

26th Report Occupational Condition of Graduates

2024 Summary Report

Supported by



Summary of the 26th Survey on the Occupational Condition of Graduates (the 2024 AlmaLaurea Report)

The 26th AlmaLaurea Survey on Occupational Condition of Graduates involved around 660,000 first and second-level graduates (two-year masters and single-cycle second-level graduates)¹ of 78 of the 82 Italian Universities that belonged to AlmaLaurea in June 2024.² More specifically, 279,000 were first and second-level graduates in 2022 involved one year after graduation; almost 124,000 were second-level graduates in 2020 involved three years after graduation; 119,000 were second-level graduates in 2018 involved five years after graduation; more than 76,000 and 62,000 were first-level graduates involved three and five years after graduation, in 2020 and 2018 respectively, and who did not continue their university education.

The graduates involved in the survey (excluding three- and five-year first-level graduates) were contacted using a dual survey technique, CAWI (Computer-Assisted Web Interviewing) and CATI (Computer-Assisted Telephone Interviewing). Indeed, the necessity to contain survey costs and the wide availability of e-mail addresses suggested contacting graduates via e-mail and inviting them to fill in a questionnaire hosted on the AlmaLaurea website. The CAWI survey was combined by the CATI as to contact those who did not respond to the online questionnaire. Such a twofold survey methodology - that is to say CAWI+CATI - led to an overall response rate of 78.1% among first and second-level graduates one year after graduation, 74.5% among second-level graduates three years after graduation and 75.6% among second-level graduates five years after graduation, measured in relation to graduates who were contacted with their consent in accordance with the GDPR (General Data Protection Regulation). First-level graduates at three and five years were exclusively contacted through a CAWI type survey instead, achieving response rates, based on the total number of emails sent, of 16.2% at three years and 12.0% at five years. This is naturally a lower rate given the methodology used and the population involved. The results were subject to a special statistical calibration procedure, so as to obtain estimates that were representative of all the graduates of the Italian Universities.³

This Summary highlights the most relevant aspects of the employment performance of first and second-level graduates.⁴ However, it should be noted that first-level graduates largely continue their studies by enrolling in a second-level course of study. Indeed, in the 2022 cohort this choice was made by 68.1% of respondents. This value is on the upswing (+0.9 percentage points compared to the same survey in 2022), continuing the upward trend observed for several years and interrupted only last year. The increase was a solid 12.9 percentage points compared to 2014, the year in which the lowest continuation rate in the 2008-2023 observation period was recorded according to AlmaLaurea surveys. Considering this evidence, in order to better monitor the employment outcomes of graduates, for first-

¹ Starting in 2015, AlmaLaurea has also been carrying out annual surveys on the Profile and Occupational Condition of PhD and Academic Master graduates. The results of the most recent surveys are available at www.almalaurea.it/en/our-data/almalaurea-surveys.

² On an annual basis, the graduates involved in the survey make up approximately 90% of all graduates of Italian non-online universities.

³ For details on the methodological aspects, see the Methodological Notes of the 25th Survey on the Occupational Condition of Graduates (2023 Report): www.almalaurea.it/sites/default/files/2023-11/almalaurea_occupazione_rapporto2023.pdf (in Italian).

⁴ Until the 2018 cohort, second-level graduates include two-year masters and single-cycle second-level graduates, as well as graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no. 249/2010). Due to its peculiarity and small size this population was instead excluded from the survey starting with the graduates of 2019. All the documentation processed is available, also separately by degree type, at www.almalaurea.it/en/our-data/almalaurea-surveys/graduates-employment-status.

level graduates it was considered appropriate to limit the analysis to those who did not enrol in another course of study after graduation (31.0% for 2022 graduates after one year).

Before presenting the main results of the AlmaLaurea survey, it is worth noting the general context of complexity and uncertainty, also in light of the Considerations of the Governor of the Bank of Italy.⁵ The economies of the global north, including Italy, were hit by large supply shocks as they dealt with a shift in the globalisation phase. More generally, there was a confluence of ongoing crises (“poly-crisis”) that affected the activities and expectations of both businesses and families, thus impacting the demand and supply of goods and services, including employment. This dual influence, which will have medium- and long-term manifestations, characterised both the recession and recovery phases and affected the labour markets where the services of young people and graduates are exchanged more strongly than others, for a variety of reasons. One of the primary reasons lies in the fact that human capital is accumulated over the long term (the period in which the younger generations seek employment) and is affected, more profoundly than other phenomena, by structural changes and the expectations of companies regarding other long-term variables, such as investment. Thus, the contextual factors that must be taken into account for an adequate assessment of the phenomenon being described are on the one hand the developments in macroeconomic measures and those concerning labour markets, which have influenced the demand for higher education and access to these markets, and on the other hand the changes in individual behaviour observed in the labour supply of various Countries after the pandemic. In this complex picture, it is young people and graduates who are most impacted by the critical issues of the Italian economy, which are structural and long-term. In the Final Considerations of the Governor of the Bank of Italy we read, among other things: “The evolution of wages has reflected the stagnation of productivity: hourly earnings of employees are now a quarter lower than in France and Germany. In per capita terms, real disposable household income is stationary at 2000, whereas in France and Germany it has increased by more than a fifth since then”.

In this context, the survey performed by AlmaLaurea in 2023 offers a complex snapshot of employment with trends that are not always linear among the various populations under consideration. The main indicators examined show a contraction in the capacity of the labour market to absorb new workers, evidenced in particular by the reduction in the employment rate, especially among recent graduates. On the other hand, job characteristics are showing some positive signs: in particular, permanent employment contracts and degree effectiveness levels are increasing. However, the salaries of university graduates continued to decline in 2023 due to still high levels of inflation. The analysis of the composition of the employment status separately among employed, unemployed, graduates continuing with their studies, and those not in the labour force shows how complex it is to discern which changes in the employment indicators can be attributed to contingent factors and which to structural developments in the labour market, on both the demand and supply sides. In this regard, on the demand side of note is the halt in the growth of gross investments recorded by Istat⁶ in 2023 (-1.3% compared to 2022), but also the complexity of the implementation of the NRRP (National Recovery and Resilience Plan), which contribute to justifying the drop observed in the employment rate among graduates. Moreover, this result is in line with the findings of the Unioncamere report “Graduates and

⁵ Bank of Italy (2024), *Final considerations of the Governor. Annual report. Year 2023*, 31 May 2024.

⁶ Analysis of ISTAT data (March 2024 Edition) on gross investment reported in the table “Components of Gross Domestic Product”, *National Accounts - Annual Data*, available at: <https://esploradati.istat.it/databrowser/#/en/dw/dashboards>.

employment”,⁷ which found a drop in the expected demand for graduates from private companies in 2023 (-1.9%) against a more generalised increase in expected hires (+6.4% overall). On the supply side, AlmaLaurea data confirm the evolution of a different approach of graduates vis-à-vis job searches, noting their greater selectivity. Specifically, graduates are less and less willing to take low-paying jobs or jobs that are not consistent with their education. In fact, one year after graduation among unemployed and job-seeking first and second-level graduates the share of those who would accept a salary of at least €1,250 was 38.1% and 32.9% respectively. These values were respectively down by 8.9 and 6.8 percentage points in the last year. Furthermore, 76.9% of first and 73.0% of second-level graduates declare themselves willing to accept a job that is not consistent with their studies. Here, too, these values are respectively down by 5.9 and 3.0 percentage points versus the past year. This is also associated with an increase in the share of those who say they are not working and not looking for work due to a lack of job opportunities.

1. Employment rate

In 2023 there was a general decline in employment levels compared to the previous year, interrupting the positive trend in the employment rate observed in recent years. The only exceptions were first-level graduates three and, above all, five years after graduation, among whom the employment rate in 2023 reached the highest values observed in more than a decade. Note however that for all populations studied employment levels in 2023 remained higher than or in line with those observed in the years immediately preceding the pandemic.

