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Inequality of opportunity for young people in Italy: Understanding the role of circumstances

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Abstract

In this paper we analyze the way in which changes in macro-economic circumstances and labour market institutions, that occurred in Italy over the '90s, affected the set of opportunities for young generations, amplify or shrinking existing inequalities. In particular we investigate whether they have modified the importance of the family background to reach certain labour outcomes (in terms of more or less secure employment). Results suggest that the effect of the social network of the father on early occupational outcomes is more related to changes in the macroeconomic circumstances than to institutional changes, and that the one on transitions is larger, in relative terms, in the late '90s than in the early '80s.

1. Introduction

In the '90s Italy has been characterized by various reforms of the labour market and the pension system, a sharp increase in house prices and rents, and a sluggish growth. The consequence has been a segmentation of the labour market with an increasing proportion of younger workers characterized by low income levels, discontinuous careers, inadequate social protection and low future pension benefits (see Berloffa and Villa, 2010).

In this paper we analyze the way in which these changes in macro-economic circumstances (in particular in labour market institutions and conditions) have modified the importance of the family background to reach certain labour outcomes, i.e. whether they have emphasized or reduced the inequality of opportunities for young people. In particular we are concerned with the increased incidence of insecure job conditions for individuals who work with fixed term or other types of "insecure" contracts and with the possibility for them to move to a more secure job-condition after a reasonable period of time. We therefore want to compare the occupational conditions that characterized the entrance into the labour market of individuals in the '70s and '80 with those that prevailed after the early '90s. Our hypothesis is that both the early occupational outcome and the transition to a "better" job condition is affected by the economic resources and social network of the family of origin, and that this effect increased in the second period.

The research aim of this paper can be better specified in the following questions:
- how did the entrance conditions in the labour market change between the '80s and the late '90s/early new millenium?
- Are early occupational outcomes and transitions significantly affected by the family background?
- Did these effects change in the two sub-periods?

The answer to these questions is organized as follows. In section 2 we briefly review the relevant literature, while in section 3 we present the methodology and the data used in our analysis; in sections 4 and 5 we discuss the descriptive and econometric results, and in section 6 we summarize the main findings and conclude.

2. Review of the literature

The marked segmentation of the Italian labour market is a structural feature that has become stronger over the last two decades, as institutional reforms have progressively increased the so called "flexibility at the margin" (the "Treu's package" in 1997 and the Biagi's Law in 2003). Italy is nowadays a country where a large number of atypical contractual arrangements (including training, apprenticeship, fixed-term contracts, agency workers, collaborators, project workers) coexist with a primary segment – characterized by standard employment contracts, continuity of employment and high protection from social security. Young people are over-represented among atypical workers: while the share of fixed-term contracts among total employees in Italy is approximately equal to the EU15 average, the share among young people is on a faster increasing trend, reaching 44% in the age group 15-24 in 2009 (see tab. 1).

Tab. 1 - The percentage share of fixed-term contracts among employees in Italy and EU15, 2004-2009 (%)

	2004	2005	2006	2007	2008	2009
Total employees						
Italy	11.9	12.3	13.1	13.2	13.3	12.5
EU15	13.5	14.4	14.7	14.8	14.4	12.5
Employees aged 15-24						
Italy	34.4	37.0	40.9	42.3	43.3	44.4
EU15	39.1	41.4	41.9	42.4	41.4	41.5

Source: Eurostat database (in: CNEL 2010: 281)

The liberalization of atypical contracts (in particular, temporary contractual arrangements) has been the main labour market policy in the EU since the mid 1990s, with the stated objective of increasing labour market flexibility. The main assumption is that temporary jobs can be attractive from the labour supply perspective as they may allow a reduction of the unemployment spells (especially for new entrants into the labour market) and contribute to the increase in the employment rate of the weakest segments of the labour market (the young, women). As a matter of fact, youth unemployment (people aged 15-24) recorded a significant reduction since the mid-1990s up to 2007, at the eve of the Great Recession (see fig.1). And this reduction in youth unemployment rates was significant for both men and women. However, the effects of the liberalization of temporary contractual arrangements on youth employment rates is less evident: in 2008, hence before the recession, only 24,4% of people aged 15-24 were employed in Italy, in comparison with 41% in EU15[2].

Fig. 1 - Youth unemployment rate and total unemployment rate by sex in Italy, 1993-2010 (%)

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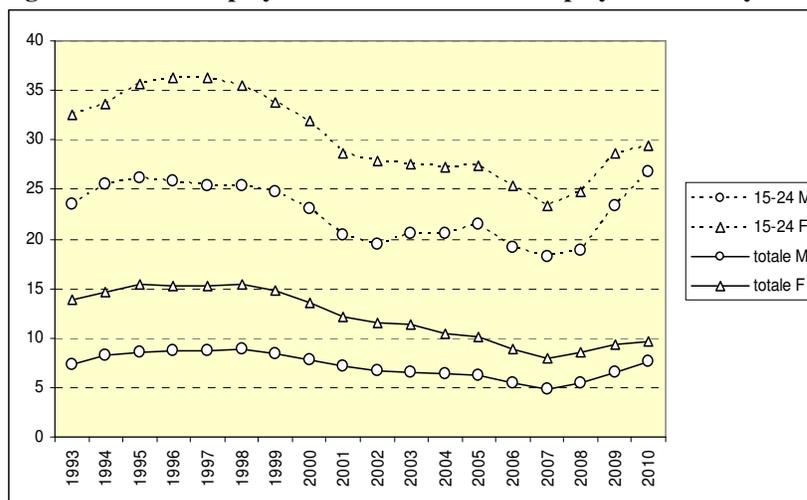
[2] The very low employment rate of young people in Italy cannot be explained by school attendance, as this is slightly lower than EU average. Moreover, while in the EU there was (up to the crisis) an upward trend in youth employment rates, this was not the case in Italy. With the only exception of men aged 30-34, all other male and female age groups recorded a further fall widening the gap with EU average in 2004-2008 (Villa 2010).

