



IFAU – INSTITUTE FOR
LABOUR MARKET POLICY
EVALUATION

Welfare reforms and labour supply in Italy

Agar Brugiavini

WORKING PAPER 2009:29

The Institute for Labour Market Policy Evaluation (IFAU) is a research institute under the Swedish Ministry of Employment, situated in Uppsala. IFAU's objective is to promote, support and carry out scientific evaluations. The assignment includes: the effects of labour market policies, studies of the functioning of the labour market, the labour market effects of educational policies and the labour market effects of social insurance policies. IFAU shall also disseminate its results so that they become accessible to different interested parties in Sweden and abroad.

IFAU also provides funding for research projects within its areas of interest. The deadline for applications is October 1 each year. Since the researchers at IFAU are mainly economists, researchers from other disciplines are encouraged to apply for funding.

IFAU is run by a Director-General. The institute has a scientific council, consisting of a chairman, the Director-General and five other members. Among other things, the scientific council proposes a decision for the allocation of research grants. A reference group including representatives for employer organizations and trade unions, as well as the ministries and authorities concerned is also connected to the institute.

Postal address: P.O. Box 513, 751 20 Uppsala

Visiting address: Kyrkogårdsgatan 6, Uppsala

Phone: +46 18 471 70 70

Fax: +46 18 471 70 71

ifau@ifau.uu.se

www.ifau.se

Papers published in the Working Paper Series should, according to the IFAU policy, have been discussed at seminars held at IFAU and at least one other academic forum, and have been read by one external and one internal referee. They need not, however, have undergone the standard scrutiny for publication in a scientific journal. The purpose of the Working Paper Series is to provide a factual basis for public policy and the public policy discussion.

ISSN 1651-1166

Welfare reforms and labour supply in Italy

by

Agar Brugiavini*

December 2009

Abstract

This paper looks at welfare reforms in Italy and their effects on labour supply. I focus on social security reforms, which have taken place in the 1990s and on labour market reforms. Old age social security expenditure in Italy is high (14% of GDP) and the system has been very generous on early retirement possibilities: the reforms have tried to tackle these issues with mixed results. The labour market reforms have addressed the rigidity of the labour market by making it easier for firms to hire on a short-term basis. However the UI system is limited to open-ended contracts and coverage is also restricted, so that young workers employed in short-term contracts have very little protection from the welfare state.

Keywords: social security system, unemployment insurance, labour supply

JEL-codes: H53; H55; I38; J08; J26; J65

* University of Venice, e-mail: brugiavi@unive.it

Table of contents

1	Introduction	3
2	Background	4
3	Recent reforms in Italy	12
3.1	Social security	12
3.1.1	Main features of the Italian social security system	12
3.1.2	Reforms of the social security system in the 1990s	15
3.2	Disability	19
3.3	Social assistance for the elderly and poverty relief	20
3.4	Contracts and labour market regulations	21
3.4.1	Main features of the labour market and its regulation	21
3.4.2	Recent reforms in the labour market	22
3.5	Unemployment insurance	25
3.5.1	Eligibility, benefit duration and benefit levels	26
3.5.2	Unemployment Insurance – Stylized facts and the reforms	28
3.6	Income taxation	30
4	The effects of the reforms	32
4.1	Effects of social security reforms	32
4.2	Effects of the labour market reforms	38
4.3	The effects of changes in income tax rates	43
5	Conclusions	43
	References	46
	APPENDIX	49

1 Introduction

Italy has seen a flurry of reforms in the 1990s, but these have been limited to social security and some segments of the labour market. The Italian welfare system is characterized by an overwhelming weight of old age spending if compared with other OECD countries, in contrast unemployment benefits and family protection provisions play a minor role. In Italy old age spending reached 11.6% of GDP in 2005 and is now approximately 14%; unemployment spending is only 0.5% and other social areas are basically at zero expenditure in the year 2005. Public spending on old-age and survivors' benefits in Italy have been the highest amongst OECD countries for some time: pensions take nearly 30% of the budget, compared with an OECD average of 16%. Hence the first part of this paper is devoted to the social security system and its reforms. I look at the composition of income by sources drawn from the Survey of Household Income and Wealth of the Bank of Italy to show that disability benefits and unemployment benefits play a minor role in comparison to old age benefits (particularly at older ages). I then describe the social security reforms and their impact on labour supply, mainly via the age-eligibility restriction to early retirement. The important reform of 1995, which changed the system into a Notional Defined Contribution NDC method of calculation of benefits has a very long transitional period which has made it essentially ineffective so far.

In order to describe the typical labour market welfare provisions I first describe the reforms of the labour market, which was well known for its rigidity (the employment protection legislation EPL index, produced by the OECD, was very high until recently). These reforms (taking place in 1997 and 2003) have reduced youth unemployment rates by opening the possibilities to access short-term jobs. However these short-term jobs are then hardly transformed into open-ended contracts (a two-tiers labour market) and also they lack welfare coverage. I describe the UI system and its evolution by highlighting the fact that coverage is mostly restricted to open-ended contracts under special conditions.

