008 is high, as it was for **L**.

Also the data relating to *monthly gain* of **L** graduates show quite significant differences: for AlmaLaurea, in 2007 the monthly gain was € 933 for pure graduates, € 1.007 for the total, and in 2008 respectively € 948 and € 1.003; for STELLA it was 1.166 € in 2007 and 1.211 € in 2008. These differences may be due both to the area of localization of most of the universities in STELLA survey, where the salaries have always been higher than in the rest of the country, and to the fact that STELLA considers only the salaries of those who work full time.

For second level graduates, wage differences between AlmaLaurea population (pure graduates 1.120 €; total 1.149 €) and STELLA (1.179 €) are quite small for the year 2007, not for the year 2008. In this year AlmaLaurea values range between 1.061 € (pure) and 1.091 € (total), while in STELLA the value is 1.266 €. This high gap is aligned with what has been verified in both years for **L** graduates, whereas it is far away from the smallness of the differences recorded for **LS/M** in 2007; an interpretation of this situation does not appear easy.

Table 3: Employment conditions of Graduates **L** (% on the total)

Categories	CASE A						CASE B						CASE C					
	ALMALAUREA				STELLA		ALMALAUREA				STELLA		ALMALAUREA				STELLA[3]	
	Pure		Total		Pure		Pure		Total		Pure		Pure		Total		Pure	
	2007	2008	2007	2008	2007	2008[1]	2007	2008	2007	2008	2007	2008[2]	2007	2008	2007	2008	2007	2008
Is working, total	42,4	42,0	47,9	45,7	45,0	40,0	42,4	42,0	47,9	45,7	45,0	37,2	42,4	42	47,9	45,7	51,1	46,4
out of which: works and is not attending a **LS/M** *course*	*26,2*	*27,2*	*31,6*	*30,8*	*33,9*	*30,4*	*26,2*	*27,2*	*31,6*	*30,8*	*33,9*	*27,6*	*26,2*	*27,2*	*31,6*	*30,8*	*38,3*	*34,6*
out of which: works and is attending a **LS/M** *course*	*16,2*	*14,8*	*16,3*	*14,9*	*11,1*	*9,6*	*16,2*	*14,8*	*16,3*	*14,9*	*11,1*	*9,7*	*16,2*	*14,8*	*16,3*	*14,9*	*12,9*	*11,8*
Doesn't work and is attending a **LS/M** course	48,2	46,4	42,3	42,3	44,2	46,6	48,2	46,4	42,3	42,3	44,2	50,3	48,2	46,4	42,3	42,3	39,8	41,8
Doesn't work, is not attending a **LS/M** course, but is looking for a job	6,5	8,6	7,0	8,9	5,8	7,9	6,5	8,6	7,0	8,9	5,8	7,6	6,5	8,6	7,0	8,9	4,6	7,0
Doesn't work, is not attending a **LS/M** course, and is not looking for a job	2,8	3,0	2,9	3,1	5,1	5,5	2,8	3	2,9	3,1	5,1	4,9	2,8	3,0	2,9	3,1	4,5	4,8

Source: own elaboration based on AlmaLaurea (2009, 2010) and STELLA (2009, 2010) data.

[1] In this case, in STELLA table for 2008 we entered only the data related to the universities which were present in 2007, as it is the only case where the added University brings to a big change in the results. It means that there is one less university than for the data considered, for 2008, in all other Tables (where the results corresponding to the two populations would not differ meaningfully).
[2] Here we considered all universities of the two studies, in order to give results homogeneous with the other Tables.
[3] Here we considered, for 2007 and 2008, only the universities of Lombardia.