Beside not having (apparently) solved the problem of youth employment, the liberalization of temporary contracts may have caused significant long-term consequences for those who entered the labour market under this regime. Indeed, one of the main questions surrounding the use of these contracts is whether they ultimately represent a port of entry to open-ended jobs or whether they represent a trap into precariousness and instability, increasing the risk of social exclusion. Given the lack of appropriate data, this question has been addressed thoroughly in other countries while there are only few analysis on the Italian case (see e.g. Gagliarducci 2005; Picchio 2008; Berton, Devicienti, Pacelli 2009).

Berton, Devicienti and Pacelli (2009) show that the transition to permanent employment is more likely for individuals holding any type of temporary contracts than for the unemployed, thus broadly confirming the existence of port-of-entry effects. Yet, not all temporary contracts are the same: training contracts are the best port of entry, while freelance contracts are the worst. They also show that temporary contracts are generally a port-of-entry into a permanent position within the same employer, but not across firms. Moreover, the time needed for an internal transformation from a temporary to a permanent position appears rather long, suggesting that firms are likely to use (a sequence of) temporary contracts as a cost-reduction strategy, rather than as a screening device for newly hired workers. Barbieri (2009) and Barbieri and Scherer (2009) show that the more recent labour market entry cohorts are destined to precarious employment, with an increasing probability of being trapped into precariousness at later stages.

The study presented in CNEL (2010: 293-298) compares one-year transition matrices for two periods: 2004-2005 and 2008-2009. Less than 30% of workers on temporary jobs (both fixed-term contracts and collaborators) move to an open-ended contract in the following year; this percentage is not higher than 25% (and decreasing) for females and young people (less than 35 years of age) over time (see table 2).

Tab. 2 – Exit rates from temporary employment by destination in 2004-2005 and in 2008-2009 (%)

	Open-ended contracts	Fixed-term contracts	Self-employment	Unemployment	Inactivity
Males					
2004-2005	28.4	49.0	3.9	7.6	11.1
2008-2009	26.9	48.9	3.7	9.4	11.1
Females					
2004-2005	20.1	55.5	2.4	6.2	15.7
2008-2009	22.4	51.8	2.2	6.4	17.1
15-24					
2004-2005	24.6	52.5	3.0	5.8	14.1
2008-2009	19.1	50.0	2.7	10.8	17.4
25-34					
2004-2005	29.2	46.5	2.5	8.7	13.1
2008-2009	25.6	49.7	4.2	7.7	12.9
35-64					
2004-2005	19.7	57.5	3.7	6.0	13.1
2008-2009	27.1	50.9	2.2	6.7	13.1

Note: Transitions are based on the second semester of each year considered.
Source: CNEL (2010: 297 and 342) on Istat LFS microdata.

In this paper we do not address directly the issue of whether temporary contracts are a port of entry or a trap; rather we want to explore the hypothesis that both the early occupational outcome and the transition to a "better" job condition is affected by the economic resources and social network of the family of origin.

The importance of the family background to reach certain economic outcomes (both in education and in the labour market) has been largely documented by the literature on intergenerational mobility, which showed that either the income elasticity of offspring with respect to parents' income is positive, or that the probability of offspring to access given economic conditions (income, education, occupational status) is strongly affected by the parents' one (for a survey see Corak 2006; for Europe and Italy see e.g. Franzini and Raitano, 2010; Giuliano, 2008; Schizzerotto and Marzadro, 2008; Brunetti and Fiaschi, 2010).

In Alma Laurea (2011: 213-214) it is shown that there are systematic differences, though relatively small, in the labour market position of graduates (five years after getting the university degree) on the basis of their family background. The share of people in employment is highest for the upper-class, but not too different from blue-collar children (83% vs. 80%). The former class records also the lowest unemployment rate (6%, compared with 10% for blue-collars), and the highest share of graduates with "stable employment contracts" (73% compared with 69%), in particular in the area of self-employment (30%, compared with 17%). Finally, the net monthly income is higher for the upper-class (€ 1,404 on average, compared with €1,249) and there is a better correspondence between the university degree obtained and the job performed.

Comi (2010) proposes an interesting approach for the analysis of the extent to which family characteristics affect the early career outcomes (earnings) of children. The importance of family influence on earnings is assessed by computing earnings correlations between siblings (the proportion of the population variance due to what is shared by siblings). Portugal is the country with the highest correlation, followed by Greece, Italy, Spain and France, whereas Germany and Austria have the lowest correlations. Ideally we would like to exploit siblings' labour outcomes to investigate our hypothesis; unfortunately, as described in the next section, the small size of our dataset does not allow us to follow this approach, and therefore we adopt a more traditional econometric analysis.