2 Background

In terms of income support the Italian system is characterized by an overwhelming weight of old age spending if compared with other OECD countries and in particular with European countries, in contrast unemployment benefits and family protection provisions play a minor role. *Table 2.1* shows the composition of welfare spending for selected countries as percentage of GDP. Italy was scoring high on old age spending already in 1995, but in 2005 old age spending increased to reach 11.6% ranking second after Austria (and social security expenditures are predicted to increase to 15% in the next few years)¹; unemployment spending is only 0.5% and other social areas are basically at zero expenditure in the year 2005. OECD data for the year 2009 confirm that Italy is the highest ranking country in terms of public old age spending.

Table 2.1 Composition of public spending in selected countries

Branch	Old age pension		Incapacity related		Active Labour Market Programs		Unemployment		Other Social Policy Areas	
	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005
Country										
Austria	12,3	12,6	2,8	2,4	0,4	0,6	1,3	1,1	5,9	6,8
France	10,6	10,9	2,1	1,9	1,2	0,9	1,6	1,7	7,5	7,8
Germany	10,4	11,2	1,9	1,9	1,2	1	1,7	1,7	8,2	7,7
Greece	9,2	10,8	0,8	0,9	0,4	0,1	0,4	0,4	4,5	5,6
Ireland	2,9	2,9	1,5	1,6	1,3	0,6	1,8	0,9	4,8	6,5
Italy	9,4	11,6	1,8	1,7	0,3	0,6	0,7	0,5	5,1	6,8
Netherlands	5,5	5,5	5	3,6	1,4	1,3	2,8	1,5	5,9	6
Spain	8,3	7,9	2,5	2,5	0,4	0,8	3,2	2,2	5,4	5,8
Sweden	9,8	9,6	5	5,6	2,2	1,3	2,3	1,2	6,2	6,8
United States	5,4	5,3	1,2	1,3	0,2	0,1	0,3	0,3	6,1	7

Hence, it is clear that public old age spending crowds out other social expenditures, both in social policy (on benefits for children or unemployment) and elsewhere (on education, for example). Revenues from pension contributions in Italy are also very high amongst OECD countries: contribution rates are 32% of gross earnings, compared with

¹ Ragioneria Generale dello Stato, (2009) Relazione Unificata sull'Economia e sulla Finanza Pubblica RUEF

an OECD average of 21%. Nevertheless the social security budget runs a deficit which is covered by taxation at large.

The same conclusion can be drawn looking at the composition of income sources by age-groups and year. The only data-base which allows me to have a complete account of the income sources for individuals at different ages is the Survey of Households Income and Wealth (SHIW) produced by the Bank of Italy. Fully comparable definitions are available from 1989 to 2006. I focus on two age groups (50-54 and 55-59) where most of the action takes place. In order to properly account for all income sources I also include earnings.

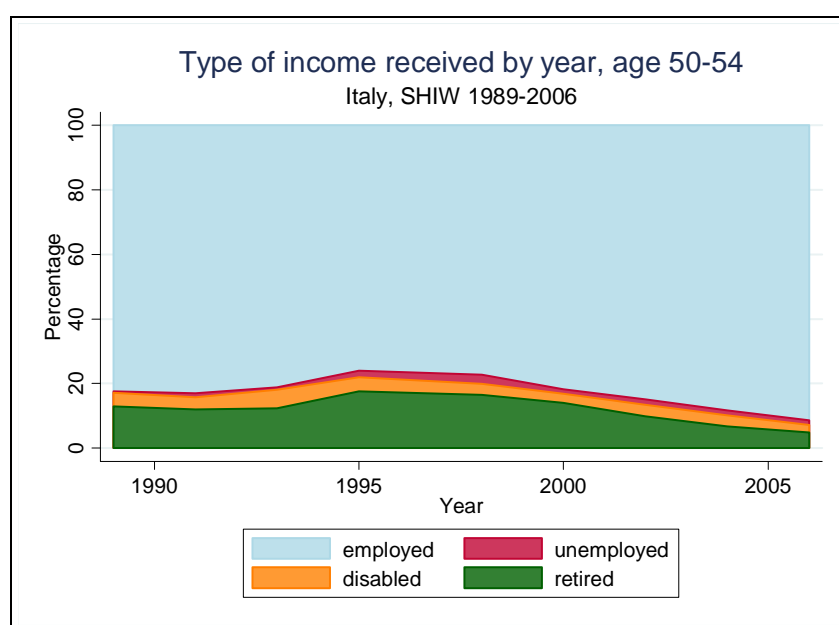


Figure 2.1 Composition of incomes received; age 50–54²

² Retired includes all individuals collecting an old age or early retirement benefits, plus survivor benefits and other non contributor benefits..