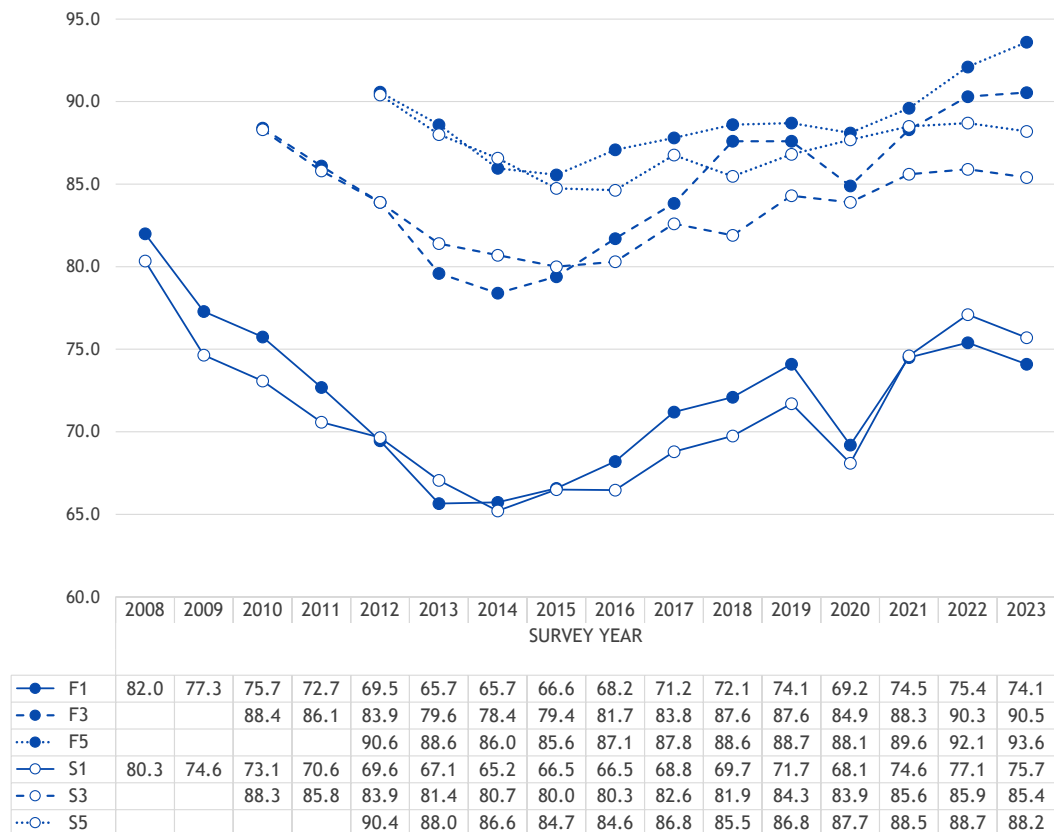
In detail, the employment rate in 2023 was 74.1% among first-level graduates one year after graduation, and 75.7% among second-level graduates in 2022 after the same amount of time (Figure 1). These values were down compared to last year (-1.3 and -1.4 percentage points, respectively).

Graduates three and five years after graduation show decidedly high levels of employment. In detail, three years after graduation, the employment rate reached 90.5% among first-level graduates and 85.4% among second-level graduates (+0.2 and -0.5 percentage points respectively compared to 2022).

Five years after graduation, the employment rate was 93.6% for first-level graduates and 88.2% for second-level graduates. The comparison with previous surveys confirms the improving trend in the employment levels of first-level graduates, which in 2023 reach the highest value observed in more than a decade (last year the increase was 1.5 percentage points). In contrast, among second-level graduates the employment rate was down compared to the 2022 survey (-0.5 percentage points), although it remains very high.

⁷ Unioncamere - ANPAL (2023), *Graduates and employment. The professional opportunities for graduates in companies. 2023 survey*. Sistema informativo Excelsior.

Figure 1 - 2007-2022 graduates surveyed one, three and five years after graduation: employment rate by degree type. Survey years 2008-2023 (percentage values)



Legend

F: first-level; S: second-level;

1: one year after graduation; 3: three years after graduation; 5: five years after graduation.

Note: as for the first-level, only graduates not enrolled in another course of study were considered. Until the 2018 cohort, second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no. 249/2010).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

1.1. Employment rate insight: outcomes of a logistic regression model

The employment outcomes of graduates show strong differentiations that in general involve both first and second-level graduates. In particular, these differences relate to gender, geographic area of residence as well as the completed course of study.

In order to jointly analyse the factors that generally affect the probability of being employed, a logistic regression model was used. Both first-level graduates and second-level graduates from 2022 were considered and interviewed one year after obtaining their degree. Among first-level graduates, the analysis is limited to those who did not continue their education by enrolling in another course of study.⁸

The analysis presented below looks at factors linked to socio-demographic aspects (gender; parents' qualifications; geographic area of residence), high school/secondary school diploma mark, university qualifications (degree type; field of study; geographic area of the university; age at

⁸ The model does not consider those already working at the time of graduation and those living abroad.

graduation; degree completion time; exam marks) and experience and skills acquired during the study period (internships/curricular traineeships; experiences of study abroad or work; computer skills). Consideration was also given to job orientation training initiatives⁹ and attention was paid to the aspirations and inclinations declared by the graduates on the eve of the end of their studies (intent to pursue their studies, willingness to travel for business, expectations regarding the job they intend to seek after graduation, in terms of acquisition of professional skills and relevance to cultural interests).¹⁰

As Table 1 shows (the only significant variables), the course of study completed has an effect on the employment opportunities of new graduates. In fact, all other things being equal, the most favoured are graduates from the information and communication technologies (ICTs), as well as those from the health and pharmacy; engineering and engineering trades; architecture and construction field of study. In addition to these there are the natural sciences, mathematics, physics and statistics, as well as education, agriculture, forestry and veterinary, but also economics field of study. Less favoured graduates are those graduated in psychology, law, as well as humanities and literature, and, finally, arts and design field of study.

Furthermore, it can be observed that, all other conditions being equal, second-level degrees show greater employment opportunities one year after graduation. As a result, second-level graduates are 40.6% more likely to be employed than first-level graduates. However, this result has to be treated with extreme caution, since profoundly different populations are being compared, both in terms of the educational path undertaken and in terms of professional and study prospects. Indeed, among second-level graduates there is a notable proportion of those who engage in activities preparatory to work as freelance professionals, such as internships or specialisation schools, which if paid raise employment levels.

The gender analysis shows that, all else being equal, men are better off (15.2% more likely to be employed than women). The traditional gender differences in terms of employment are thus confirmed as significant, with men once again having an advantage over women.¹¹

Territorial differences in terms of geographical breakdown of both residence and study are also significant. In detail, those who reside in the North are more likely to be employed (+20.8%) than those who reside in the South. Similarly, as regards the geographical breakdown of where the students went to school, graduates from the North are 39.3% more likely to be employed than those in the South.

Although the analysis leads to the estimation of a limited influence, graduates from families in which at least one parent has a degree show a lower probability of employment (-9.4%) one year after graduation, compared to those who have parents with a non-university degree. The hypothesis

⁹ Consideration was given to the satisfaction expressed by graduates upon graduation with respect to the initiatives organised by the University, including for example help with preparing CVs and company presentations in the classroom.

¹⁰ Factors that were taken into account but were not found to be significant include those related to the socio-economic background of the family of origin and to the aspects of pre-university studies (type of diploma), as well as mobility for study purposes, knowledge of foreign languages and expectations of the job sought related to: earning prospects, career opportunities, independence and autonomy, prestige, opportunities for contacts abroad, possibility of making the best use of the skills acquired during studies, social utility of the job, job security, free time, relationship with colleagues in the workplace and workplace (i.e. location and related physical characteristics). In contrast, the following factors were excluded from the model given their negligible contribution: expectations about the job sought related to coherence with studies completed, involvement and participation in work and decision-making processes, flexibility of working hours and willingness to work part-time.