3. Data and Methodology

In order to answer our research questions we need longitudinal data on individual job histories with information about the family of origin. To our knowledge, the only dataset that provides this information for Italy is the Italian Households Longitudinal Study (Ilfi), a panel survey begun in 1997 and carried out for five biennial waves (up to 2005) on a national representative sample of about 11.000 adults. The first wave gathered retrospective information on all significant events occurring to the members of the sample in the period between their births and the date of the interview. The four subsequent surveys updated this information.

Beside covering the time period we are interested in, namely the years before and after the institutional changes occurred in the Italian labour market, this dataset provides information on work and educational histories, allowing us to follow the occupational status of each individual at different points in time, and also on the family of origin (household composition and house tenure at birth and at 14 years of age, education and occupational status of the parents and of the person who was head of household if he/she was different from parents).

The first methodological issue is whether to conduct the analysis by birth cohort, by education cohort (i.e. by the year in which individuals finished their educational career) or by labour-market cohort (i.e. by the year individuals entered the labour market). Clearly the first choice is the safest one in terms of endogeneity problems. However, since we are interested in examining labour market opportunities we prefer the second option as the analysis by education cohort allows us to compare individuals at similar "labour-market cycle" stage, and to account for the potential endogeneity of inactivity.

The second methodological issue regards the type of analysis to be carried out in order to examine the family effect on transitions. While the family effect on occupational outcomes at a given year of observation is conceptually quite simple and can be grasped by estimating e.g. a multinomial logit (as we will do), the problem of transition is more complex. In particular, there are different aspects that could be considered: the family effect on the unconditional probability of leaving any insecure spell, or on the probability of leaving an insecure spell for a sufficiently long period of time, or on the total length of insecure spells. As a first step we decided to look at the family effect on the transition probability between the occupational status three and six years after the end of education, i.e. either university or high school (for those who do not continue to university). We aggregate the different occupational categories in three main groups: secure[3] employment (which includes employees with open ended contract and self employed who work continuously[4]), insecure employment (which includes fixed term contracts, individuals working without a contract or in occasional employment) and unemployment. We define the transition from insecure to secure employment and from unemployment to either a secure or an insecure job as an improvement in working condition, and we model the probability of experiencing this transition. Since we don't observe the transition for those who were "initially" in stable employment, we use a probit model with sample selection to control for the probability of being unemployed or insecure in the initial state (Van de Ven and Van Pragg, 1981).

A few more technical details are worth mentioning before turning to the analysis. First, given that our dataset reports for each individual all the educational and job episodes, we have both individuals who started to work while in education and individuals who interrupt their educational career for a certain period of time. For these individuals the definition of the "end" of the educational career is somewhat arbitrary. We consider as "not ended" an educational career when the interval between the end of a cycle (educational level) and the

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[3] In this paper we will use the words "stable" and "secure" interchangeably.
[4] We can exploit a specific question present in the survey for this.

start of a new one is less than eight years[5]. Furthermore, we drop those individuals who finished education "too late", i.e. after age 25 for high-school, 35 for university and 40 for masters and PhDs.

Second, we define the occupational status three or six years after the end of studies by observing the job or unemployment episodes that started or was on-going in that year[6]. For the descriptive analysis, in the group with secure employment we distinguish between employees with open-ended contracts and self-employed who work continuously. As already mentioned, given the limited size of our sample, for transition matrices and the econometric analysis we aggregate these two categories into one group.

Third, for our empirical analysis we divided observations in two periods: those who finished education between 1971 and 1985, and those who finished after 1992 (and before 2005 given that this is the last year of the survey). In this way we can capture the main effects of the changes occurred in the Italian labour market after the early '90s on individuals' job histories, avoiding the possible problems for those who started their job search during the recession of the early '90s.

Finally, since our sample is quite small, we compare its composition and the results of the multinomial logit for the "initial" occupational condition (i.e. the one observed three years after the end of studies) with those emerging from two much larger cross-sectional surveys carried out by Istat on high-school and university graduates (precisely three years after they got their degree). The Istat surveys (*Indagine sull'inserimento professionale dei laureati*, Istat 2005, and *Indagine sui percorsi di studio e di lavoro dei diplomat,* Istat *2002*) have been conducted every three years from 1989 to 2007 for university graduates and from 1998 to 2007 for high school graduates, and they collected information about job and other conditions three years after the end of school, i.e. in 1998 we have information about those who finished in 1995, etc.

Before discussing the econometric analysis in more details, in the next section we present some descriptive statistics for our dataset.

4. Descriptive analysis

The sample in our dataset consists of about 12,000 individuals, 73% of whom are born after 1940. 84% of these (7280) report all the necessary information to construct the final year of education. We have 2646 individuals who finished their educational career between 1971 and 1985, and 1421 who finished after 1992. Table 3 presents some characteristics of the two groups. The composition by educational level (of both the individuals and their parents[7]) reflects the general increase in education. The percentage of individuals who interrupted their educational career for more the 1 year between one educational level and

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[5] As described in table 1, however, the percentage of these cases is very low.
[6] We included in the unemployed also those individuals who did not report any unemployment or inactivity episodes but declared to be looking for a job at the time of the interview, when the latter is subsequent to the end of the educational career.
[7] We define parents' education as the highest educational level between mother and father.

the subsequent one is below 5%, and it reduces to less than 1-2% when we consider interruption periods of more than seven years. The incidence of working while studying reduces over time, while the average length of time between graduation and the beginning of the first job increases for both high-school and university graduates.

