Young Entrants, Temporary Jobs and Career Opportunities.

Short-Term Perspectives of Young Italian Workers

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very incomplete draft

Abstract

The paper analyses the job market entry of younger cohorts in Italy. We aim to investigate on the type of the offered contracts, on how temporary contracts end, on the survival probabilities in temporary positions, according to various characteristics of workers and firms. We use two years job histories from new data coming from the compulsory communications system, an administrative dataset where all hirings, transformations, extensions, (early) termination of all Italian employees are recorded for the period 4.2008-6.2010.

Analysing people aged between 15 and 34 by using logit models we obtain that the probability of being hired on permanent basis has increased during the first period of the crisis, whereas it has significantly decreased from the half of 2009. The oldest, males, foreigner and the lower educated people show a significant higher probability of being hired on permanent basis. With respect to north-west, firms located in the north-east and in the center make a widespread use of temporary contract.

From the second quarter of 2009, the probability of transformation of a temporary contract into a permanent one has strongly reduced. Women, Italians and individual with low educational level show a lower probability of transformation. In North-west Italian regions this probability is higher.

1 Introduction

The last estimates from the labour force survey in Italy state that more than 1 out of 4 individuals aged between 15 and 24 years are officially unemployed. Furthermore, the incidence of temporary contracts is higher for the younger cohorts and young workers exhibit very low initial wages: Berton et al. [2009a] show that the cost associated with some fixed-term contracts (wage and salary) can be down 50% with respect to standard workers, in Italy.

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We acknowledge the General Department for the Innovation Technology of the Ministry of Labour and Social Policies for the usage of compulsory communications data.

However, as worker security is interpreted as a way for firms to create and retain in-firm specific skills, employers do not necessarily have an interest in indiscriminate usage of short temporary contracts, i. e. extensive flexibilization.

The use of open-ended contracts induces more human capital accumulation, especially of the firm-specific form, because a higher expected duration of the employment spell (see Berton et al. 2009b) provides more incentives to both workers and firms to invest in training.

About career expectations in Italy, the ambiguous nature of temporary contracts - on the one hand the opportunity of receiving training, on the other hand the risk of being trapped in temporary jobs - seems to be correlated with the duration of the contract[1]. The probability of transition to an open-ended contract decreases with the number of temporary experiences and the duration of unemployment spells between them, as shown in Gagliarducci (2005), who used the ILFI dataset (Indagine Longitudinale sulle Famiglie Italiane).

Moreover, Berton et al. (2009b), using the WHIP database (Work Histories Italian Panel), find a different impact of the several fixed-term contracts, in terms of career, on the probability of obtaining an open-ended position. They also show a significant difference between temporary contracts with training ("contratto di formazione lavoro e apprendistato") with respect to freelance ("lavoro parasubordinato"[2]).

Although there are state-dependence effects on being held in temporary positions, according to Picchio (2008), who uses the SHIW database (Survey of Italian Households' Income and Wealth), in Italy workers employed on temporary basis have a higher probability of obtaining a permanent position than the unemployed ones.

In Italy, the unbalanced generational wage dynamic stands out by comparing the average wage of different generations and their levels of instability (Staffolani et al., 2009).

We aim at evaluating the job market entrance of the younger cohorts in Italy by using two years job histories from the new data from Compulsory Communications ("Comunicazioni Obbligatorie", CC hereafter): since 2008 each employer has to communicate some events related to his employees' contracts, namely job activation, fixed-term extension, transformation and termination (see Strano et al., 2010).

At a first stage we ask whether are there any individual characteristics as long as employer features which are more favourable for obtaining permanent jobs. Then, we follow some different cohorts of young individuals which entered the job market at the beginning of 2008, and then we observe their career profiles in the following two years.

We perform some analyses on the probability for a temporary young worker of moving towards a permanent job. We will exploit the longitudinal nature of data to perform survival analysis on the duration of the contracts.

[1] On the contrary, in Britain temporary contracts were still a port of entry to non-temporary contracts during '90s (Booth et al., 2002.

[2] It is a peculiar Italian labour contract which presents both the characteristics of the employment contract and the self- employment.

DA RISCRIVERE: The next section presents the data. Section 3 shows some analysis referring to the characteristics of the entry and the exit processes of young cohorts in the Italian labour market. Section 4 presents a survival analysis on the duration of contracts. Section 5 concludes.

2 Data: from contracts to jobs

The sample dataset comes from the CC system and refers to the events for all the workers born on 15 January, 15 April 15 July and 15 October: about 1 out of 91 of all italian workers have been included in the CC sample [3]. In order to avoid some problems related to the early development of the system and to the failure to review the latest communications, CC have been selected for the period from March 2008 to June 2010.