¹¹ Gender differences are also evident with regard to different aspects of the work performed. On this topic, in January 2022 AlmaLaurea published the Report "Male and female graduates: professional choices, experiences and achievements", www.alma laurea.it/i-dati/le-nostre-indagini/indagini-tematiche/laureate-e-laureati-scelte-esperienze-e-realizzazioni-professionali (in Italian).

embedded in this result is that the family context allows graduates to choose to delay entry into the labour market while waiting for a better placement. This is part of a broader context in which the family of origin influences both the educational and occupational choices of graduates. In this regard, specific studies have compared the university studies of graduates with those of their parents, highlighting how the phenomenon of inheritance of the degree is especially widespread among graduates (i.e. medicine and law) which give access to the freelance profession.¹² Moreover, such courses of study require a further cycle of specialisation in order to enter into freelance work.

The analyses reveal interesting results on employment opportunities one year after graduation as a function of study performance. As calculated by taking into account their distribution by university, field of study and degree class, exam marks have a positive effect on employment opportunities. For instance, the chance of being employed one year after graduation increases by 5.2% for those with scores above the median value of their reference group. Compliance with the deadlines set by the regulations for the completion of the course of study also favours better employment opportunities. Compared to those who graduate at least one year late, graduates who finish their studies on time are 8.4% more likely to be employed. Finally, all things being equal, as the age at graduation increases, the probability of being employed decreases (-3.6% for each additional year). This is connected with the fact that those who enter the labour market at a younger age probably have more "attractive" prospects and availability to employers even on a contractual basis.

High school graduation mark also has a positive impact on the probability of being employed (+0.4% for each additional point).

There are also several experiences gained during the course of study that increase employment possibilities. Those who have done a curricular internship are, *ceteris paribus*, 6.6% more likely to be employed one year after graduation than those who have not performed such an activity. Similarly, those who have spent a period of study abroad recognised by their course of study¹³ are more likely to be employed (+17.1%) than those who have not gained any experience outside their home country.

¹² AlmaLaurea (2024), 26th Graduate Profile Survey 2023. Summary of the 2024 Report, www.almalaurea.it/en/our-data/almalaurea-surveys/graduates-profile.

¹³ These are study experiences within the framework of a European Union programme (i.e. Erasmus) and other programmes recognised by the course (i.e. Overseas).

Table 1 - 2022 first and second-level graduates interviewed one year after graduation: logistical regression model for the assessment the probability of being employed. Survey year 2023

	b	S.E.	Exp(b)
Gender (female=0)			
male	0.142	0.019	1.152
At least one parent with a university degree (no=0)			
yes	-0.099	0.019	0.906
Geographic area of residence (South=0)			
North	0.189	0.031	1.208
Centre	0.143	0.033	1.153
High school/secondary school diploma mark (in hundredths)			
	0.004	0.001	1.004
Degree type (First-Level=0)			
Second-Level	0.341	0.022	1.406
Field of study (Politics, social sciences and communications=0)			
Agriculture, forestry and veterinary	0.556	0.065	1.745
Architecture and construction	1.069	0.057	2.913
Arts and design	-0.207	0.054	0.813
Economics	0.541	0.037	1.718
Education	0.571	0.046	1.770
Law	-0.282	0.040	0.754
Information and communication technologies (ICTs)	1.557	0.107	4.743
Engineering and engineering trades	1.328	0.047	3.775
Humanities and literature	-0.269	0.049	0.764
Foreign languages**	0.039	0.044	1.040
Health and pharmacy	1.510	0.038	4.528
Psychology	-0.606	0.048	0.546
Natural sciences, mathematics, physics and statistics	0.621	0.043	1.861
Sports sciences and physical education**	-0.004	0.069	0.996
Geographic area of university (South=0)			
North	0.331	0.031	1.393
Centre	0.261	0.033	1.298
Age at graduation			
	-0.037	0.003	0.964
Degree completion time (1 or more years late=0)			
on time	0.081	0.020	1.084
Exam mark (below the median value=0)			
mark above or equal to the median value	0.050	0.019	1.052
Internships organised by the course of study (no=0)			
yes	0.063	0.020	1.066
Work during studies (no=0)			
yes	0.188	0.018	1.207
Studied abroad during the course of study (no experience=0)			
study abroad recognised by the course of study	0.158	0.027	1.171
personal initiative**	0.169	0.104	1.184
Number of known IT tools (almost 2 IT tools=0)			
3 or 4 IT tools	0.144	0.026	1.155
5 or more IT tools	0.217	0.023	1.242
Participation in job orientation training initiatives organised by the University (not participate=0)			
yes*	0.037	0.018	1.038
Plan to pursue post-graduate studies (yes=0)			
no	0.351	0.019	1.421
Willingness to travel for business (no=0)			
yes	0.219	0.043	1.245
Aspects important for job-seeking: acquisition of professional skills (no=0)			
yes	0.178	0.023	1.194
Aspects important for job-seeking: relevance to cultural interests (no=0)			
yes	-0.110	0.018	0.896
Constant	-0.444	0.123	0.641

Note: Correct classification rate of 66.9%; N=78,308; R2 Nagelkerke=0.163.

* Significance at 5% (p<0.05) - ** Not significant

Where not explicitly stated, parameters significant at 1% (p<0.01).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

Work experience while going to university, regardless of its nature and continuity, has a positive effect on employment opportunities one year after graduation. All other things being equal, those who worked during their studies are 20.7% more likely to be employed than those who graduated without any work experience. It is worth remembering that in this specific study only the employment opportunities of graduates were considered, without taking into account the characteristics of the job found. Therefore, the results just described suggest that work experience of any kind - even if not consistent with the course of study - helps graduates find employment more easily after graduation.

Computer skills also have a positive effect on the possibility of finding a job within the first year after graduation: the likelihood of being employed among those who know at least five IT and digital tools is 24.4% higher than among those who know at most two tools, confirming that knowledge of IT and digital tools has become essential in today's society. A specific study carried out by AlmaLaurea investigated knowledge of IT tools at a gender level, which highlighted the existence of differences in employment performance and job characteristics.¹⁴

There are also initiatives organised by universities to support the university-work transition, which are found to increase the likelihood of employment one year after graduation. This in-depth study focused in particular on job orientation training initiatives organised by the University. Those who reported having participated in such initiatives at the time of graduation are more likely to be employed (+3.8%) one year after graduation than those who did not take advantage of them.

As might be expected, those who, at the time of obtaining their degree, declared that they did not intend to continue their studies are more likely to be employed than those who expressed the intention of continuing their studies (+42.1%).