Table 4: Employment conditions of Graduates **LS/M** (% on the total)

Categories	CASE A						CASE B						CASE C					
	ALMALAUREA				STELLA[1]		ALMALAUREA				STELLA[2]		ALMALAUREA				STELLA[3]	
	Pure		Total		Total		Pure		Total		Total		Pure		Total		Total	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Is working	57,4	51,3	58,9	53,3	68,0	61,8	57,4	51,3	58,9	53,3	72,6	61,4	57,4	51,3	58,9	53,3	72,3	61,4
Doesn't work, but looks for a job	22,6	25,9	18,8	24,9	10,3	14,6	22,6	25,9	18,8	24,9	9,3	15,5	22,6	25,9	18,8	24,9	8,9	15,5
Doesn't work and doesn't look for a job	20,0	22,8	22,3	21,9	21,7	23,1	20,0	22,8	22,3	21,9	18,2	23,1	20,0	22,8	22,3	21,9	18,8	23,1

Source: own elaboration based on AlmaLaurea (2009, 2010) and STELLA (2009, 2010) data.

[1] In this case, in STELLA table we entered only the data related to universities which were present in both years. Comparing to those used in all other tables (where the results corresponding to the two populations would not differ meaningfully), one university is missing in 2007 and another one in 2008.
[2] Here we considered all universities of the two studies, in order to give results homogeneous with the other Tables.
[3] Here we considered, for 2007 and 2008, only the universities in Lombardia.

Table 5 reports about the time that people searching for job and still unemployed has spent in search of it. The data are not comparable because AlmaLaurea considers the time elapsed since the last job search, STELLA the whole time spent in searching for work. However, we present these data because it is interesting to observe that between 2007 and 2008, while the time has been slightly shortened for AlmaLaurea, there is a significant increase in the time for STELLA.

Table 5: Average time (in months) already spent searching for work (**L** and **LS/M**)
(% on who searches and does not work)

Categories	L			LS/M		
	ALMALAUREA[1]		STELLA[2]	ALMALAUREA[1]		STELLA[2]
	Pure	Total	Pure	Pure	Total	Total
2007						
Up to a month	72,6	73,9	21,0	81,8	82,1	17,0
1-6 months ago	21,8	20,9	30,0	14,9	14,6	37,8
More than 6 months ago	5,4	5,1	42,2	3,3	3,3	45,1
2008						
Up to a month	73,7	74,3	15,5	84,8	84,8	14,7
1-6 months ago	21,0	20,5	29,3	12,6	12,7	31,7
More than 6 months ago	5,2	5,0	50,0	2,6	2,5	53,6

Source: own elaboration based on AlmaLaurea (2009, 2010) and STELLA (2009, 2010) data.

[1] Time elapsed since the last search initiative.
[2] Time elapsed since the beginning of the job search.

For **L,** we also analysed the reasons given by graduates enrolled in **LS/M** courses (**Table 6**).

Table 6: Reasons for enrolling in **LS/M** courses
(% on who is enrolled)

Categories	ALMALAUREA		Categories	STELLA
	Pure	Total		Pure
2007				
To improve the cultural background	36,3	37,0	**I wanted to supplement / increase my education**	63,5
To have more opportunities to find a job	38,3	37,3	**A choice almost necessary to enter the labour market**	32,1
Because it is necessary for finding a job	22,2	22,2		
Because I looked for a job but I did not find it	2,9	3,0	**I had difficulties to enter the labour market**	1,2
2008				
To improve the cultural background	33,6	34,2	**I wanted to supplement / increase my education**	60,0
To have more opportunities to find a job	38,8	38,1	**A choice almost necessary to enter the labour market**	33,0
Because it is necessary for finding a job	23,8	23,7		
Because I looked for a job but I did not find it	3,4	3,5	**I had difficulties to enter the labour market**	3,6

Source: own elaboration based on AlmaLaurea (2009, 2010) and STELLA (2009, 2010) data.

In both years and in both surveys, although with different accents, enrolment in **LS/M** is justified by the idea of improvement, rather than by the conviction of the need for a further degree in order to enter the labour market.

Analyses conducted on graduates always show strong differences among the various subject groups: on examining the disaggregated data, a great variability emerges, with special evidence in the employment/study condition. This condition, referring here just to **L** graduates 2008, is shown in **Table 7**. Differences emerge quite clearly.