Table 3. Sample characteristics (%)

Final year of education	1971-1985	1992-2005
Individuals'education		
Lower Secondary	46.9	18
Upper secondaty	42.2	49
Tertiary	10.9	33
Parents'education*		
Lower Secondary	83	53
Upper secondaty	13	36
Tertiary	4	11
Percentage of individuals who interrupted their educational career		
for more than 1 year	4.8	4.6
for more than 2 years	3.7	2.3
for more than 7 years	1.9	0.4
Percentage of individuals who started to work before the end of studies		
Lower Secondary	38.7	19.2
Upper secondaty	42.0	25.2
Tertiary	47.7	28.8
Average job-search period after graduation**		
High school	*1.84 years*	*2.07 years*
University	*1.38 years*	*2.02 years*

Source: Our calculation based on ILFI data. See the text for details.
Notes: *: Parents' education is defined as the highest educational level between mother and father
**: For those who started work after finishing their studies.

Table 4 presents a comparison between the ILFI (second period) and ISTAT datasets (for high-school graduates we considered the 1998 survey, i.e. the one closest to the average final year of education in Ilfi data which is 1996). Because of differences in the way questions are asked in the surveys, we cannot compare the different categories of precarious workers (employees fixed-term contracts, employees and self-employed who work occasionally, etc.). Therefore we consider only five aggregate categories: employees with open-ended contracts, self-employed and entrepreneurs who work continuously, "precarious" workers (who include all employees and self-employed in situations different from the previous two), unemployed and inactive individuals.

For the sample of high school graduates, we have quite similar proportion of employees with an open ended contract and of unemployed, whereas quite different proportion of precarious individuals. However, this may be due to the particular year of the Istat survey. For university graduates the differences are not so pronounced: employees with open ended contracts and inactive individuals are underrepresented in the Ilfi sample (27% vs 31%, and 7% vs 12%), and the opposite for precarious workers (32% vs. 25%); the proportions of

self-employed and unemployed are surprisingly very similar in the two datasets. Given that differences are not so large, and that they go in opposite directions for high-school and university students, we are quite confident that our results can be meaningful for understanding the changes occurred in our country.

In order to grasp the changes in the employment opportunities occurred in the last two decades, we use ILFI data to compare the occupational statuses three years after the end of high education in the two periods (table 5). The reduction in the incidence of employees with open-ended contracts is quite impressive for both educational levels, and somewhat higher for university graduates: from 52% to 28% for high-school graduates and from 58% to 27% for individuals with higher education. This huge reduction gives rise to a remarkable increase in the share of precarious workers (17 and 13 percentage points for high-school and university graduates respectively), and in unemployment (around 10 percentage points in both categories), and in a more moderate increase of self-employed (3 and 7 percentage points respectively). Changes in inactivity go in the opposite direction for high-school and university graduates.

Table 4. Occupational status of high school and university graduates three years after the end of education

	High school		University	
	ILFI	**Istat**	**ILFI**	**Istat**
final year of education	**1993-2002**	**1998**	**1993-2002**	**1992-2004**
Employees with open-ended contracts	28.0	24.7	27.1	31.3
Self-emp./Entrepreneurs who work continuously	10.8	6.0	16.7	15.0
Temporary/precarious/occasional employees and self-employed	29.6	43.2	32.6	25.5
Unemployed	24.9	22.3	16.3	16.4
Inactive	6.7	3.8	7.3	11.7
	100	100	100	100

Source: Our calculation based on ILFI and Istat data. See the text for details.

Table 5. Occupational status of high school and university graduates three years after the end of education, for different periods of the final year of education.

	High school		University	
final year of education	**1971-1985**	**1993-2002**	**1971-1985**	**1993-2002**
Employees with open-ended contracts	51.9	28.0	58.0	27.1
Self-emp./Entrepreneurs who work continuously	7.9	10.8	9.2	16.7
Temporary/precarious/occasional employees and self-employed	12.2	29.6	19.6	32.6
Unemployed	14.0	24.9	7.1	16.3
Inactive	14.1	6.7	6.1	7.3
	100	100	100	100

Source: Our calculation based on ILFI data. See the text for details.

In short, employment opportunities changed quite significantly in Italy over the last two decades: while in the '70s and '80s more than 2 out of 3 high school or university graduates who decided to participate in the labour market were in a stable employment condition three years after the end of their studies (employees with open ended contract and self employed), in the '90s and early years of the new millennium this proportion reduced to less than 1 out of 2.

In order to check whether these differences are persistent or are simply a transitory phenomena (i.e. whether the changes occurred over the '90s modified only the way of entering the labour market or caused a deeper structural change of employment opportunities), we exploit the longitudinal feature of our dataset and consider the transition matrices[8]. Given the small number of observations that we can rely on (1432 in the first period but only 437 in the second one), we aggregated these different occupational categories in four main groups: secure employment (which includes employees with open ended contract and self employed who work continuously), insecure employment (which includes fixed term contracts, individuals working without a contract or in occasional jobs), unemployment and inactivity. The two transition matrices (one for each period) for these categories are presented in tab. 6 (cells report the row percentage, i.e. the proportion of individuals who were in a given category three years after the end of education and ended up in the different categories three years later).