Initially the sample dataset contains more than 330.000 contracts.However, temporary contracts started before 2008 and ended in the following period at the due date of termination are not included. Therefore, the labour contracts terminations are underestimated and the analysis of the difference between activations and terminations of labour contracts - inflows and outflows - is misleading at the moment.

The starting CC dataset refers to contracts (and their transformations, extensions and termination), the one we used in the following analyses has been modified to focus on "jobs", characterized by a continuous relationship - or stopped for a short period, as we sill see later - between the same employer and employee.

In order to move from *contracts* to *jobs*, we carried out the following steps:

- interim contracts appeared twice in the dataset. We removed the contract referring to the interim agency (about 17.000 cases);
- the disposal of companies again give rise to duplicate contracts, that we removed. The starting date of the "job" is the one of the old firm whereas the termination date is the one in the new firm (about 8.000 cases);
- there are many cases of transformation, extension, early termination of contracts with a starting date after 2008, nevertheless their activation is missing even if the registration is compulsory by law. In these cases, employers probably incorrectly specified the starting date of the contract. For our purposes, the starting date of these contracts has been substituted with a missing value - see figure 1 - ruling out these *jobs* from the ananlyses (about 9.000 contracts);
- many temporary contracts have been extended once or more with no interruption. A unique *job* has been considered with the ending date equal to the termination of the last extension, keeping the the number of the extensions.
- many subsequent contracts between the same employer and employee have only small breaks. If the time between the ending date of the first contract

[3] Since January 2008 each employer has to communicate by computer means at the site *http://www.co.lavoro.gov.it/*, both in the public and the private sector. The CC database does not include self-employed.

and the starting date of the second one is lower than a given number of days, defined as τ the *distance* between the two consecutive contracts, these cases represent "hidden extensions"(see figure 2);

- two different contracts (for instance, fixed-term and open-ended) between the same worker and firms actually could represent contract transformations ("hidden transformation") when the ending date of the first contract and the starting date of the second one (the *distance*, τ) is lower than a given number of days. We set $\tau = 30$ for the cases of hidden extension and hidden transformation (about 47000 cases). (see figure 3);

Hence, we end up with the *job* dataset, which contains also many information referring to the employers and the employees. The analyses presented thereafter refer to *young workers*, defined as individuals born between 1974 and 1993, whose job started from April 2008 up to 30 June 2010, ending with 82.419 "jobs" included in the sample.

Note that our analyses refer to labour relationship and not to workers. When a worker has multiple jobs during the period, or she moves to another firm, or she leaves her job (or she is laid off) and later is newly hired by the previous employer (and unless the period between the two contracts is lower or equal to 30 days, see above), then there are multiple observations for the same worker.

3 Descriptive statistics

The average number of jobs for young workers is around 2.6 during the period that we considered, the 60% of young workers shows only one presence in the dataset, the 23.4% of them are present two times and only a small fraction had 3 or more jobs during the period.

Table 1 shows the type of contract young employees are hired on. More than 3 out of 4 new jobs start as temporary. The same figure for non-young workers gives less than 2 out of 3.

Table 1: Jobs by types of contract

Permanent	22,022	27
Fixed-term	39,387	48
Apprenticeship	7,030	9
Freelance	6,507	8
Interniship	2,513	3
Interim	4,960	6
Total	82,419	100

Source: DB_rapporti_d30.dta

In the periodApril-June of the three years the share of permanent new jobs goes from 25%, to 30%, to 19%. It seems that the meager economic recovery in 2010 is strongly based on temporary positions.