Without presenting further tables, we discuss here in some detail, as an example, data on **L** graduates of those subject groups, that have the highest or the lowest percentage of graduates working in the year 2008. The highest values and the lowest ones, both in AlmaLaurea and in STELLA, are found respectively for the medical group (nurses and other paramedical professions) and for the geo-biological one.

Globally, AlmaLaurea and STELLA surveys for these groups contain information on a population very close to the national total (80% for the medical group, and 91% for the geo-biological one). Except for gender composition (which does not show significant differences), only AlmaLaurea data are available for a comparison of *general information* between the two groups. The *degree marks* of the two groups show an almost identical behaviour (with values between 103,3 and 103,7). The main differences concern the *age of the graduation*, and the *average duration* of the studies. Graduates of the medical group, although they employ fewer years to achieve the degree (about 3.5 years, compared with over 4 for the geo-biological group), take their degree at an age much higher than members of the geo-biological group (i.e., between 27,1 –pure graduates– and 28,1 –total–, against 23,8 and 24,5). This is probably related to the fact that –due to numerus clausus– access to courses of the medical group not always takes place immediately after the achievement of the upper secondary school degree. Further, in this group there is a number of persons who already work, and seek to qualify through a vocation-oriented degree.

The analysis on the *employment and study condition* shows that in the medical group, for AlmaLaurea as well as for STELLA, the percentage of people working is pretty high, almost always higher than 85%. Vice-versa for graduates of the geo-biological group the highest percentage goes to those who have declared to be just a **LS/M** student; percentages vary between a minimum of 72,7% (pure AlmaLaurea) and a maximum of 78,7% (STELLA).

The data relating *employment status pre and post-graduation* present, as far as the medical group is concerned, similar results for AlmaLaurea and STELLA; in both cases, the maximum percentage is reached by those who claim they have started to work after graduation (AlmaLaurea 70% pure graduates, totals 63,3%; STELLA 84,1%). Instead, for the geo-biological group that answer shows a notable difference between AlmaLaurea, with the same value (34%) for the pure graduates and for the totals, and STELLA (72,1%). However, here STELLA population is quantitatively rather limited, so statistical fluctuations are not negligible.

The *part time contract* presents low values, and a fairly limited spread, in the case of the medical group, ranging from 17% in AlmaLaurea (both pure graduates and total) to 10% in STELLA. Conversely, in the geo-biological group this typology shows very high values: 65,7% (pure graduates) and 60,5% (total) in the case of AlmaLaurea, 34,7% in the case of STELLA.

The data on *monthly earnings* show that in the case of the medical group differences between the AlmaLaurea population (pure graduates 1.313 €; total 1.318 €) and STELLA (1.380 €) are rather limited; instead, in the case of the geo-biological group the difference is pretty high (AlmaLaurea pure graduates 683 €, total 624 €; STELLA 1.053 €). This difference is probably due to the presence of part-time contracts in the analysis on AlmaLaurea graduates.

Table 7: Employment/study conditions (graduates **L**), related to subject group (%)