Table 6. Transition matrices: three year and six years after the end of education, for different periods of the final year of education.

1971-1985

3 years	6 years				
	Secure	Insecure	Unempl.	Inactive	**N. obs.**
Secure	95.4	1.6	1.5	1.5	**871**
Insecure	29.3	65.2	2.0	3.5	**198**
Unempl.	58.9	19.5	19.5	2.2	**185**
Inactive	8.4	0.6	18.0	73.0	**178**
N. of obs.	**1,013**	**180**	**85**	**154**	**1,432**

1992-1999

3 years	6 years				
	Secure	Insecure	Unempl.	Inactive	**N. obs.**
Secure	88.5	6.8	3.7	1.0	**192**
Insecure	21.0	75.0	1.6	2.4	**124**
Unempl.	22.9	26.0	49.0	2.1	**96**
Inactive	16.0	16.0	12.0	56.0	**25**
N. of obs.	**222**	**135**	**59**	**21**	**437**

Source: Our calculation based on ILFI data. See the text for details.

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[8] Since the latest year in our dataset is 2005, when we consider six years after the end of education we loose all those individuals who finished their studies after 1999.

Results are consistent with the description of the Italian labour market as deeply segmented, and underline the increase of this segmentation over time. Persistence in secure employment is very high, although slightly reducing in the second period. There is a significant increase in the persistence in insecurity between the first and the second period (from 65% to 75%). This means that for an increasing share of workers the condition of being precarious does not characterize only the beginning of the career, but it extends for quite a long period of the working life. Also the persistence in unemployment increased, and exit from it is much more towards insecure employment than to a secure one, when compared with the first period (26% and 22% vs. 20% and 59% respectively). Persistence in inactivity decreased, signaling that it may include a higher share of "discouraged workers".

5. Econometric Analysis

In our econometric analysis we restrict our attention only to high-school and university graduates because the labour market segment that they can access is quite different from the one for individuals with just compulsory schooling, and also because the latter are very few in the second period. In order to highlight the effect of the family background on the probability of being insecure (i.e. either unemployed or in insecure employment), we run two multinomial logit models for three categories (secure, insecure and unemployment, where the secure category is the baseline) including variables that refer to individual and family characteristics[9]. Among the former we include gender, educational level, having attended a university in the North or Centre, the number of previous work experiences, and two dummy variables capturing whether individuals finished education late (after 30 years of age for university and after 22 for high-school), and whether they graduated after 1977 (for the first period) or after 1995 (for the second period).

As regards the family characteristics we should consider the different channels through which the family can affect the individual occupational status. Indeed, job search, occupation and career prospects may be affected by the family background through economic, cultural, and social channels[10]. Even though it is more relevant for educational choices, the economic channel also affects the job-search process by giving different option values, or making it easier to start an independent economic activity. For example, the possibility of rejecting a job offer may be very different for individuals coming from low or high income families. The cultural channel works through the values attached to the different alternatives (e.g. intrinsic value of "secure" labour contracts) or through better knowledge of important information (e.g. how to write a cv, how to behave in a job-interview), or through the stimulus of non-cognitive/soft skills that obtain a premium in the labour market. Finally, the social channel influences preferences, opportunities and choices

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[9] We performed two generalized Hausman tests to check the independence of the "inactivity" category and we could reject the hypothesis of non-independence at 19% and 79% of significance level in the two periods respectively.

[10] There may be also a genetic channel but no robust evidence has been provided about it (especially about the transmission of cognitive abilities, IQ).

through peer-effects, network-related advantages such as informal channels of job-search, etc.

When considering the economic channel, some authors have underlined the decisiveness of the timing of poverty: economic difficulties in the initial years (0-5) have particularly negative effects on future outcomes (because of their effect on cognitive development). In our dataset the only variable that is related to the economic situation of the household in the initial years is house tenure (i.e. whether the house was rented or owned by the individual's parents), and this is a too weak proxy for the economic condition, so we do not include it in our analysis. As a proxy for the social channel it is common to consider father's occupation. In our case one should be aware that the type of fathers' occupations that provide "favourable" social relationships may be quite different for the labour market for high-school and university graduates. While for the latter the relevant occupations may be managers and professionals, for the former one should consider also qualified professions in the services and commercial activities. Since we cannot distinguish the two markets, we construct a dummy variable capturing these three types of occupations[11]. Finally, for the cultural channel we use mother's education both because it has been shown to have stronger effects on children's cognitive and non-cognitive skills, and because we avoid multi-collinearity problems with the father's occupation. A medium-high cultural background has been identified by having a mother with secondary or tertiary education[12].

Table 7 presents the results of the two multinomial logits for the two periods[13]. As regards variables not related to the family background, results are in line with what one would expect. In the first period, being female increased the probability of being both insecure and unemployed, whereas having finished late and having attended university in the Centre/North decreased it (the latter have very pronounced effects especially on unemployment). Individuals with a university degree were more likely to be insecure, and those with a higher number of previous job experiences were less likely to be unemployed. Those who graduated in the first half of the '70s were less likely to be both insecure and unemployed (although the estimates are not very precise). In the second period the difference is mainly with respect to the probability of being insecure, which is not affected any more by being female and holding a university degree, and which increases significantly for those who graduated in the second half of the '90s.