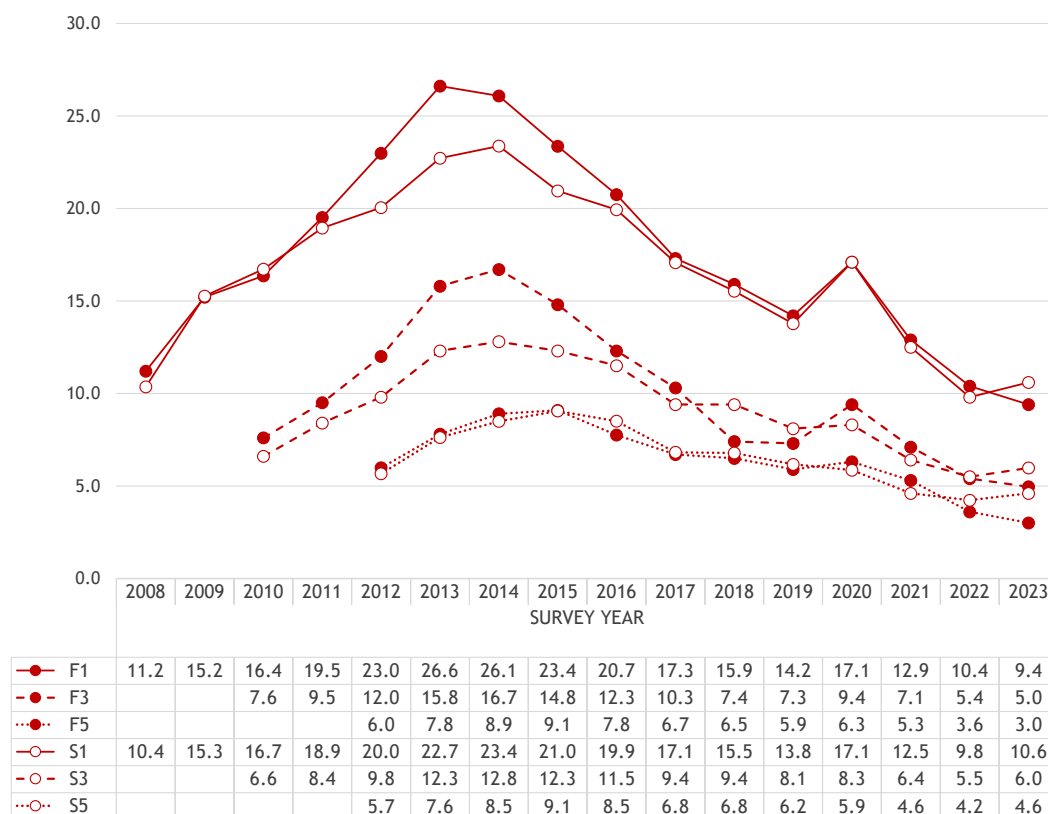
According to the statements they made on the eve of finishing their studies, some aspects of the job that graduates intend to seek were also significant. All other things being equal, those who in their job search attributed a high degree of importance ("definitely yes") to the acquisition of professional skills (+19.4%) were more likely to be employed one year after graduation, an aspect for which a faster entry into the labour market is important in order to gain experience and acquire skills. The willingness to travel for business is also rewarding in terms of employment (+24.5% more likely than those who do not declare this willingness), regardless of the frequency. On the other hand, there is a lower probability of employment for those who consider important to the relevance to interests (-10.4%), an aspect that probably leads graduates to be more selective while searching for a job.

¹⁴ Girotti C. and Binassi S. (2020), *Computer Skills and Employment. A Comparative Gender Study*", in Colombo M. and Salmieri L. (eds.), *The Education of Gender. The Gender of Education. Sociological Research in Italy*, p. 111.

2. Unemployment rate

In 2023, one year after graduation the unemployment rate was 9.4% for first-level graduates and 10.6% for second-level graduates (Figure 2). This result confirms the improvement observed for first-level graduates in recent years, showing a contraction compared to the values observed in 2022 (-1.0 percentage points). Among second-level graduates, on the other hand, an increase was recorded in the last year (+0.8 percentage points), breaking the downward trend in unemployment.

Figure 2 - 2007-2022 graduates surveyed one, three and five years after graduation: unemployment rate by degree type. Survey years 2008-2023 (percentage values)



Legend

F: first-level; S: second-level;

1: one year after graduation; 3: three years after graduation; 5: five years after graduation.

Note: as for the first-level, only graduates not enrolled in another course of study were considered. Until the 2018 cohort, second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no. 249/2010).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

Since the unemployment rate is calculated with respect to the labour force, i.e. those who have entered the labour market either because they are employed or because they are actively looking for a job, a complete analysis of the phenomenon requires taking into account its relative size. In 2023, one year after graduation, 81.7% of first-level graduates and 84.7% of second-level graduates were in the labour force. Compared to the 2022 survey, the share of the workforce was down (-2.5 percentage points for first-level graduates and -0.8 percentage points for second-level graduates).

Three years after graduation, the unemployment rate is lower than at one year and is 5.0% for first-level graduates (-0.4 percentage points compared to the 2022 survey) and 6.0% for second-level graduates (+0.5 points). The labour force, which has remained substantially stable over the past year, exceeds 90% among both first-level graduates (95.3%) and second-level graduates (90.8%).

Unemployment levels five years after graduation stand at 3.0% among first-level graduates (-0.6 percentage points compared to the 2022 survey) and 4.6% among second-level graduates (+0.4 points). The analysis of the labour force five years after graduation shows quotas of 96.4% for first-level graduates and 92.5% for second-level graduates, confirming the upward trend among the former and the substantial stability for the latter observed in recent years.

3. Job characteristics: definition of the cohort under examination and availability of documentation

In this 2024 Report work characteristics are analysed for all those who declare that they are engaged in paid employment, including post-graduate training such as internships, doctorates, professional schools.¹⁵ This approach was adopted starting with the 2023 Report, after the necessary studies to assess its impact, as documented in previous reports. Depending on the degree type and the course of study completed, there are also relevant differences in the size of the cohort being analysed, particularly accentuated in those fields of study where such training activities are widespread. However, it is true that the levels of the individual indicators examined do not change appreciably.¹⁶ In this regard, while this new approach was adopted starting with the 2023 Report, the survey questionnaire was modified in 2018 and therefore it is possible to analyse six years of data.

4. Types of work

The predominant forms of employment among graduates employed one year after graduation (Figure 3) are permanent employment contracts (34.9% among employed first-level graduates and 26.5% among employed second-level graduates), fixed-term contracts (30.0% and 25.1%, respectively) and training contracts¹⁷ (17.5% and 25.0%, respectively). Conversely, 10.1% of first-level and 8.4% of second-level employed graduates are self-employed. As might be expected, activities supported by a scholarship or research fellowship¹⁸ are most common among second-level graduates (8.8%), while they are residual among first-level graduates (0.3%). Undocumented employment affects 1.1% of first-level and 0.9% of second-level graduates. Finally, the other contractual forms¹⁹ concern 5.9% and 5.2% of the employed respectively.

¹⁵ Until the 2022 Report, these characteristics were only examined for those who declared to be in paid employment (thus excluding postgraduate studies). The change in the definition of the cohort under analysis is justified by the opportunity to align the AlmaLaurea survey with Istat's approach as far as possible in the most recent survey on graduates and in the Labour Force survey.

¹⁶ The changes made to the survey questionnaire between 2018 and 2022 enabled the consistency of the indicators to be checked. For details on methodological aspects see the Methodological Notes published at: www.almalaurea.it/sites/default/files/2023-11/almalaurea_occupazione_rapporto2023.pdf (in Italian).

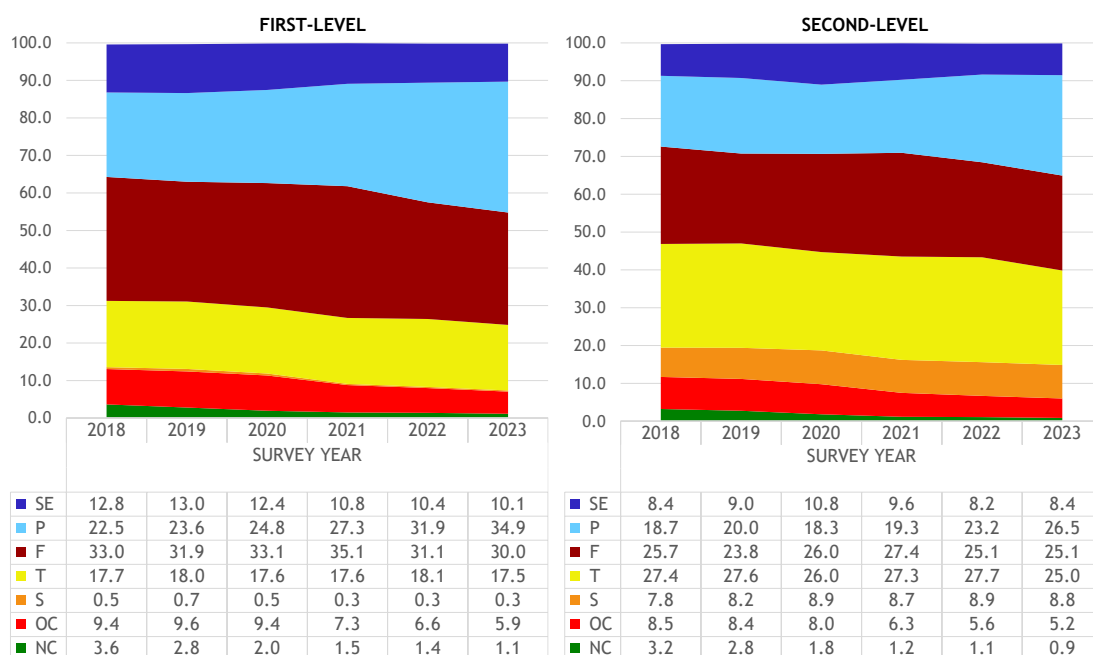
¹⁷ These include apprenticeships and in-company internships.