Degree subject group	ALMALAUREA		STELLA	ALMALAUREA		STELLA	ALMALAUREA		STELLA
	Pure	Total	Pure	Pure	Total	Pure	Pure	Total	Pure
	Is working and is not attending a LS/M course			Is working and is attending a LS/M course			Is working , Total		
Agriculture	27,9	31,7	22,7	15,5	14,6	8,3	43,4	46,3	31,0
Architecture	19,1	21,4	6,6	14,3	14,4	6,7	33,4	35,8	13,2
Chemistry, Pharmacy	25,3	28,8	22,3	9,2	9,5	4,8	34,5	38,3	27,1
Economics, Statistics	19,6	23,3	20,1	15,6	15,7	12,6	35,2	39,0	32,6
Education	41,1	43,1	43,6	18,8	18,5	16,7	59,9	61,6	60,3
Engineering	11,0	15,1	8,7	13,1	13,3	6,1	24,1	28,4	14,8
Foreign Languages	26,6	27,7	27,8	13,9	14,2	10,8	40,5	41,9	38,6
Geology, Biology ,Geography	7,1	9,4	8,9	12,8	13,0	4,1	19,9	22,4	13,1
Humanities	18,0	20,5	14,8	17,9	18,2	15,2	35,9	38,7	30,0
Law	14,1	17,6	13,4	18,6	19,0	9,0	32,7	36,6	22,4
Mathematics, Physics, Informatics	22,5	27,2	30,8	13,3	13,2	7,7	35,8	40,4	38,5
Medicine	81,9	82,9	84,9	2,2	2,4	2,6	84,1	85,3	87,6
Physical Education	37,9	41,5	37,3	28,1	26,3	12,2	66,0	67,8	49,5
Politics, Social Sciences	27,8	31,8	29,7	16,6	16,8	10,1	44,4	48,6	39,8
Psychology	7,5	10,5	8,6	26,1	27,2	14,8	33,6	37,7	23,3
GENERAL TOTAL	27,2	30,8	27,6	14,8	14,9	9,7	42,0	45,7	37,2

Source: own elaboration based on AlmaLaurea (2010) and STELLA (2010) data.

The *reasons for enrolling in a* **LS/M** *course* given by graduates of the medical group and of the geo-biological one show, in both surveys, that in both groups the idea of improvement prevails, as justification of their choice. For the medical group this has been indicated by 88% of AlmaLaurea respondents (both in the case of pure graduates and on the total), by 69% respondents in STELLA; for the geo-biological group the percentages are closer, namely in AlmaLaurea 60% (both for pure graduates and for the total), and in STELLA 50%. The conviction of the need for a further degree to find a job has a much smaller incidence, though with varying proportions in the two groups. In AlmaLaurea, these respondents are less than 4% (pure graduates and total) for the medical group, and close to 35% (pure graduates and total) for the geo-biological; in STELLA this answer is given by 25% of respondents in the medical group, and by 43% in the geo-biological group.

3. The forecasts of annual recruitment (Excelsior surveys)

The Excelsior survey, edited by Unioncamere, deals with recruitment forecasts as expressed by private companies. Hiring in public administration and self-employed work remain outside the counting; this is always to be taken into account, particularly when one compares with the total numbers of graduates. Surveys do not include an *a posteriori* check of forecasts, on the basis of actual recruitment.

The data in **Table 8** show how the estimated intake of different types of graduates by companies varied from 2006 to 2010.

Table 8: Excelsior forecasts on needs of enterprises

	A	B	C	D	E	F	G	H
			B/A		D/A	B/D		G/A
	Total graduates required	L required	% L on tot.	LS/M + pre-Bologna (long-cycle degree) required	% LS/M + pre-Bologna on tot.	% L on LS/M + pre-Bologna	Type not specified	% Type not specified on tot.
2006	59.400	8.750	14,7	31.850	53,6	27,5	18.800	31,6
2007	75.330	12.280	16,3	36.370	48,3	33,8	26.680	35,4
Variation % compared to 2006	26,8	40,3		14,2			41,9	
2008	88.000	18.380	20,9	40.650	46,2	45,2	28.970	32,9
Variation % compared to 2007	16,8	49,7		11,8			8,6	
2009	62.460	15.950	25,5	27.980	44,8	57,0	18.530	29,7
Variation % compared to 2008	-29,0	-13,2		-31,2			-36,0	
2010	68.800	12.880	18,7	30.390	44,2	42,4	25.530	37,1
Variation % compared to 2009	10,2	-19,2		8,6			37,8	

Source: own elaboration based on Excelsior data.

We note that the expected request for **L** graduates between 2006 and 2007, and between 2007 and 2008, reported a much larger percentual increase than for **LS/M** graduates; likewise, the decrease recorded in 2009 compared to 2008 was much weaker for **L** graduates than for **LS/M**. From 2007 to 2009 the quota of indifference to the type of degree decreased, slowly but steadily. Consequently, the two types of degree, while recording a quite different incidence rate, displayed an opposite trend: as a proportion of the total, the demands of **L** graduates have steadily increased, while for **LS/M** the percentage has been decreasing.