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[11] These correspond to the first, second and fifth group in the Isco-Istat classification (see Istat 2001). In the interpretation of the results one should keep in mind that in our dataset fathers' occupation refer to the time at which the child was fourteen.

[12] We included also secondary education because in the first period there were too few cases with a highly educated mother.

[13] In the second period we restrict our attention to those individuals for whom we can observe the occupational status both three and six years after the end of education because this is the sample that we will use in the subsequent probit model.

Table 7: Multinomial logit for the occupational condition three years after the end of studies (base category: secure employment.

Final year of education	1971-1985			1992-1999		
	Coef.	Std. Err	P>|z|	Coef.	Std. Err	P>|z|
Insecure						
Female	0.609	0.165	0.000	-0.116	0.243	0.634
Old	-0.460	0.251	0.067	-0.718	0.320	0.025
Univers.	0.529	0.217	0.015	-0.022	0.311	0.944
Grad. before 1978 (before						
1996 for the last three col.)	-0.237	0.169	0.161	-0.886	0.245	0.000
n.prev job exp.	0.000	0.091	0.999	0.148	0.102	0.148
Univ.C/North	-0.360	0.328	0.273	-0.222	0.426	0.603
m/high father's occupation	-0.246	0.204	0.227	-0.165	0.304	0.587
m/high mother's educ	-0.202	0.248	0.415	0.113	0.276	0.684
_cons	-1.656	0.169	0.000	0.121	0.253	0.633
Unemployed						
Female	0.257	0.171	0.133	0.497	0.269	0.064
Old	-0.356	0.243	0.142	-0.348	0.330	0.293
Univers.	-0.336	0.276	0.224	-0.379	0.352	0.281
Grad. before 1978 (before						
1996 for the last three col.)	-0.146	0.174	0.402	-0.366	0.263	0.164
n.prev job exp.	-0.509	0.164	0.002	-0.098	0.133	0.459
Univ.C/North	-1.824	0.764	0.017	-0.896	0.594	0.132
m/high father's occupation	-0.196	0.215	0.363	0.229	0.316	0.468
m/high mother's educ	-0.201	0.281	0.474	-0.319	0.318	0.315
_cons	-1.163	0.166	0.000	-0.400	0.278	0.150
Number of obs		1216		409		
Wald chi2(18)		104.74		38.11		
Prob > chi2		0.000		0.001		
Log pseudolikelihood		-888.967		-408.005		
Pseudo R2		0.1072		0.0559		

As regards family effects, the coefficient on both mother's education and father's occupation were negative (although not significant) in the first period, whereas in the second period, the effect of mother's education on the probability of being insecure reversed its sign (although it's still not significant). Given the differences in economic conditions within the two periods, we estimated another model allowing for the interaction between the father's occupation and the dummy for graduating in the second half of each period. Differences in the marginal effects are reported in table 8. The effect of father's occupation on unemployment vanishes[14], as well as the one on insecurity in the first half of the two periods, whereas the latter becomes negative and significant for the early '80s (the point estimate also becomes more negative for the late '90s but it is still not significant). So, from our dataset, differences in the effect of father's occupation are more pronounced

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[14] The point estimate of the marginal effect actually becomes positive in the '90s.

within the two periods than between them, suggesting a significant link between the macro-economic conditions and the importance of the family background.

Table 8: Marginal effects after multinomial logit (table 8).

Final year of education	1971-1985		1992-1999	
	dy/dx	P>|z|	dy/dx	P>|z|
Insecure				
Predicted Prob.	0.153		0.295	
m/high father's occupation*	-0.027	0.255	-0.049	0.385
m/high mother's educ*	-0.021	0.456	0.044	0.429
With interaction between father's occup. and time-dummies				
Predicted Prob..	0.152		0.295	
father's occupation (I half)*	0.011	0.783	-0.021	0.795
father's occupation (II half)*	-0.052	0.059	-0.073	0.321
Unemployed				
Predicted Prob.	0.125		0.227	
m/high father's occupation*	-0.016	0.452	0.053	0.350
m/high mother's educ*	-0.017	0.528	-0.061	0.205
With interaction between father's occup. and time-dummies				
Predicted Prob.	0.125		0.226	
father's occupation (I half)*	-0.011	0.732	0.026	0.722
father's occupation (II half)*	-0.021	0.468	0.088	0.332

(*) dy/dx is for discrete change of dummy variable from 0 to 1

As a check of our results we estimated various multinomial logit models also on Istat data for university graduates, where we added more control variables given the large sample size (see table A1 in the appendix for detailed results for the 1989 and 2001 surveys). The interesting result from our point of view is that the marginal effect of father's occupation on the probability of being insecure (see table 9) decreases in relative terms from the mid '80s to the late '90s and new millennium (while in absolute terms, over the '90s if first decreases and then increases) and this is similar to our results when we allow for the interaction of father's occupation with time dummies. With respect to unemployment, we do not observe a reversing of the sign, but we do observe a continuous reduction of the effect after the mid '90s until it vanishes in the last survey.