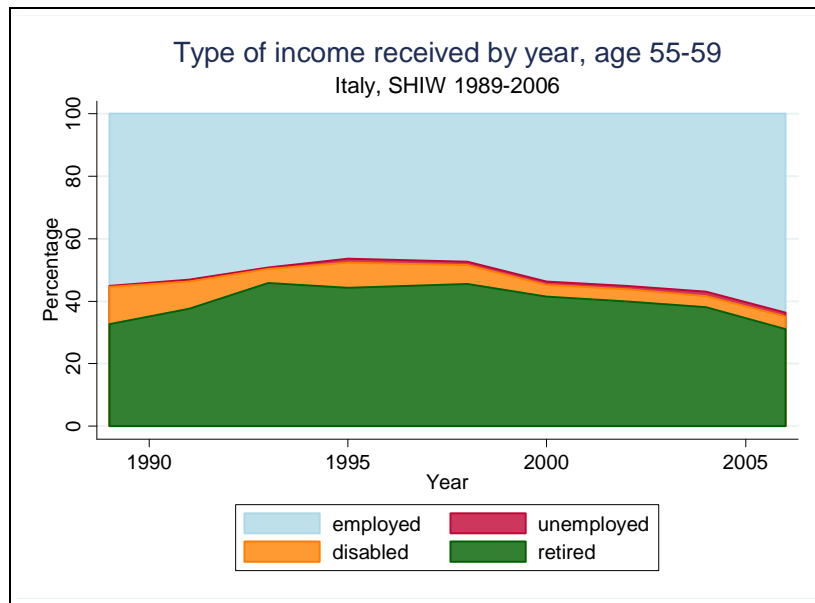


Figure 2.2 Composition of incomes received; age 55–59

At young ages (40–49) very few individuals benefit from unemployment insurance or other provisions. As age increases, the relevance of social security benefits is dominating the scene. In particular as many as 18% of individuals in the age group 50-54 and 40% in the age group 55-59 collect retirement benefits (*Figure 2.1* and *Figure 2.2*). Starting in 1995, disability benefits and survivor benefits as well as old age benefits decrease for both age groups. This is partly due to the effect of the reforms of the 1990s, as I will explain later. It should be noted that the large expenditure on disability in the early years is explained by the existing stock of disability benefits granted before the 1990s, which is gradually reduced by an important disability-insurance reform in 1984 which gradually reduced the take-up.³

Activity-inactivity rates are drawn both from the Labour Force Survey and from the SHIW Survey. While the former is designed to record labour force status, and available for a long time span, it should be noted that it has two major problems: (1) until recently it was recording only employed and unemployed; (2) there are several breaks in the series, particularly relevant is the one in 1993, with a change in definition of the unem-

³ For the age group 60-64 old age benefits and survivor benefits (collected mostly by widows) become dominant

ployed, and the one in 2003⁴. Hence the SHIW data can provide more information on the non-employed and more comparability over time, but it has a limited time-span.

First it is useful to look at employment rates – separately for men and women – in recent years (*Table 2.2*). Employment rates are much higher for men than women, they hardly reach 50% for the age group 20–24 (mostly due to schooling) and in the age groups 55-59 and over (due to retirement and early retirement).

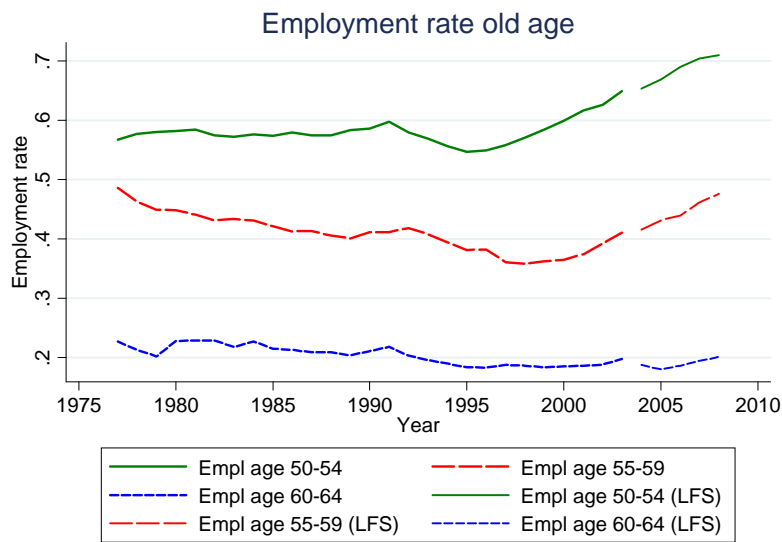
Table 2.2 Employment Rates in 2004–2008 by age-groups and gender

Men					
Age	2004	2005	2006	2007	2008
15-19	12.0	10.8	10.7	9.8	9.3
20-24	48.5	47.3	49.1	48.5	48.5
25-29	73.9	72.7	74.0	73.4	73.2
30-34	87.1	86.4	86.5	87.2	86.2
35-39	90.8	90.6	90.9	90.9	90.1
40-44	92.1	91.8	91.8	91.3	90.2
45-49	90.9	90.7	91.2	90.8	90.6
50-54	82.7	85.2	86.7	87.7	87.2
55-59	54.0	55.5	56.4	59.0	60.3
60-64	29.1	27.6	28.0	28.9	29.1
65-69	10.8	11.6	12.3	12.0	12.5
70-74	5.5	5.1	5.2	5.6	5.6
Women					
Age	2004	2005	2006	2007	2008
15-19	6.8	5.3	4.9	5.2	4.9
20-24	37.5	34.7	34.0	33.0	33.1
25-29	55.1	53.6	55.7	55.1	55.4
30-34	61.7	62.0	62.0	62.2	63.0
35-39	61.5	61.6	62.9	63.0	63.3
40-44	60.6	61.0	61.8	61.5	62.2
45-49	57.2	57.6	59.1	59.9	60.1
50-54	48.4	49.1	51.9	53.6	55.2
55-59	29.5	31.1	32.0	33.8	35.4
60-64	9.1	9.1	9.8	10.6	11.6
65-69	2.9	2.8	2.9	3.1	3.2
70-74	1.1	0.8	0.9	1.0	1.3

Source: Labour Force Survey

⁴ The Italian Statistical Office has provided harmonized data drawn from the Labour Force Survey from 1977 to 2003 (MARSS data).