There is a different situation in 2010. The requests of **LS/M** graduates are still decreasing, this time very slightly, but there is a considerable increase in the indifference, and correspondingly an almost equal decrease of required **L** degrees. Giving an interpretation of this development is not easy, as one could assume that information on the characteristics of university degrees increases along the years, thus reducing the unspecified requests; it will be important to look at the trend in the coming years.

We also present, in **Table 9**, the graduates' requests for different subjects groups, referred to years 2006 and 2010 and reported respectively to **L**, to **LS/M**, or not specified.

To have some indications on employment changes, even in relationship to different subject groups, it may be interesting to examine the ratio between the requests and the number of graduates; this is made in **Table 10**. As already noted, only private employment is considered here.

It appears that for this recruitment there is an overall forecast of 12% for **L**, of almost 40% for **LS/M** (and pre-Bologna long-cycle degree); the differences among the groups are very considerable. In the Table we highlighted the highest values, both for **L** and for **LS/M** (and pre-Bologna long-cycle degree); in the latter case, it seems that for two groups there is even a shortage of graduates.

Table 9: Graduates' expected recruitments, years 2006 and 2010, by degree subject group

	L				LS/M and pre-Bologna long-cycle				Not specified			
	2006		2010		2006		2010		2006		2010	
	Recruitment of L graduates	% incidence L on tot.	Recruitment of L graduates	% incidence L on tot.	Recruitment of LS/M and pre-Bologna (long-cycle degree) graduates	% incidence LS/M + pre-Bologna on tot.	Recruitment of LS/M and pre-Bologna (long-cycle degree) graduates	% incidence LS/ M+ pre-Bologna on tot.	Recruitment of unspecified graduates	% incidence unspecified graduates	Recruitment of unspecified graduates	% incidence unspecified graduates
Total	**8.750**	**14,7**	**12.880**	**18,7**	**31.850**	**53,6**	**30.390**	**44,2**	**18.800**	**31,6**	**25.530**	**37,1**
Degree subject group												
Agriculture	11	4,5	11	5,3	150	60,2	101	48,3	88	35,4	97	46,4
Architecture	43	6,6	170	26,2	369	56,8	297	45,8	238	36,6	182	28,0
Chemistry, Pharmacy	293	7,2	343	9,3	3.018	74,2	2.607	70,3	758	18,6	760	20,5
Economics, Statistics	931	4,6	2.269	10,9	11.798	58	9.471	45,6	7.627	37,5	9.007	43,4
Education	1.123	51,8	1.284	24,4	483	22,3	1.419	27	563	25,9	2.556	48,6
Engineering	1.034	6,6	1.913	9,5	9.972	64,1	11.060	55,1	4.560	29,3	7.085	35,3
Foreign Languages	174	12,1	164	12,0	739	51,4	488	35,6	424	36,5	718	52,4
Geology, Biology, Geography	33	4,0	99	21,0	620	74,7	248	52,9	177	21,3	123	26,1
Humanities	77	6,0	92	13,3	778	60,8	463	67,1	526	33,2	135	19,6
Law	60	5,8	205	20,7	441	42,8	448	45,3	529	51,4	337	34,1
Mathematics, Physics, Informatics	64	4,9	137	8,7	788	60,6	598	38,1	447	34,4	835	53,2
Medicine	4.068	61,1	5.184	65,1	1.066	16,0	1.523	19,1	1.521	22,8	1.261	15,8
Physical Education	23	11,0	4	5,7	45	21,4	32	45,7	142	67,6	34	48,6
Politics, Social Sciences	200	27,8	152	15,0	311	43,2	332	32,8	209	29	526	52,1
Psychology	148	40,1	273	34,6	123	33,2	243	30,7	99	26,7	274	34,7
Subject group not specified	*468*	*18,7*	*580*	*17,9*	*1.149*	*45,8*	*1.060*	*32,7*	*892*	*35,5*	*1.600*	*49,4*

Source: own elaboration based on Excelsior data.