¹⁸ More specifically, scholarships or research grants, work grants and research fellowships.

¹⁹ These include coordinated and continuous collaborations, occasional collaborations and intermittent or on-call work.

A comparison with the surveys of previous years shows trends that are not always linear, often differentiated between first and second-level graduates and difficult to fully explain given the multiplicity of factors that affect the results. Here we simply highlight that the upward trend in permanent contracts for both cohorts surveyed continued (compared to the 2022 survey, +3.0 percentage points for first-level graduates and +3.3 points for second-level graduates). In the last year, on the other hand, training contracts were down, especially among second-level graduates (-2.7 points; -0.6 points among first-level graduates). Fixed-term contracts, on the other hand, were down among first-level graduates (-1.1 percentage points) and stable among second-level graduates.

Figure 3 - 2017-2022 graduates employed one year after graduation: type of work by degree type. Survey years 2018-2023 (percentage values)



Legend

SE: self-employment; P: permanent contract; F: fixed-term contract; T: training contracts; S: scholarship or research fellowship; OC: other contract; NC: no contract. The sum of the percentages may be less than 100 due to non-responses.

Note: as for the first-level, only graduates not enrolled in another course of study were considered. Until the 2018 cohort, second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no. 249/2010).

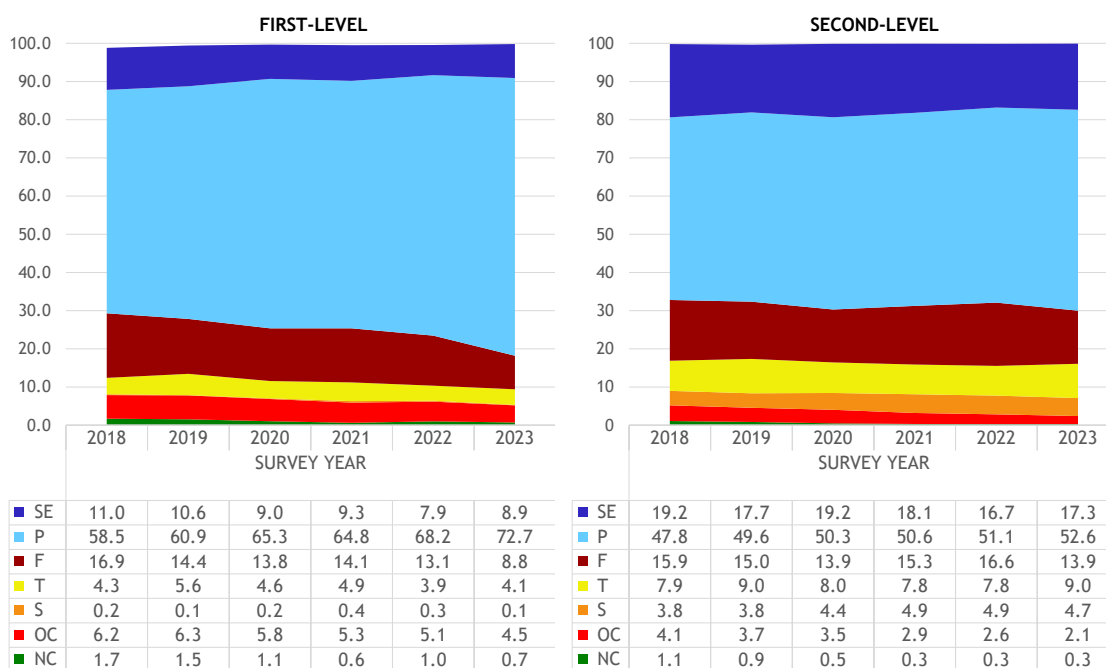
Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

Extending the period of observation beyond the first year after graduation allows a more complete assessment of the characteristics of the type of work. Three years after graduation, permanent employment contracts had been given to 58.7% of first-level graduates and 41.3% of second-level graduates. Three years after graduation fixed-term employment contracts (14.1% among first-level graduates and 19.0% among second-level graduates) and training contracts (11.4% and 15.5%, respectively) remain widespread. Conversely, 7.9% of first-level graduates and 12.9% of second-level graduates are self-employed. Once again, the activities supported by a scholarship or research fellowship are more prevalent among second-level graduates (7.9%), being decidedly negligible among first-level graduates (0.3%).

Among 2018 graduates, five years after receiving their degree (Figure 4) the share of those employed with a permanent contract exceeds half of those in employment and even reaches 72.7% among first-level graduates and 52.6% among second-level graduates. 8.8% of first- and 13.9% of second-level graduates are employed with fixed-term contracts, while training contracts involve 4.1% and 9.0% of the employed respectively. On the other hand, self-employment concerns 8.9% of first-level and a good 17.3% of second-level employed graduates. Fewer than 1% of the employed were engaged in undocumented jobs (0.7% among first-level graduates and 0.3% among second-level graduates). All other contractual forms are rather limited, showing percentages of less than 5%.

An increase in permanent employment contracts is recorded compared to the 2022 survey especially for first-level graduates (+4.5 percentage points, +1.5 for second-level graduates), and self-employment (+1.0 and +0.6 points, respectively). Fixed-term contracts, on the other hand, registered a contraction (-4.3 percentage points for first-level graduates and -2.7 points for second-level graduates).

Figure 4 - 2013-2018 graduates employed five years after graduation: type of work by degree type. Survey years 2018-2023 (percentage values)



Legend

SE: self-employment; P: permanent contract; F: fixed-term contract; T: training contracts; S: scholarship or research fellowship; OC: other contract; NC: no contract. The sum of the percentages may be less than 100 due to non-responses.

Note: as for the first-level, only graduates not enrolled in another course of study were considered; second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no 249/2010).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

4.1. Smart working and other forms to work remotely

Smart working, together with teleworking, represents a form of work that has existed in our Country for some time,²⁰ but before the outbreak of the Covid-19 pandemic had not been used much by Italian companies. In recent years, however, there has been a sharp increase in remote workers. In fact, the health emergency led to a sudden and strong recourse to this working method, the prevalence of which subsequently fell following the containment of the pandemic. However, today smart working remains widespread and is now a structured form of work within companies, albeit with a varying intensity in the public and private sectors. According to the Smart Working Observatory of the Milan Polytechnic,²¹ smart working was confirmed to be on the rise in 2023, especially in large companies, where almost all of them use it (96%, versus 91% in 2022). While the levels are much lower, this working method is also on the rise in the public administration (61%, up from 57% in 2022) and in small and medium-sized enterprises (56%, up from 48% in 2022). Furthermore, almost all large companies plan to continue smart working in the future (only 6% are uncertain), while in the public administration and in small and medium-sized enterprises there is greater uncertainty: 20% and 19% respectively do not know whether smart working will be continued in the coming years.