Figure 1: "Implausible" contract created by a communication

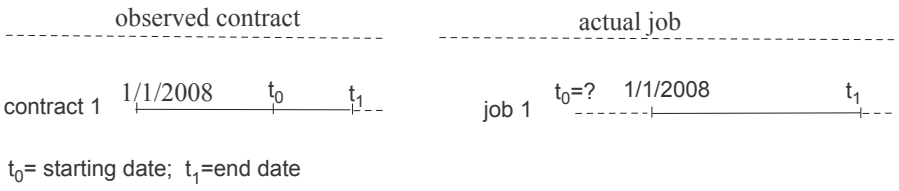


Figure 2: "Hidden" extension

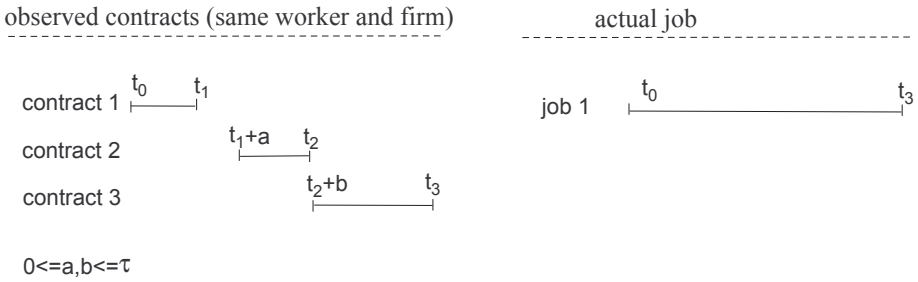


Figure 3: "Hidden" transformation

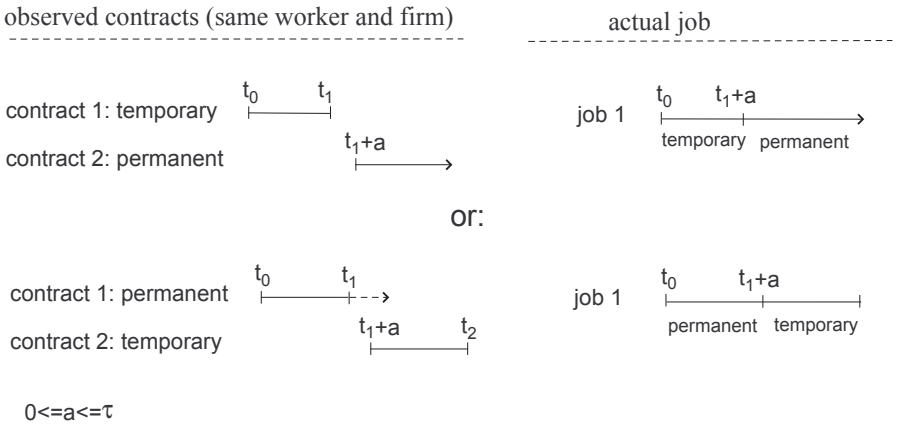
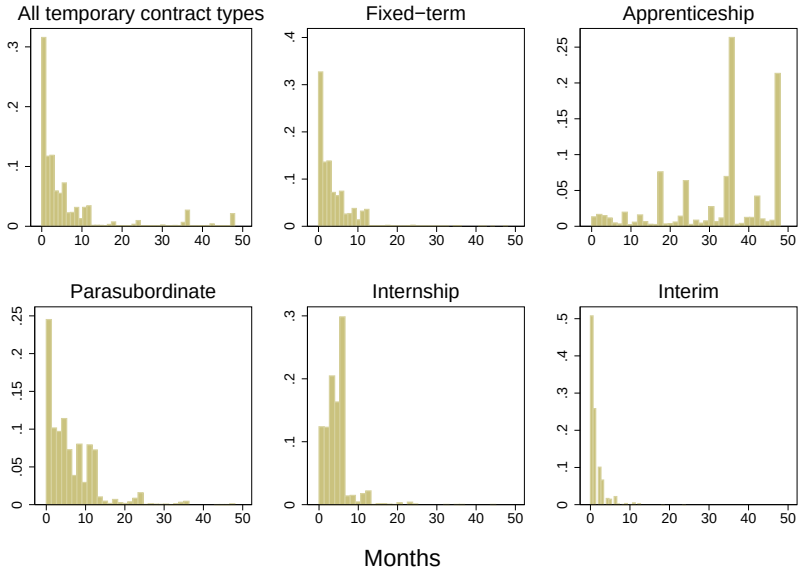


Figure 4: Temporary contracts and their expected (ex-ante) length, months



The expected average length of jobs by type of contract[4] is shown in figure 4.

Different type of contracts are characterized by very different distributions of the expected length. The median for the length of fixed-term and interim contracts is of one month, whereas the other types of contracts show the median of 2 or more months. The highest average expected length is for the apprenticeship contract (37 months) and the lowest is for the interim one (1.3 month). The whole average length of temporary contracts is 8.2 months.

With respect to the educational level for the entry job table 2 [5] shows that the freelance contract mostly regards workers with an academic degree, that are also the less engaged in apprenticeship. Permanent contracts are most associated with primary education.

Table 3 shows the type of contract people are hired on by gender and nationality. Firms use permanent contract more for men than for women, that instead are hired with a higher frequency using the *freelance* contract. The permanent contract is used more to hire foreigners than Italians (nearly the double). The Freelance contract is used 5 time more frequently when firms hire italians.

Interesting differences emerge also by considering the geographical dimension.