Table 10: Comparison between 2010 expected recruitments and graduates in 2009

	A	B	C	D	E	F	G	H	I	L
			A/B				D/F			H/I
	Recruitment of L graduates (Excelsior)[1]	Total L graduates	L: % demand on tot. L	Recruitment of LS/M + (pre-Bologna long-cycle degree) graduates (Excelsior)[1]	Total LS/M graduates	Total LS/M + pre-Bologna (long-cycle degree) graduates	LS/M + pre-Bologna: % demand on tot. LS/M + pre-Bologna	Recruitment of unspecified graduates (Excelsior)[1]	Graduates (all typologies)	All typologies: % demand on total
Degree subject group										
Total	**20.483**	**171.208**	**12**	**48.317**	**93.587**	**121.469**	**39,8**	**68.800**	**292.677**	**23,5**
Agriculture	21	2.929	0,7	189	1.984	2.437	7,8	210	5.366	3,9
Architecture	237	8.494	2,8	413	5.946	7.480	5,5	650	15.974	4,1
Chemistry, Pharmacy	432	2.427	17,8	3.278	4.130	4.733	69,3	3.710	7.160	51,8
Defence, security, military studies		407			440	440			847	0,0
Economics, Statistics	4.011	24.922	16,1	16.739	12.827	15.489	108,1	20.750	40.411	51,3
Education	2.499	7.795	32,1	2.761	1.668	7.593	36,4	5.260	15.388	34,2
Engineering	2.959	19.300	15,3	17.101	12.644	15.157	112,8	20.060	34.457	58,2
Foreign Languages	345	11.141	3,1	1.025	4.069	5.264	19,5	1.370	16.405	8,4
Geology, Biology, Geography	134	8.197	1,6	336	4.954	5.728	5,9	470	13.925	3,4
Humanities	114	16.192	0,7	576	6.765	9.436	6,1	690	25.628	2,7
Law	310	6.211	5,0	680	10.721	16.401	4,1	990	22.612	4,4
Mathematics, Physics, Informatics	293	5.149	5,7	1.277	2.639	3.022	42,2	1.570	8.171	19,2
Medicine	6.161	20.448	30,1	1.809	8.947	9.621	18,8	7.970	30.069	26,5
Physical Education	8	3.021	0,3	62	1.089	1.197	5,2	70	4.218	1,7
Politics, Social Sciences	317	26.968	1,2	693	9.786	11.774	5,9	1.010	38.742	2,6
Psychology	418	7.607	5,5	372	4.978	5.697	6,5	790	13.304	5,9
Subject group not specified	1.146			2.094				3.240		

Source: own elaboration based on Excelsior data.

N.B. – Elsewhere, pre-Bologna long-cycle graduates are not considered in this paper. Here we have to take them into account, as the Excelsior survey asks for requests of **LS/M** graduates added with pre-Bologna. Therefore, the relevant values of second level graduates are those in column F; we inserted column E just to show the figures for graduates of the "new" system.

[1] For a quota of Excelsior total recruitments (68.800), a preference for **L** or for **LS/M** (+ pre-Bologna long-cycle degree) has not been expressed; in the table, this quota has been divided between those two items according to the proportion established by the expressed options.

4. Final remarks

Before drawing some conclusions, we would like to underline how it would be desirable to have more complete and homogeneous data. Anyhow, we believe that the processing carried out here has greatly reduced the disadvantages caused by differences (in terms of methodology, wording of questions, analysis of replies) almost inevitably present in investigations carried out independently by different agencies. This was made possible also because the agencies themselves have provided useful and clarifying contributions (for which we are grateful) on some of the points where comparisons raised problems.

A set of results seems in fact indisputable, and the convergence of many data is particularly significant right because it is present despite the different methods adopted in acquiring the data. Referring, for **L**, to "pure" graduates (i.e., not considering the residuals of past situations), the following evidences may be pointed out.