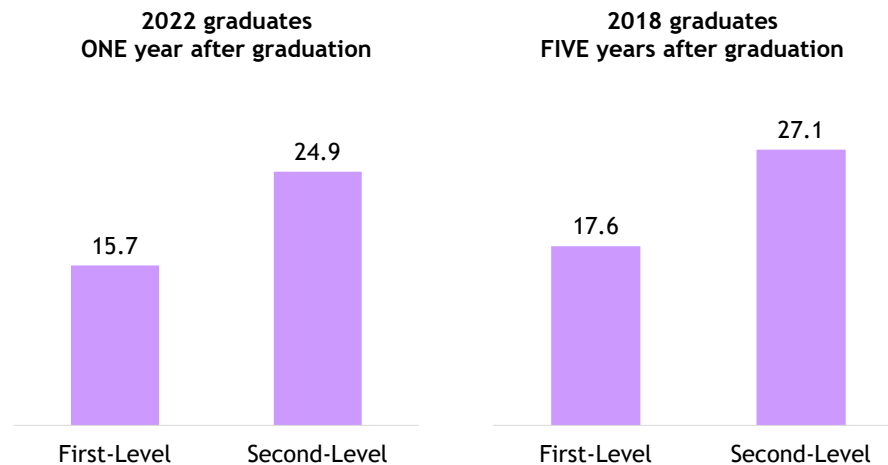
The 2023 AlmaLaurea survey shows that smart working and, more generally, remote work, involves a total of 15.7% of first-level graduates and 24.9% of second-level graduates employed one year after graduation (Figure 5). Although these figures show a downward trend in the prevalence of smart working following a gradual return to normality after the emergency (compared to what was observed in 2022, -1.3 percentage points among first-level graduates and -2.7 points among second-level graduates), this working method is nevertheless more widespread than what was observed before the outbreak of the pandemic.

The trends were also broadly confirmed among 2018 graduates employed five years after graduation, where the percentages are 17.6% among first-level graduates and 27.1% among second-level graduates, again showing a decline in the last year (-1.4 and -4.0 percentage points, respectively).

²⁰ With reference to Italian legislation (Law no. 81/2017), 'smart working' or 'lavoro agile' refers to an employee-employer agreement according, which working activities are performed partly on company premises and partly without a fixed location, within the limits of the maximum daily and weekly working time deriving from the law and national collective agreements. On the other hand, the so called 'telelavoro' (remote working) has been active in our country for longer and has been differentially regulated between the public and private sectors.

²¹ Smart Working Observatory of Milan Polytechnic (2023), *Refocusing on Smart Working: necessity, convention or conscious choice?* www.osservatori.net/it/ricerche/comunicati-stampa/smart-working-italia-numeri-trend (in Italian).

Figure 5 - 2022 and 2018 graduates employed one and five years after graduation: proportion of teleworkers by degree type and years since graduation (percentage values)



Note: as for the first-level, only graduates not enrolled in another course of study were considered; 2018 second-level graduates, five years out, also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no 249/2010).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

For the ease of reading, we will hereinafter refer to “smart working” as employed or self-employed activities carried out remotely. Here we will limit ourselves to noting that telelavoro is definitely less widespread. In fact, overall, one year out it concerns 0.5% of first-level graduates and 0.9% of second-level graduates. By contrast, there is a greater use of smart working (8.2% and 12.9% respectively) or, for self-employed activities, remote working (7.0% and 11.2% respectively).

Teleworkers more frequently pursue an intellectual, scientific and highly specialised profession. They work more often in the private sector, less so in the public sector.

They are relatively more employed in the computer science, professional consulting, communications as well as credit and insurance branches. In contrast, they are relatively less employed in those areas where a physical presence in the workplace is usually required, i.e. in the healthcare, commerce and education and research branches.

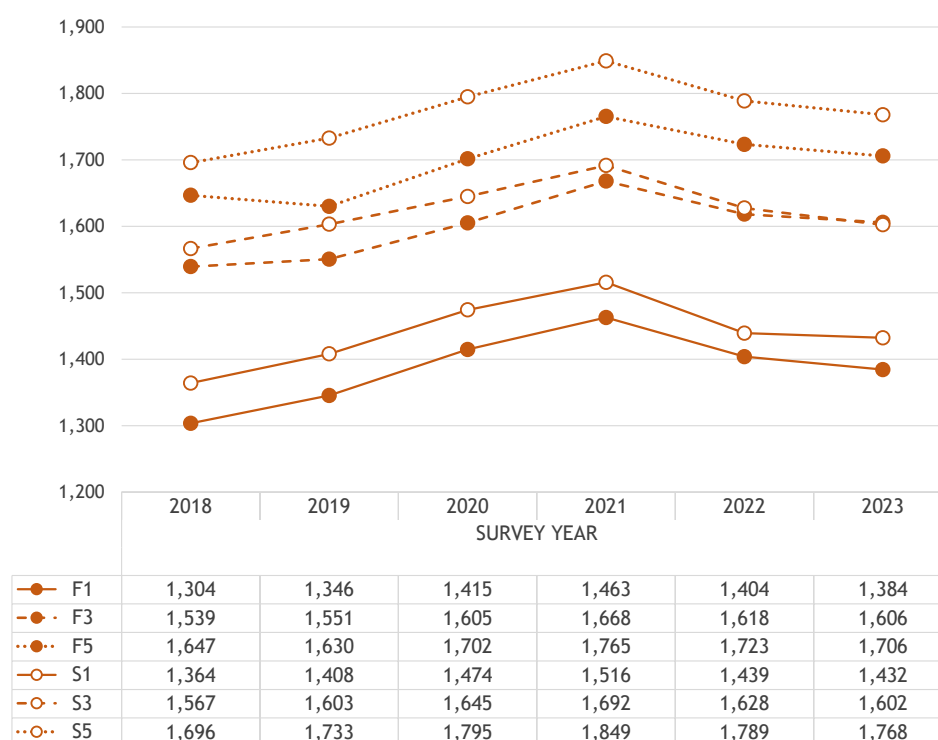
In terms of type of employment, to a greater extent those who work remotely have a permanent employment contract, while fixed-term contracts are less frequent. These results are generally confirmed for both first and second-level graduates one and five years after graduation.

5. Salaries

The analysis of remuneration must necessarily take into account the levels of inflation that also characterised 2023, mainly due to the consequences of continuing geopolitical instability. In fact, for all cohorts examined, net monthly wages in 2023 were found to be growing in nominal terms, i.e. taking into account the values actually collected from the graduates' responses in their interviews. However, the changed purchasing power had repercussions on the economic landscape. In fact, in real terms salary levels contracted across the board in 2023, confirming the situation highlighted last year of a counter-trend to the increases recorded up to 2021. Therefore, it is deemed appropriate to only analyse real wages below.

More specifically, in 2023, one year after graduation the net monthly salary was on average equal to €1,384 for first-level graduates and €1,432 for second-level graduates (Figure 6). As mentioned above, these values appear to have fallen in real terms over the past year by 1.4% for first-level graduates and 0.5% for second-level graduates.

Figure 6 - 2013-2022 graduates employed one, three and five years after graduation: net monthly earnings by degree type. Survey years 2018-2023 (values revalued according to ISTAT consumer price indices; average values in euros)



Legend

F: first-level; S: second-level;

1: one year after graduation; 3: three years after graduation; 5: five years after graduation.

Note: as for the first-level, only graduates not enrolled in another course of study were considered. Until the 2018 cohort, second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no. 249/2010).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

These salary levels are inevitably affected by the different proportion of part-time work, which in 2023 involved 18.4% of first-level graduates and 13.8% of second-level graduates. These values have

been on a downward trend for several years now, although compared to 2022 the decline is very small (-0.2 and -0.4 percentage points, respectively). In any case, these values do not influence the salary trends illustrated. On the other hand, the different proportion of part-time work has an impact on the pay differentials between first and second-level graduates: in 2023 the latter receive a net monthly salary 3.5% higher than first-level graduates, but if we isolate those who work full-time the pay differential drops to 1.2%.