[4] In the graph were plotted those contracts with an expected length lower or equal to 50 months, which represent around the 97% of all temporary jobs. The "actual" length of temporary contract considers that some temporary contract have been transformed in permanent one, others have been deferred, other have been closed before their expected termination.

[5] Some jobs refer to individuals with missing data on education, the 23% of cases, many of them immigrants. Therefore, the row total does not coincide with the previous table.

Table 2: Type of contract by education, young, column %

	compulsory school	secondary school	college	Total
Permanent	26	20	17	22
Fixed-term	52	47	44	49
Apprenticeship	10	10	5	10
Freelance	4	11	21	9
Internship	2	4	9	4
Interim	6	8	5	6
Total	100	100	100	100

Source: DB_rapporti_d30.dta

Table 3: Type of contract by gender and nationality, young, column %

	male	female	foreigner	Italian	Total
Permanent	29	24	41	21	27
Fixed-term	47	49	45	49	48
Apprenticeship	9	8	6	9	9
Freelance	6	10	2	10	8
Internship	3	4	1	4	3
Interim	6	6	4	7	6
Total	100	100	100	100	100

Source: DB_rapporti_d30.dta

Considering firms plant, we can see in table 4 that the permanent contract is used more frequently in the north-west and in Italian Islands. Firms established in the north-west regions hire workers on permanent basis more frequently. Interim contracts are widely used in the north regions.

Table 4: Type of contract by geographical area of the job, young, column $\%$

	North-West	North-East	Center	South	Islands	Total
Permanent	30	21	26	29	30	27
Fixed-term	39	52	46	54	52	48
Apprenticeship	9	11	10	5	6	9
Freelance	9	5	9	7	9	8
Internship	3	4	4	2	2	3
Interim	10	7	5	3	2	6
Total	100	100	100	100	100	100

Source: DB_rapporti_d30.dta

In order to sum up the previous evidences and check their significance, a logit model has been estimated, where the dependant variable is the probability to be hired with a permanent contract (versus the one of being hired with a temporary one).

Some differences emerge from the different specification of the models. We will refer here to the full model, the $A3$ column. The probability of being hired on permanent basis has increased during the first period of the crisis, whereas it has significantly decreased from the mid 2009. The probability of being hired on permanent basis increases with age among young individuals. The same happens for males and foreigner. The lower educated workers (the reference group) are also the ones that find a permanent job with a higher frequency. With respect to the North-West area, firms located in the North-East and in Central Italy make a widespread use of temporary contract.

A temporary job should normally end at its expiry date, that must be specified when the contract is signed. But this job can be extended, or transformed into a permanent one[6], or they can end before the expiry date. The above four different type of termination of temporary contracts are presented, for the different type of contracts, in table 6.

The highest probability of transformation concerns the worker hired with fixed-term contracts, the lowest one for workers hired as freelance. Apprenticeship shows the highest probability of ending before the expiry date, whereas interim contract shows the highest one of extension.

According to CC data, only 5% of temporary jobs are transformed in permanent ones. Given that transformation in a permanent contract is surely the most important change that can affect a temporary job, we present in table 7 a multivariate

[6]Remind that we consider also the hidden extensions and the hidden transformations, see section 2.

Table 5: Logit estimates of the probability of being hired on permanent basis, youngs

	A1	A2	A3
	coeff.	coeff.	coeff.
quarters. ref: 2008q2			
2008q3	-0.144***	-0.122***	0.062*
2008q4	0.081**	0.074**	0.069*
2009q1	0.251***	0.140***	0.151***
2009q2	0.273***	0.122***	-0.152***
2009q3	-0.349***	-0.429***	-0.242***
2009q4	-0.046	-0.112***	-0.099**
2010q1	0.115***	-0.042	-0.017
2010q2	-0.311***	-0.427***	-0.409***
age		0.067***	0.082***
female		-0.189***	-0.165***
Italians		-0.691***	-0.545***
Education. ref compulsory			
N.A.		0.367***	0.204***
Secondary		-0.149***	-0.141***
College		-0.487***	-0.220***
Plant area. Ref: North-west			
North-east		-0.513***	-0.445***
Center		-0.215***	-0.259***
South		0.055**	0.341***
Islands		0.149***	0.228***
N	82416	82394	77377
pseudo-R^2	0.008	0.072	0.216
χ^2	725.072	6949.943	20001.45

Table 6: Reasons of the end of the contract by type of contracts

	ended at expiry date	transformed	prolongated	ended in advance	Total Total
Fixed-term	46	8	25	21	100
Apprenticeship	43	5	2	49	100
Freelance	51	2	26	21	100
Internship	52	4	25	19	100
Interim	34	5	53	9	100
Total	46	7	25	23	100

Source: DB_rapporti_d30.dta

descriptive statistic based on a logit model [7].