In order to understand the labour market evolutions and the consequences of reforms, it is important to look at patterns of the employment rates for distinct age groups: particularly relevant are the age groups from 50 to 64. *Figure 2.3* shows that the employment rates have been steadily declining with an important reversal taking place after 1995, particularly for the age group 50-54, due to the pension reforms of 1992 and 1995, when the more stringent rules on early retirement start binding (as I will explain later). Similar evidence is drawn from the Bank of Italy data SHIW (*Figure A.1* and *Figure A.2* in the Appendix) which also show the relationship between inactivity (retired people) and the changes in employment both for the age group 50-54 and 55-59.



Source: Labour Force Survey⁵

Figure 2.3 Employment time for the age groups 50–54,55–59 and 60–64

Figure 2.4 shows that while the employment rate of prime age individuals (25–64) is rather stable with an increase after 1996, the employment rate of young people (20–24) has been steadily declining due to increased schooling with an important reversal in the trend after 1997, the time when labour reforms took place.

⁵ In 2004 there is an important change in the survey methodology of the Labour Force Survey, which explains the break in the series

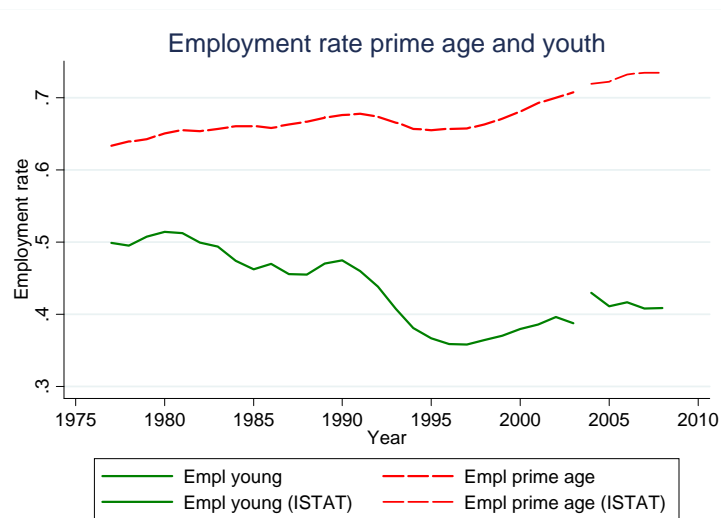


Figure 2.4 Employment time for the young (20–24) and prime age (25–64)

Source: MARSS, Labour Force Survey

Recent years (2007, 2008) have witnessed an increasing gap between the employment rates of these age groups.

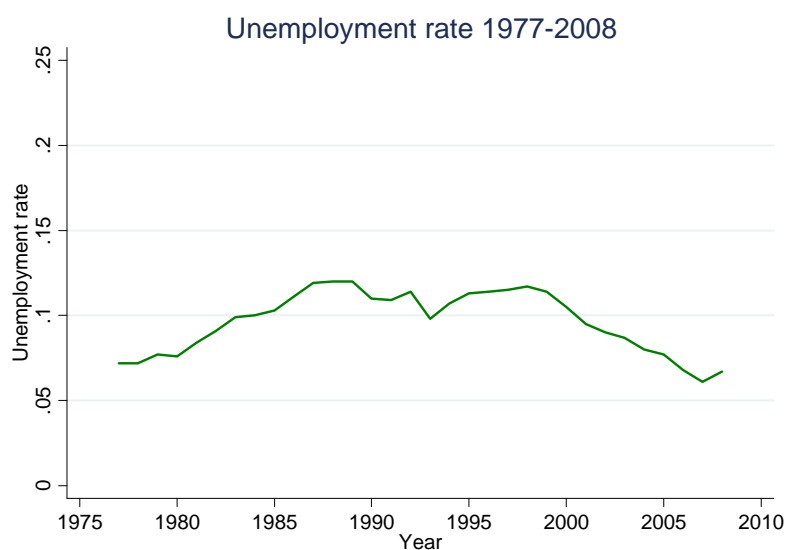
Unemployment of the young is a serious concern in Italy, I will therefore describe some facts specific to unemployment. The Italian unemployment rate reached its peak in the second half of the 1990s. Recent years saw a downward trend such that Italy is no longer amongst the highest unemployment countries (see *Table 2.3*).

Table 2.3 Harmonized unemployed rates for selected OECD countries. Source: OECD 2009

Country	Year						
	1980	1985	1990	1995	2000	2005	2008
Austria	..	..	..	3.9	3.6	5.2	3.9
France	5.8	9.6	8.4	11	9	9.3	7.9
Germany	..	..	..	8	7.5	10.6	7.3
Greece	..	7	6.3	9	11.2	9.9	7.7
Ireland	..	16.8	13.4	12.3	4.4	4.4	6
Italy	4.8	8.2	8.9	11.2	10.1	7.7	6.8
Netherlands	4.3	7.9	5.9	6.6	2.8	4.7	2.8
Spain	9	17.8	13	18.4	11.1	9.2	11.4
Sweden	2.1	2.9	1.7	8.8	5.6	7.3	6.1
United States	7.1	7.2	5.6	5.6	4	5.1	5.8
Euro area	..	..	..	10.4	8.5	9	7.6
OECD - Europe	..	..	8	9.8	8.2	9	7.1
OECD - Total	..	..	6.1	7.3	6.2	6.8	6

Figure 2.5 shows the total unemployment rate for the period 1977–2008. In order to provide an explanation for the observed patterns, it will be necessary to split the data by

gender and geographical region. However, long time series on disaggregated unemployment rates in Italy are not readily available, since official statistics feature various definitional changes making it very hard to reconstruct regional employment rates by age and gender. Time series of unemployment reconstructed by the Italian Statistical Office on a consistent basis using the Labour Force Survey data (MARSS) are available only for the period 1977-2003.