Three years after graduation the net monthly salary reaches €1,606 for first-level graduates and €1,602 for second-level graduates, registering a drop in the last year (-0.7% and -1.6%, respectively).

Five years after graduation, the net monthly salary is €1,706 for first-level graduates and €1,768 for second-level graduates. Even five years after graduation, there was a decrease in salaries compared to the similar survey in 2022: -1.0% for first-level graduates and -1.2% for second-level graduates.

Here, too, it is worth taking into account the varying prevalence of part-time work, which in 2023 involved 11.4% of first-level graduates and 6.4% of second-level graduates (compared to 2022, -0.9 percentage points for first-level graduates and -0.6 points for second-level graduates). The different proportion of part-time work has no impact on the observed salary trends, while confirming the effect on the differential observed between first and second-level graduates. The latter receive a net monthly salary that is 3.6% higher than that of first-level graduates. However, if the comparison is restricted to those working full-time, the salary differential drops to 1.7%.

5.1. An additional salary insight: outcomes of a linear regression model

A linear regression model was used to analyse the multiple factors affecting graduates' net monthly earnings. The approach followed is similar to that described in section 1.1 for the assessment of the probability of being employed, although with some peculiarities related to the different phenomenon under investigation. The 2022 graduates were thus considered and interviewed one year after obtaining their degree. Such group included both first-level graduates - who did not continue their education by enrolling in a course of study, and second-level graduates - who were contacted one year after obtaining their degree.²²

The analysis considers factors related to gender, *geographic area of residence*, *family of origin (parents' qualifications)*, *high school/secondary school diploma mark* and university degree (degree type, field of study). Also considered were experience acquired during university studies (*work experience or study abroad*), *language and computer skills acquired during studies*, as well as *motivation for enrolling at the university*. In view of its descriptive nature, the model also considers some characteristics of the work performed, which are closely linked to the wages of the graduates (geographic area of work, full/part-time, also in its distinction between voluntary and involuntary, average number of hours worked per week, type of work, company's sector and branch of economic activity, profession performed), as well as *geographic mobility for work purposes*. These are concomitant factors, which have been included for merely descriptive reasons.²³

²² As with the in-depth study of the probability of being employed, the model does not include those who were already working at the time of graduation and those living abroad.

²³ The variables in italics were included in the model but not shown in Table 2 for reasons of simplification given their modest contribution. Also considered, but not found to be significant, were age at graduation, willingness to travel for business, expectations for the job sought with respect to relations with colleagues in the workplace, independence and autonomy, coherence with studies

The model shown in Table 2 spotted evident differentiations by degree type, which were already highlighted by the descriptive analyses previously discussed. All else being equal, compared to a first-level degree, obtaining a second-level degree allows on average an estimated monthly net bonus payment of €115.

All other things being equal, the field of study also has a decisive effect on the pay differentials of recent graduates. Compared to graduates of the politics, social sciences and communications field of study, graduates receive, on average, significantly higher salaries come from the health and pharmacy (+€310 net per month), information and communication technologies ICTs (+€184), engineering and engineering trades (+€175), economics (+€104), as well as natural sciences, mathematics, physics and statistics (+€86) and education (+€64). On the other hand, graduates in psychology are at a greater disadvantage in terms of salary (-€73 net per month).

The traditional gender differences are noticeable; in fact, the model estimates that, all else being equal, men earn a net average of €72 more per month one year after graduation.

Pay differences are also found in geographical terms: compared to those employed in the South, those working in the North earn on average a net €40 more per month, while those working in the Centre earn €26 more. But it is above all among graduates working abroad that the pay advantage is considerably marked (more than €661 net per month more than those working in the South). However, it is worth remembering the differences in the cost of living that characterise different countries and regions within the same country, thus having an impact on wages, as also underscored in various studies on AlmaLaurea data.²⁴

completed, acquisition of professional skills, free time, flexibility of working hours, possibility of making the best use of skills acquired during studies, as well as the presence of children and participation in the definition of the company's objectives/strategies. Conversely, the following factors were excluded from the model given their negligible contribution: socio-economic background of the family of origin, aspects of pre-university studies (type of diploma), geographic area of university, geographic mobility for study purposes, the declared intention at graduation to continue studies, degree completion time, exam marks, internship experiences during studies, expectations of the job sought with respect to earning prospects, career prospects, social utility of the job, prestige, job security, opportunities for contacts abroad, involvement and participation in work and decision-making processes, relevance to cultural interests, workplace (i.e. location and physical characteristics), as well as the time it takes to enter the job market and certain factors related to the work performed (coordination of work done by others, use of smart working, use of digital platforms and effectiveness of the degree).

²⁴ See among others Chiesi A. M. and Girotti C. (2016), "Retribuzioni dei laureati e mercato del lavoro in tempi di crisi", in *Quaderni di sociologia*: Vol. LX, Rosenberg&Sellier, page 72.

Table 2 - 2022 first and second-level graduates employed one year after graduation: linear regression model for assessing net monthly earnings. Survey year 2023

	b	S.E.
Gender (female=0)		
male	71.56	3.53
Degree type (First-Level=0)		
Second-Level	115.29	4.46
Field of study (Politics, social sciences and communications=0)		
Agriculture, forestry and veterinary***	0.99	12.91
Architecture and construction***	-14.81	10.99
Arts and design*	-25.49	12.92
Economics	104.41	8.06
Education	64.41	10.55
Law	-25.61	9.53
Information and communication technologies (ICTs)	184.25	14.36
Engineering and engineering trades	174.78	8.69
Humanities and literature	-37.60	11.69
Foreign languages	-34.62	9.97
Health and pharmacy	310.45	8.66
Psychology	-72.57	12.53
Natural sciences, mathematics, physics and statistics	86.48	8.62
Sports sciences and physical education**	31.78	17.00
Geographic area of work (South=0)		
North	39.66	8.04
Centre	25.75	7.77
Abroad	661.24	13.77
Full-time/part-time (involuntary part-time=0)		
full-time	298.38	7.35
part-time by choice	45.37	9.22
Hours worked per week	11.53	0.26
Type of work (other contract=0)		
self-employment	285.98	7.24
permanent contract	145.50	5.18
fixed-term contract	89.94	5.09
Company sector (private=0)		
public	184.80	5.57
not-for-profit**	3.20	10.32
Company branch (social and personal, recreational and cultural services=0)		
agriculture*	49.32	20.12
engineering industries and precision engineering industries	131.44	11.60
building industry	50.53	12.99
chemical and energy industries	138.64	11.00
manufacturing industry	114.06	11.42
commerce	27.17	9.64
credit and insurance	229.81	12.04
transport, advertising and communications	59.68	11.50
consulting	34.94	9.39
computer science	100.44	11.42
other services for companies	62.29	12.51
public administration, armed forces*	35.74	14.95
education and research	88.26	9.22
healthcare	205.25	9.12
Profession (other professions=0)		
entrepreneurs, executives or intellectual, scientific and highly spec. professions	71.84	4.44
post-graduate education	-389.34	6.18
Constant	55.79	17.81

Note: R-squared = 0.503 (adapted R-squared = 0.502), N = 56,035

* Significance at 5% (p<0.05) - ** Significance at 10% (p<0.10) - *** Not significant.

Where not explicitly stated, parameters significant at 1% (p<0.01).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

Turning to an analysis of specific job characteristics, it was found that all other things being equal there were differences in pay according to weekly working hours as well as the prevalence of full-time and part-time work, among other things highlighting a disadvantage especially for those engaged in involuntary part-time network. In fact, the model estimates higher wage levels not only for those employed who work full-time (on average +€298 net per month) but also for those who work part-time by choice (+€45) compared to those who work part-time involuntarily (i.e. not having found a full-time job).