Our next step is to model the transition to a "better" employment situation, i.e. from either an insecure job to a secure one, or from unemployment to any form of employment, by means of a probit model with sample selection. In order to identify the two equations we need to impose some exclusion restrictions. Since we can compute the length of time in which an individual has been working in the current job, we use this variable in the transition probability instead of the number of previous job experiences. Furthermore, we assume that having finished late, having attended a university in the Centre or North of Italy and the number of previous work spells have an effect on the selection probability but not on the transition equation. Table 10 reports the results of the two probit models.

Table 9: Marginal effects of father's occupation and mother education three years after the end of studies – Istat survey on university graduates, various years

Final year of education	1986	1992	1995	1998	2001	2004
Insecure						
Predicted probability	*0.311*	*0.294*	*0.210*	*0.256*	*0.333*	*0.346*
high father's occupation	*-0.056*	*-0.033*	*-0.024*	*-0.018*	*-0.028*	*-0.031*
P>|z|	0.000	0.002	0.003	0.036	0.011	0.009
medium/high mother's educ	*-0.001*	*-0.003*	*0.002*	*0.005*	*0.013*	*-0.020*
P>|z|	0.968	0.774	0.768	0.552	0.205	0.127
Unemployed						
Predicted probability	*0.155*	*0.235*	*0.199*	*0.083*	*0.112*	*0.132*
high father's occupation	*-0.020*	*-0.042*	*-0.031*	*-0.013*	*-0.014*	*-0.004*
P>|z|	0.075	0.000	0.000	0.009	0.041	0.674
medium/high mother's educ	*-0.030*	*-0.010*	*-0.001*	*0.004*	*-0.003*	*0.011*
P>|z|	0.003	0.319	0.908	0.331	0.596	0.141

Table 10: Probit models with sample selection for the transition from insecure to secure employment or from unemployment to any kind of employment

Final year of education	1971-1985			1992-1999		
	Coef.	Std. Err	P>|z|	Coef.	Std. Err	P>|z|
Transition Equation						
Female	-0.505	0.300	0.093	-0.029	0.163	0.857
Time dummy (first half)	0.089	0.261	0.733	0.298	0.226	0.187
Univers.	-0.011	0.183	0.953	-0.069	0.182	0.704
Duration in current job	-0.388	0.087	0.000	-0.102	0.070	0.144
m/high father's occupation*first half time dummy	-0.021	0.270	0.939	0.110	0.248	0.658
m/high father's occupation*second half time dummy	0.299	0.343	0.384	0.379	0.274	0.167
_cons	0.723	1.757	0.681	-0.970	0.176	0.000
Selection Equation						
Female	0.267	0.078	0.001	0.083	0.130	0.522
Old	-0.224	0.198	0.256	-0.394	0.151	0.009
Time dummy (first half)	-0.152	0.083	0.066	-0.412	0.137	0.003
Univers.	0.091	0.125	0.467	-0.142	0.166	0.392
N. of previous work spells	-0.117	0.095	0.217	0.019	0.056	0.738
Univ.C/North	-0.360	0.277	0.194	-0.204	0.235	0.386
m/high father's occupation*second half time dummy	-0.219	0.126	0.082	-0.050	0.232	0.830
m/high mother's educ	-0.115	0.128	0.366	0.090	0.163	0.579
_cons	-0.446	0.080	0.000	0.367	0.143	0.010
Number of obs	1212			407		
Wald chi2(6); Prob > chi2	48.87	(0.000)		5.16	(0.524)	
Log pseudolikelihood	-929.57			-403.22		
Wald test of indep. eqns. (rho = 0):						
Prob > chi2	0.945			0.086		

In evaluating the significance level one should bear in mind that the first model was estimated on 1212 observations, while the second one only on 407. Unfortunately, the small sample size does not allow us to obtain precise estimates for the second period (we cannot reject the hypothesis that all coefficients in the transition equation are zero). However, some details are worth noting. The negative effect of being female on the probability of improving the occupational condition seems to disappear in the '90s, and the duration dependence (for work) seems to decrease. Moreover, within the second period, the probability of improving seems to decrease over time. As regards our variable of interest, in the second half of both periods there seems to be an effect of father's occupation on the transition probability, whereas the effect on selection disappears in the '90s. Again, the marginal effects of father's occupation in the second half of the two periods appear very similar in absolute terms (but the effect increased a lot in relative terms, see table 11).

Table 11: Marginal effects after probit with selection (table 10).

Final year of education	1971-1985		1992-1999	
	dy/dx	P>|z|	dy/dx	P>|z|
Transition equation				
Predicted Prob.	0.455		0.172	
m/high father's occupation*first half time dummy	-0.008	0.939	0.029	0.672
m/high father's occupation*second half time dummy	0.118	0.382	0.110	0.219

(*) dy/dx is for discrete change of dummy variable from 0 to 1

6. Summary and conclusions

In this paper we investigated whether the changes in macro-economic circumstances and in labour market institutions that occurred in Italy during the '90s have modified the importance of the family background to reach certain labour outcomes.

We use the Italian Households Longitudinal Study (Ilfi) and divide observations in two periods according to the year in which individuals finished their studies: between 1971 and 1980 and from 1992 to 2005. By considering the individuals' occupational status three years after finishing education, we show that employment opportunities changed quite significantly in Italy over the last two decades: while in the '70s and '80s about 2 out of 3 high school or university graduates who participated in the labour market were in a secure employment condition (employees with open ended contract and self employed) three years after the end of their studies, in the '90s and early years of the new millennium this proportion reduced to 1 out of 2.