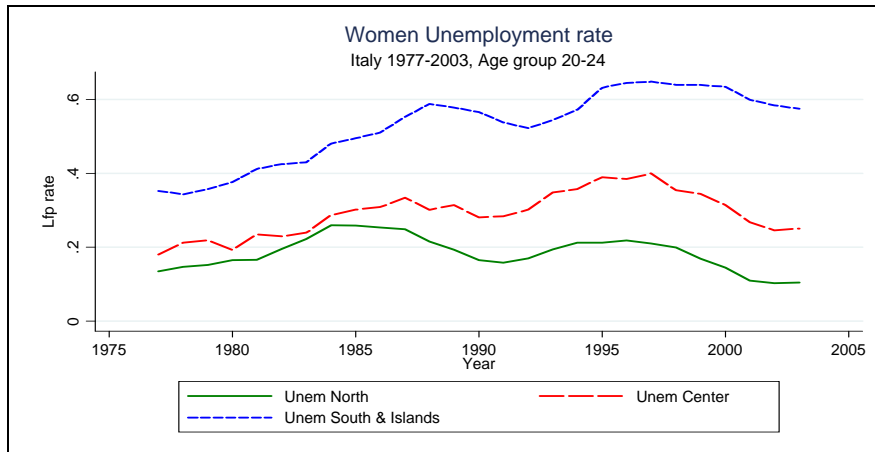
(Source: Labour Force Survey-)

Figure 2.5 Total unemployment rate (all ages)

At the aggregate national level, including all ages from 15 to 70, two main “humps” are observed – one at the end of the 1980s and another in the second half of the 1990s. The reversal observed after 2000 is partly due to an important reform of the labour market of 1997 (known as the “Treu Package”). Unemployment starts to increase again in 2008. When looking at the data in more detail, it should be noted that for the younger age groups and older age groups unemployment does not follow exactly the non-employment patterns (*Figure A.3* and *Figure A.4* in the Appendix) due to the inactivity status of “student” or “retired”, hence it is useful to inspect the unemployment data for these age groups⁶. When focusing on the disaggregated unemployment figures (*Figure 2.6* and *Figure 2.7*) it is striking that there is a wide dispersion across regions and by

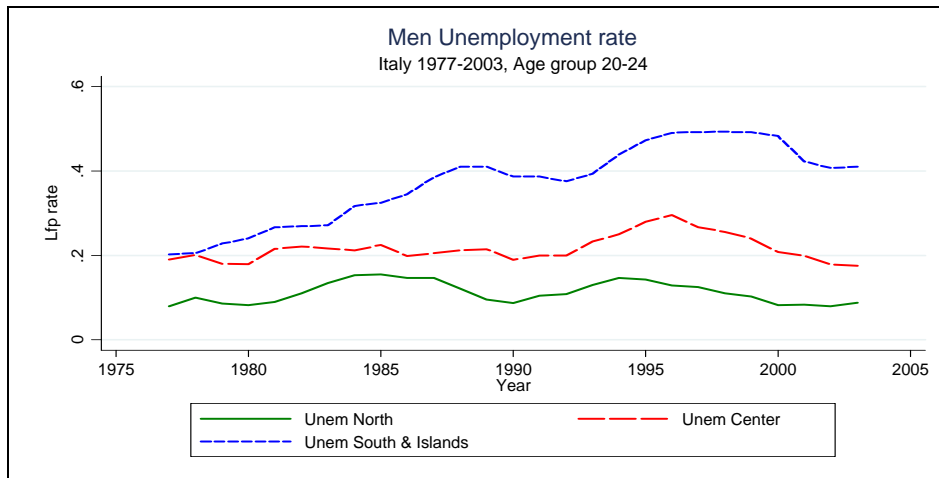
⁶ Obviously the difference between the two series is also partly due to the fact that the unemployment rates are defined as the people unemployed over the labour force.

gender: more than 60% of women in the labour force in the age group 20-24 in the South in the years 1995-1996 are unemployed against an average of 13% at the national level.



(Source: Labour Force Survey)

Figure 2.6 Unemployment rate for women by year and region, age 20–24⁷



(Source: Labour Force Survey)

Figure 2.7 Unemployment rate for men by year and region, age 20–24

These patterns show that the Italian labour market is particularly unbalanced and it has often been characterized as having “insider/outsider” features. At one extreme, standard open-ended contracts are extremely protected as firing costs are particularly high. At the other extreme, fixed-term contracts have become quite popular in the last

⁷ As explained in the text employment and unemployment data are hard to obtain on a consistent basis because of the many changes in the methodology. The regional unemployment data made available stops in 2003.

decade; these “short term” workers – typically young workers – suffer from a lack of welfare protection and hardly any transition is observed from fixed-term contracts to open-ended contracts, as I shall discuss later.