[7] We drop temporary contracts whose expected expiry date was later than 30/06/2010.

Starting from the second quarter of 2009, the probability of transformation of a temporary contract into a permanent one has strongly reduced. Women and Italians show a lower probability of transformation. Workers with college education show a higher probability of transformation. In North-west Italian regions (the reference area) this probability is higher. The type of temporary contract that seems to guarantee a higher probability of transformation into a permanent one is the fixed-term contract.

As shown in Figure 5, there are very different actual durations with respect to the types of temporary contracts: apprenticeships are the most long-lasting while internships have the lower duration with major terminations after six months.

Table 8 shows the estimates for the hazard for the termination of a temporary contract for some individual and job characteristics, controlling for time changes, regions, occupations and sectors. Women exhibit higher hazard rate for the termination of their temporary jobs - even if it is not always significant - as well as for the Italian citizens. Age has a negative impact on the hazard just for the full specified model.

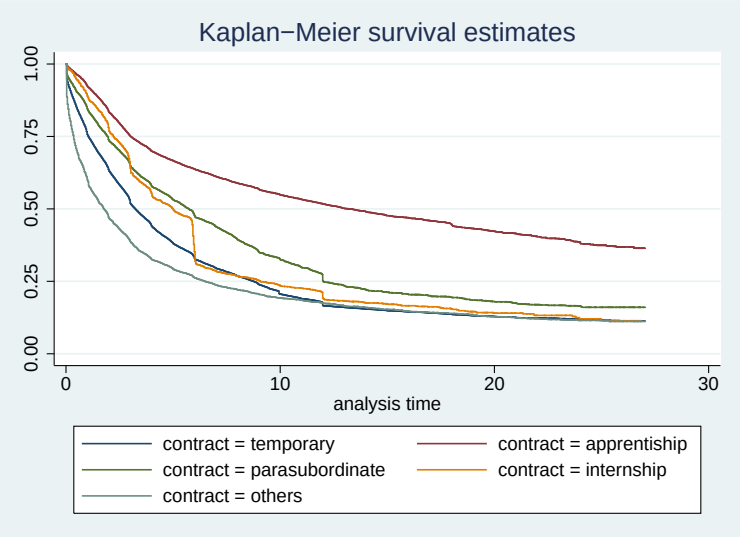
Table 7: Logit estimates of the probability of job transformation from temporary to permanent, youngs

	B1 coeff.	B2 coeff.
quarters. ref: 2008q2		
2008q3	0.023	-0.001
2008q4	-0.063	-0.071
2009q1	0.040	0.067
2009q2	-0.254***	-0.264***
2009q3	-0.268***	-0.287***
2009q4	-0.339***	-0.337***
2010q1	-0.214***	-0.194**
2010q2	-0.185*	-0.203**
age	0.070***	0.060***
women2	-0.134***	-0.148***
Italians	-0.210***	-0.198***
Education. ref compulsory		
N.A.	-0.023	-0.020
Secondary	0.049	0.061
College	0.261***	0.398***
Plant area. Ref: North-west		
North-east	-0.266***	-0.308***
Center	-0.250***	-0.231***
South	-0.773***	-0.758***
Islands	-0.886***	-0.872***
Contract. ref: fixed-term		
apprenticeship		-0.399***
freelance		-1.831***
internship		-1.294***
interim		-2.099**
N	41277	41277
r2p	0.131	0.156
chi2	3275.630	3898.103

Table 8: Survival estimates of the hazard for a temporary job, workers 15-34

	C1	C2
quarters. ref: 2008q2		
2008q3	0.044**	0.010
2008q4	0.030	0.037*
2009q1	-0.193***	-0.189***
2009q2	0.106***	0.069***
2009q3	0.134***	0.056***
2009q4	0.074***	0.036*
2010q1	-0.212***	-0.203***
2009q2	-0.266***	-0.310***
Age	0.008***	-0.030***
Female	0.046***	0.021*
Italian	-0.043***	0.034**
Education. ref compulsory		
N.A.	0.076***	0.036**
Secondary	-0.096***	-0.054***
College	-0.357***	-0.412***
Plant area. Ref: North-west		
North-east	0.099***	0.062***
Center	0.069***	0.071***
South	0.345***	0.259***
Islands	0.308***	0.243***
Contrat type Ref: Temporary		
Apprenticeship		-0.962***
Freelance		-0.180***
Internship		-0.048*
Other		0.225

Figure 5: Effective (ex-post) job duration (in months)



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