Even in contractual terms, all else being equal important salary differences are estimated, with self-employment, permanent and fixed-term employment contracts corresponding to higher salaries (+€286, +€146 and +€90 respectively) compared to other forms of work, including training contracts, scholarship or research fellowships, and work not governed by any contract. In more general terms, the results of the study show that fixed-term contracts correspond to lower wages.

The company's sector and branch of economic activity have a significant impact on the salaries of graduates. In fact, all other things being equal, compared to the private sector, the public sector has an estimated wage advantage of €185. The branches of economic activity with the largest wage differentials compared to social and personal, recreational and cultural services are above all the credit and insurance (+€230) and the healthcare (+€205). The model also estimates a wage advantage for graduates working in the chemical and energy industries (+€139), in engineering industries and precision engineering industries (+€131), but also in the other manufacturing industry (+€114) and in the computer science (+€100).

Finally, all else being equal, graduates in high professions such as entrepreneurs, executives or intellectual, scientific and highly specialised professions receive +€72 than those in lower-level professions.²⁵ In contrast, the model estimates significantly lower salaries for those engaged in post-graduate education²⁶ (on average -€389 per month). This result is determined in particular by the low salaries paid to graduates engaged in internships and apprenticeships.

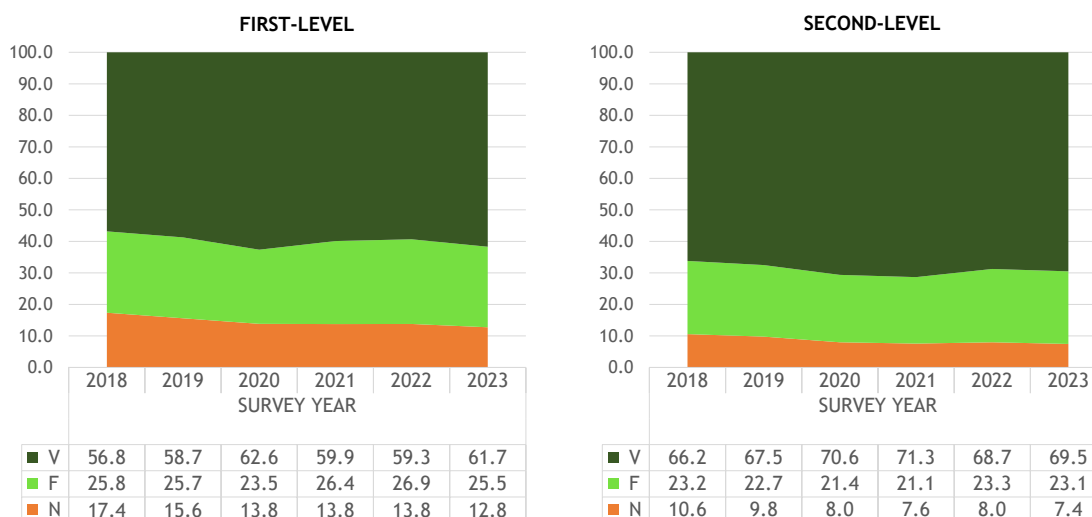
²⁵ 'Other professions' include technical jobs, executive office workers, skilled trades and services, professions related to the armed forces and the remaining non-classified occupations (ISTAT, CP2021).

²⁶ These include PhDs, specialisation schools, activities supported by scholarships, internships and apprenticeships.

6. Effectiveness of the degree on the job

Graduation effectiveness is a subjective measure of coherence between studies completed and jobs performed, as it is based on evaluations expressed by employed graduates. Together with regulatory and statistical measures, it is a way to identify and analyse horizontal or vertical mismatches. As regards graduates' statements on the use of the skills acquired during their studies, as well as on the formal or substantive necessity of the qualification for employment, it was found that one year after graduation the degree was "very effective or effective" for 61.7% of employed first-level graduates and 69.5% of employed second-level graduates (Figure 7). Overall, compared to the 2022 survey, effectiveness levels are increasing, especially among first-level graduates (+2.4 percentage points), but also among second-level graduates (+0.8 points). Thus, there was an interruption of the downward trend in effectiveness levels observed in more recent years.

Figure 7 - 2017-2022 graduates employed one year after graduation: degree effectiveness by degree type. Survey years 2018-2023 (percentage values)



Legend

V: very effective/effective; F: fairly effective; N: not very/not at all effective.

Note: as for the first-level, only graduates not enrolled in another course of study were considered. Until the 2018 cohort, second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no. 249/2010).

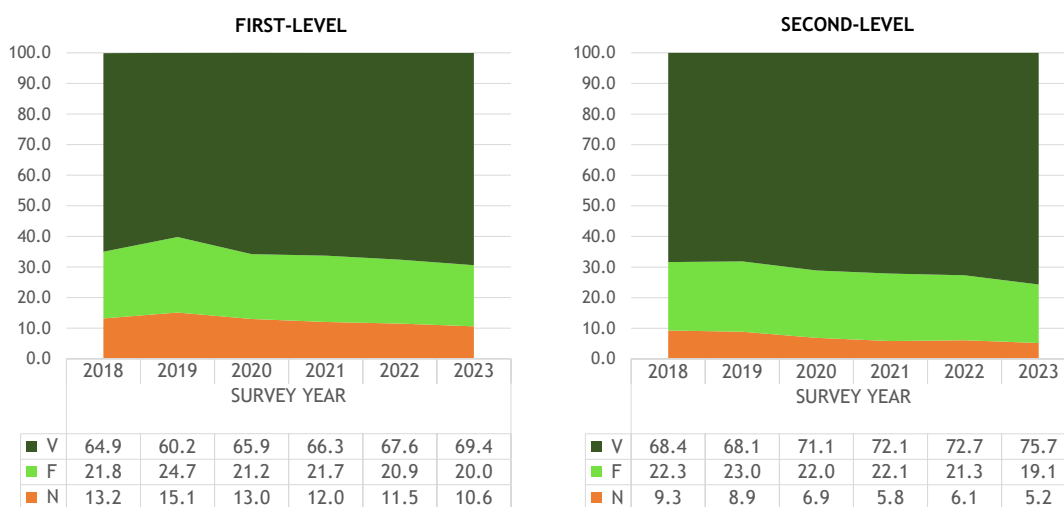
Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

As discussed before, as time passes after graduation the characteristics of the job performed improve including the effectiveness of the degree. Considering 2020 graduates at three years, the degree is "very effective or effective" for 64.1% of first-level graduates. This value has fallen sharply in the last year (-4.7 percentage points). Significantly higher levels of effectiveness were observed among second-level graduates, measuring 74.2%, substantially in line with last year.

At five years the effectiveness levels respectively reach 69.4% and 75.7% of employed first and second-level graduates (Figure 8). Compared to the similar survey in 2022, effectiveness levels are up (+1.8 percentage points among employed first-level graduates and +3.0 points among employed second-level graduates). This confirms the trend of slow improvement in recent years, the highest levels of effectiveness observed during the period under review being reached in 2023.

The picture here outlined is largely confirmed if we separately consider the two components of effectiveness. That is to say, in the job performed, the use of the skills acquired at university and the formal or substantive requirement of a degree for the practice of one’s own type of work.

Figure 8 - 2013-2018 graduates employed five years after graduation: degree effectiveness by degree type. Survey years 2018-2023 (percentage values)



Legend

V: very effective/effective; F: fairly effective; N: not very/not at all effective.

Note: as for the first-level, only graduates not enrolled in another course of study were considered; second-level graduates also include graduates from the pre-reform course of study in Primary Education Sciences (before the reform of Italian Ministerial Decree no 249/2010).

Source: AlmaLaurea, Survey on the Occupational Condition of Graduates.

The complete documentation is available at:

www.almalaurea.it/en/our-data/almalaurea-surveys/graduates-employment-status.

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