3 Recent reforms in Italy

In this section I describe the main features of the welfare system and the important reforms by focusing the attention on the social security system and the unemployment insurance system.

3.1 Social security

Because the basic historical aspects of the system are well documented elsewhere (see Brugiavini, 1999 and Brugiavini and Peracchi, 2004), in this paper I describe very briefly its main rules and recent developments (see also OECD, 2007).

3.1.1 Main features of the Italian social security system

The Italian social security system is based on a variety of institutions administering public pension programs for different types of workers (private-sector employees, public-sector employees, self-employed, professional workers)⁸. All programs are of the unfunded pay-as-you go (PAYG) type. Despite a process towards convergence during the 1990s, the various programs maintain quite different rules. In terms of pillars, the first “public” pillar is the most relevant as the following *Table 3.1* shows in comparison to Spain and the USA.

⁸ Social security system and pension system are in this paper used as synonymous. In fact, social security is the main source of publicly provided income in old age in Italy.

Table 3.1 Composition of retirement income in selected countries

	Italy	Spain	US
First Pillar ^b	74%	92%	45%
Second Pillar ^d	1%	4%	13%
Third Pillar ^f	25%	4%	42% ^g

Notes: The rows (summing to 100%) show the composition of retirement income according to sources. (b) Public retirement income (public pensions, social assistance, civil servants' pensions, etc.) as percent of total income of two-person retiree household. (d) Private occupational pension income as percent of total income of two-person retiree household. All other retirement income (asset income, net transfers received, earnings, etc.) as percent of total income of two-person retiree household. (g) 25 percentage points of this figure are earnings.

Source: Brugiavini, Peracchi and Wise, 2003.

Currently, about two thirds of the labour force is insured with the National Social Security Institute (INPS). The Institute is responsible for a number of separate funds, of which the most important covers the private-sector non-agricultural employees (Fondo Pensioni Lavoratori Dipendenti or FPLD). Social security collects contributions from employers and employees and covers three types of risks: longevity risks (old age benefits), the risk of death (survivor benefits) and disability risks (disability benefits).

The system started before World War I but was re-designed in 1969: social security benefits changed from a defined-contribution social insurance system to an earnings-related social insurance system. The idea was to guarantee to every worker a retirement income comparable to what earned during the working life. At the same time coverage increased.

An early retirement pension was introduced (called seniority pension) related to the years of contribution (irrespective of age), to guarantee a pension income also to individuals with at least 35 years of contribution. The idea was to provide income to people who had started to work early and also to women, who had carried out both market and non-market activities during their lifetime. It should be noted that the early retirement option was made available to private sector employees but also to particular categories of public sector employees.

With the same legislative act, the *social pension* was introduced to guarantee a basic standard of living also to all citizens who had no other incomes. It consists of a monthly payment to individuals who are not eligible for an old age pension, who are aged 65 or older and hold an Italian citizenship.

These reforms took place at a time when the economy was growing and there was no concern for the old age crisis and the longevity improvements that undermined the system in the late 1980's. The way benefits were computed changed over time, but was essentially of a "final salary" type as averages of the earnings of the last years of work formed the basis for the calculation (called pensionable earnings). To these averages some "rate of return" (representing the accrual factor) was applied: a parameter approximately equal to 2%, for each year of contribution⁹. An upper limit was placed on the pensionable earnings, which was however removed in 1988 and earnings exceeding the limit would be taken into account in the benefit calculations, but not at their full amount. Until 1968 old-age pension and earnings could not be combined, this restriction was lifted in 1969 but within limits.

In 1969 it was also established that pension benefits should be indexed according to an automatic growth mechanism that linked benefit to both inflation and part of the wage growth. In 1976 benefits were automatically indexed to the contractual wages of the workers in the industrial sector.

The statutory retirement age for old age benefits was 60 for men and 55 for women, however, as anticipated, a generous early retirement option was available that allowed workers to retire at any age if 35 years of contributions had been completed.

The social security system guarantees an old age pension, a seniority pension and a disability pension¹⁰ to public sector employee since 1919 through a large variety of small funds. In 1973 all these funds were merged into one. Benefits calculations were even more generous than in the private sector as the average earnings immediately prior to retirement formed the basis of the benefit.

Following the same requirements of the pensions for the private employee, the pension of the public sector employee has a floor (minimum benefit) and a ceiling to

⁹ The rate was initially lower and grew over time

¹⁰ In Italy, disability pension refers to more than one type of pension. In 1919, a *public invalidity pension*, was introduced; it was available for individuals with a physical or mental disease, certified by medical checks, that cause a reduction of at least 2/3 of the original working capacity. With Law no. 222 of June 12, 1984, the *public inability pension* was introduced for private employees only; it is available for individuals with a physical or mental disease, certified by medical checks, which is permanent and makes it impossible to carry out any job. With the Dini reform of 1995, the *public inability pension* was extended also to public employees under the proviso that the impairments are not caused by work. In 1995 a special inability pension for the public sector already existed, which provides for income support in the case where the impairments are caused by work (see the section on disability)

pensionable earnings. In the public sector men and women could retire through early retirement even with just 20 or 15 years of contributions, respectively, at any age.