- ➢ The percentage of **L** graduates who work, a year after the degree, is more than 40%, and among these a number between 25% and 34% is not, at the same time, enrolled in **LS/M**.
- ➢ The percentage of **L** graduates that continue their studies in **LS/M**, including those who work at the same time, is between 55% and 65%; among these, only a minority believes that a further degree is necessary to enter the labour market.
- ➢ Employment of **L** graduates, as well as the trend to continue their studies, are highly differentiated among the different subject groups.
- ➢ The reduction of employment between 2008 (graduates 2007) and 2009 (graduates 2008) has been much more relevant for **LS/M** that for **L**; for both types of degrees, it has been higher in STELLA universities than in AlmaLaurea.
- ➢ About the decrease between 2008 and 2009, an indication similar to the previous one emerges from Excelsior forecasts: -13, 2% for **L**, -31,2% for **LS/M**.
- ➢ Still from Excelsior surveys, a different trend in the forecasts appears for 2010; of course, for this year no checks *ex post* are possible as yet.

These results disprove widespread and not documented claims about an asserted uselessness of **L**, but at the same time we must understand that many problems are still open. As we have mentioned at the beginning of this paper, also at European level countries and H.E. institutions are warmly invited to examine closely the problems related to first level degrees: employability is at the top of the attention.

We expect to go on with further developments of this research, first of all collecting new information as soon as they are going to be available. In addition, we plan to analyse, also through meetings with privileged observers internal to the academic system as well as representative of the concerned stakeholders, the following points:

- ➢ specific reasons for strong differences in employment of **L** graduates of the various subject groups;
- ➢ territorial effects, to understand the meaning –if any– of different results between AlmaLaurea and STELLA[13];
- ➢ employment forecasts outside the companies (public administration, self-employed activities);
- ➢ degrees of correspondence between the skills acquired during the university period and those which are necessary, or useful, in the labour market;

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[13]AlmaLaurea, which analyses a very broad set of universities and which is territorially distributed in a somehow homogeneous way, has already highlighted strong differences between the different geographical areas. In particular, the percentage of those who, after **L**, continue their studies in **LS/M** is much higher in the southern area, where there is a lower supply of jobs.

> ➢ possible preferability, in cases where the **L** degree requires "applicative" completions, of one-year professional training programmes ("Master", according to Italian vocabulary), instead of **LS/M**.

We will also examine the possibility of concluding arrangements, for which preliminary contacts are under way, with regions or local institutions, in order to develop case studies at a regional level. The objective is to use also documents on the actual recruitment, starting from the "compulsory communications" which, by law, employers have to make to "Recruitment Agencies"; the interesting experience that the Chamber of Commerce is already conducting in Milan ("Specula" project) will be taken into account.

Of course, extension of information becomes an instrument to stimulate the universities, as well as all the constituencies involved in the private and the public system of the labour market, to the development of appropriate actions. Let us indicate some examples.

With regard to universities, the awareness about the real working outlets can (and should) lead to a careful monitoring of educational plans, with a permanent attention towards the efficacy of the various didactic regulations.

With regard to the private labour market, it will be necessary to consider the opening of precise indications in the national contracts: up to now, the consequences of the degree articulation have not been taken into account.

With regards to the public sector, the value of **L** degree is in theory fully recognized, but in practice this does not occur. Two directives of the Department of Public Function (a structure of the Presidency of the Council of Ministers) have made clear, in 2000 (Minister Bassanini) and in 2005 (Minister Baccini), what follows: in all cases in which previous legislation required a university degree for recruitment in public positions (i.e., former levels VII and VIII), the required title is now the **L** degree, while **LS/M** is only necessary for the leadership. Despite this indication, many calls by all kinds of administrations require **LS/M** also for not managerial positions.

Choices like these are highly questionable: in fact, it is very difficult that anyone will recognize the significance of the degrees given by the State, if the first one who does not recognize them it is the State itself.

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