By exploiting the longitudinal feature of our dataset, we examined the transitions from three to six years after the end of studies. Because of the small size of our sample we were forced to aggregate the different occupational categories into four main groups: secure employment, insecure employment, unemployment and inactivity. Results are consistent

with the description of the Italian labour market as deeply segmented, and underline the increase of this segmentation over time. Persistence in secure employment is very high, although slightly reducing in the second period. There is a significant increase in the persistence in insecurity which means that for an increasing share of workers the condition of being precarious does not characterize only the beginning of the career, but it extends for quite a long period of the working life. Also the persistence in unemployment increased, and exit from it is much more towards insecure employment than to a secure one, when compared with the first period.

As regards family effects on early occupational outcomes (i.e. three years after the end of studies), while we could not identify any significant effect of mother's education, some types of father's occupation (when the individual was fourteen) significantly reduced the probability of being insecure for those who finished their studies in the late '70s and early '80s (and also in the late '90s-early new millennium, although the estimate was not significant), whereas they had no effect in the early '70s and mid '90s. In other words, differences in the effect of father's occupation are more pronounced within the periods (1970-1985 and 1992-2002) than between them. For the '90s and the new millennium, Istat data on university graduates confirm that the effect of father's occupation on being insecure first decreases and then increases over time.

These results suggest that, up to the late '90s, the effect of the social network of the father on early occupational outcomes is more related to changes in the macroeconomic circumstances than to the institutional changes occurred between the '80s and the '90s. More work is needed on Istat data for high-school and university graduates to better understand the consequences on the importance of the family background of the specific reforms introduced in 1997 and 2003, because they cannot be captured by using the Ilfi dataset.

Unfortunately, Istat data do not allow us to examine the family effect on transitions. Estimation based on Ilfi data turns out to be quite difficult for the '90s because the sample size is too small. However, there are some signals that the effect of father's occupation on transition is again more pronounced in the early '80s and late '90s, and that the marginal effect in the latter period is larger in relative terms, compared to the one for the early '80s.

In order to confirm these results on transitions we would need larger datasets with longitudinal information on labour market histories and characteristics of the family of origin, but unfortunately they are not available for Italy, yet. This paper can also be viewed as making the case for producing this type of data urgently.

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Appendix.

Table A1: Multinomial logit for the occupational condition three years after the end of studies (base category: secure employment).

Final year of education	1986			1998		
	Coef.	Std. Err	z	Coef.	Std. Err	z
Insecure						
Female	0.68	0.07	9.97	0.54	0.04	12.68
Year of birth	0.87	0.11	7.91			
Age <=26				-0.10	0.08	-1.20
Final marks	-0.02	0.03	-0.66	0.19	0.05	4.02
Honours				0.07	0.06	1.20
Month of graduation	0.02	0.01	2.46	0.06	0.02	3.37
No delay in graduation				-0.12	0.08	-1.49
Engineering	-0.57	0.10	-5.53	-0.65	0.06	-10.58
Economics	-0.7	0.1	-7.17	-0.49	0.05	-9.22
Scientifc	-0.14	0.1	-1.49	-0.15	0.05	-2.72
Medicine	1.07	0.1	10.53	-0.17	0.15	-1.15
work after school	0.43	0.07	6.35	0.17	0.04	3.97
high father's occupation	-0.33	0.08	-4.14	-0.12	0.05	-2.49
Medium/high mother's educ	-0.06	0.07	-0.82	0.03	0.04	0.75
Center	0.001	0.08	0.01	0.36	0.05	7.14
South	0.42	0.08	5.54	0.40	0.05	7.99
_cons	-2.8	0.32	-12.20	-1.29	0.11	-11.94
Unemployed						
Female	0.78	0.09	9.11	0.72	0.07	10.89
Year of birth	0.75	0.14	5.19			
Age <=26				-0.21	0.12	-1.72
Final marks	-0.10	0.04	-2.90	-0.09	0.07	-1.32
Honours				-0.24	0.08	-2.90
Month of graduation	0.06	0.01	5.38	0.01	0.02	0.30
No delay in graduation				-0.19	0.12	-1.59
Engineering	-1.21	0.17	-7.11	-1.53	0.11	-14.07
Economics	-1.13	0.13	-8.65	-0.95	0.07	-12.65
Scientifc	-0.52	0.12	-4.24	-0.71	0.08	-8.74
Medicine	1.2	0.11	10.49	-0.56	0.21	-2.63
work after school	0.87	0.08	10.34	0.81	0.06	13.76
high father's occupation	-0.27	0.1	-2.78	-0.20	0.07	-2.94
Medium/high mother's educ	-0.26	0.09	-2.90	0.07	0.06	1.09
Center	0.56	0.11	5.30	0.92	0.08	11.75
South	1.26	0.09	13.66	1.69	0.07	25.11
_cons	-3.69	0.29	-12.70	-2.41	0.17	-14.27
Number of obs		9334			17420	
Wald chi2(30); Pr. > chi2		997.68	(0.0000)		1871.86	0.0000
Log pseudolikelihood		-8368.96			-14122.2	
Pseudo R2			0.1133			0.0860