3.1.2 Reforms of the social security system in the 1990s

As I argued, in the early stages up to 1980's governments showed no concern for the generosity of the social security system and the growth in pension outlays. Indeed reforms, in the form of "parametric changes", almost invariably increased generosity of the system (see also Boeri, Brugiavini and Peracchi 2003 and Brugiavini and Galasso, 2004). The main reforms of the social security system took place in 1992, 1995 and 1997. They are known, respectively, as the Amato, Dini and Prodi reforms, from the names of the Prime Ministers at the time. In addition, smaller changes to the system have been made nearly every year since 1992. Of the three main reforms of the 1990s, the Dini reform appears as the most radical, because it completely redesigns the system by modifying the eligibility rules and by changing the benefit formula from defined-benefits to defined-contributions (notionally defined contributions). However, because the changes are only introduced gradually, through a very long transitional period, the direct effects of the Dini reform may be considered small compared to the less radical Amato reform.

Overall, because of the long transitional periods, the cohorts that reached the retirement age during the 1990s and those currently retiring remained largely unaffected by the reforms of the 1990s, as most of the burden of the adjustment fell on the younger cohorts (Brugiavini and Galasso, 2004).

More precisely, the **1992 (Amato) reform** explicitly distinguishes between workers with at least 15 years of contributions at the end of 1992 and all other workers. The old system (introduced in 1969) applies, with some changes, to the former, whereas the new system only applies to the latter. The new rules of the Amato reform established that the age requirement for an old-age pension was to be gradually increased by one year of age every two years, starting from 1994, until reaching age 65 for men and age 60 for women in the year 2000.

Also from 1994, the requirement is set at age 65 for state employees (irrespective of gender) and age 60 for local government employees (again, irrespective of gender). The old requirements remain unchanged for a few special categories (army and police per-

sonnel, flight personnel, travelling personnel of public transportation services, firemen and employees of the entertainment industry).

The numbers of years of contribution required for an old-age pension is gradually increased by one every two years starting from 1993, until reaching 20 years of contributions in 2001.

For workers with less than 15 years of contributions at the end of 1992, the reference period for computing pensionable earnings is gradually increased until including the whole working life, with past wages adjusted to inflation on the basis of the annual rate of change of the cost-of-living index plus an additional 1%.

One important change, aimed at curtailing the generosity of pension benefits, is that benefits are automatically adjusted, on an annual basis, only to the changes in the cost of living and not to real wage growth.

The adoption of different rules for older and younger workers is maintained in the subsequent **1995 (Dini) and 1997 (Prodi) reforms**. In particular, with the exception of the new eligibility rules, very few changes apply to workers with 18 or more years of contributions at the end of 1995, beyond those already introduced in 1992. Hence conditions both for eligibility and for benefit calculation vary according to three categories of covered workers:

- **Category A.** New entrants to the labour force as of 1996.
- **Category B.** Insured workers with less than 18 years of contributions in 1996.
- **Category C.** Insured persons with at least 18 years of contributions in 1996.

The **Dini reform** changed dramatically the pension system of younger generations, that moved from a defined benefit calculation method to a notionally defined contribution method (very similar to the Swedish system). The drawback is that this reform had a very long transitional period (the first generation to retire fully under the new regime will be in 2032). In the transitional phase benefits would be calculated on a *pro rata* basis according to the number of years of contributions under the two regimes (contributions paid after 1993 count under the new regime).

The Dini reform introduced other important changes. The payroll tax rate was increased from 27% to 32% for all dependent employees in the private sector. Two thirds of the payroll tax rate had to be covered by the employer, the residual part paid by the

employee. Also for public sector employees one part of the contribution would be paid by the State. Since 1996 the percentage of contributions of the employee is equal to 8.75% and the percentage of the State is 24.20%.

One major change is that, during the transitional phase, in order for workers to become eligible for seniority pension, a joint requirement of age and years of contribution was introduced: starting from 1996 a worker could retire if he was aged 52 and had accumulated 35 years of contribution. These limits were raised gradually such that in 2002 the entry age was 57 with 35 years of contribution, for both men and women (similar, though slightly different rules applied to public sector employees). The minimum age requirements for seniority pensions were in any case gradually increased to reach age 40 in 2008. *Table 3.2* summarizes the situation for the three major social security funds.

Under the new regime (depending on the number of years of collected contributions) workers, both men and women, who started working after 1995 (workers in Category A) can choose the age of retirement in a range between 57 and 65, with a minimum requirement of at least 5 years of contribution.

By far the major change of the 1995 reform is in the benefits computation method as a notionally defined contribution (NDC) system was adopted based on accumulated contributions, applying to workers who started their career after 1995 (Category A). For a worker who started paying contribution on or after January 1, 1996, the pension is based on a notional annual contribution, equal to 33% of annually covered earnings in the case of employees and equal to 20% of annually covered earnings for the self-employed. Notional contributions are adjusted annually according to the average rate of increase in gross domestic product (GDP) during the last 5 years. At retirement, the lifetime accrued notional stock of contributions is multiplied by an actuarial coefficient that varies according to the worker's age (from 4.720% at age 57 to 6.136% at age 65).

The “pro-quota” system I mentioned applies also to the benefit calculation for workers with less than 18 years of contributions at the end of 1995 (Category B). Hence the actual benefit calculation also varies according to time of entering the labour market.

As far as collecting benefits while working, the new rules established that it would be possible to combine benefits with earned income, subject to some limitations.

Table 3.2 Rules for early retirement in the transitional phase for private sector employees (INPS), public sector employees (INPDAP) and the self-employed.

Year	INPS (Private Sector)	INPS-(Private Sector)	INPDAP (Public Sector)	INPDAP (Public Sector)	Self-employed	Self –employed
	Age and years of contribution	Only years of contributions	Age and years of contribution	Only years of contribution	Age and years of contribution	Only years of contribution
1998	54 and 35	36	53 and 35	36	57 and 35	40
1999	55 and 35	37	53 and 35	37	57 and 35	40
2000	55 and 35	37	54 and 35	37	57 and 35	40
2001	56 and 35	37	55 and 35	37	58 and 35	40
2002	57 and 35	37	55 and 35	37	58 and 35	40
2003	57 and 35	37	56 and 35	37	58 and 35	40
2004	57 and 35	38	57 and 35	38	58 and 35	40
2005	57 and 35	38	57 and 35	38	58 and 35	40
2006	57 and 35	39	57 and 35	39	58 and 35	40
2007	57 and 35	39	57 and 35	39	58 and 35	40
2008	57 and 35	40	57 and 35	40	58 and 35	40

A mini-reform was implemented in 2007 introducing changes for new entrants to the labour force and to the seniority (early retirement) pension. Starting in 2008, workers who started their career after 1995 will be eligible to old-age pension at age 65 (men) and age 60 (women) with at least 5 years of paid contributions or any age if 40 years of contributions have been collected. Hence the seniority pension was extended to those entering the labour force in 1996. At the same time rules were tightened for those currently claiming early retirement: in 2008 and 2009 the joint requirement for retirement is age 58 with at least 35 years of contributions; regardless of age with at least 40 years of contributions. From July 1, 2009, eligibility depends on an index (called “quota”) which is the sum of the workers’ age and the years of collected contributions (35 years of contributions are always the minimum requirement). Hence the “quota” in 2009 is 95.

The pre-1995 regime envisages a minimum pension (see below) which is abolished under the new regime; *i.e.*, for workers entering the labour market after 1996. However, retirees with total incomes below the social-assistance level can claim a means-tested social benefit from age 65.

3.2 Disability

The social security system envisages two types of disability provision:

- 1 Ordinary (“civilian”) disability benefit granted to all citizens under certain health impairments.

Since 1970 it grants to deaf or dumb people older than 18, a disability benefit and in some cases also a *monthly attendance supplement*; after 1980 this benefit is no longer transferred to survivors. For people older than 65 years a non-contributory pension is paid (*pension sociale*).

- 2 Disability (called invalidity) benefit for workers

A person registered with INPS (paying contributions) whose working capacity is permanently reduced because of physical or mental impairment of at least 2/3.

The important landmark is a law passed in 1984 for private sector employees, public sector employees and the self-employed establishing that *the invalidity pension* is granted if a physical or mental disease is certified by a medical test and it causes a reduction of at least 2/3 of the original working capacity. Furthermore at least five years of social security contributions are necessary, *of which* at least three years paid during the five years before the application, at least five years of enrolment in the INPS list overall. The important restriction introduced in 1984 is that the invalidity pension is not a permanent pension (it should be renewed every three years, after three times it will become a permanent pension). It will become an old age pension at the legal retirement age. It is incompatible with unemployment benefits. The legislation of 1984 applied to private sector employees; it was extended to public sector employees in 1995.

In 2000, it was established that all employees are eligible for *INAIL* life annuity which is applicable for any work injury which causes a permanent invalidity between 16% and 100%.

A further benefit envisaged for workers is the “inability pension”: this is granted to workers registered with INPS (or entitled to the public invalidity pension) whose physi-

cal or mental impairment makes it *impossible* to carry out any type of work for their entire life (i.e. people who lost 100% of their working capacity)

3.3 Social assistance for the elderly and poverty relief

In 1952 it was established that benefits not reaching a minimum level would be topped up, the difference being paid by the State through general taxation. One peculiar feature of the Italian social security system is that retirees can draw more than one benefit (for example early retirement benefit and invalidity benefit). Up to 1983 this topping up would apply to any benefit, but since 1983 this was possible for only one pension per retiree. This topping up is means-tested, taking as a reference income also the income of the spouse. The minimum monthly benefit currently is € 443.12 for a single pensioner¹¹ or for a couple with annual income less than € 17,281.68

Survivors are entitled to benefits if the deceased was an insured worker (at least 5 years of contributions). Eligible survivors are: the spouse, also if separated and entitled to alimony; children younger than age 18 (age 21 if in full-time education, age 26 if a university student, no limit if disabled at the time of the insured's death) and other relatives in decreasing order. The survivor pension is determined as a percentage of the wage or old age pension collected by the deceased: 60% to the spouse; 20% to each child, if the spouse is entitled too, or 40% if only the children are entitled.

The Dini Reform of 1995 also changed the requirements for survivor benefits. Survivors can claim a benefit if the deceased had at least 15 years of contributions, or if he had reached the requirements for a disability pension (i.e. 5 years of contributions, including 3 in the last 5 years before death). The Dini Reform also changed the percentages for benefits: 60% to the spouse without children; 20% to each child, if the spouse is entitled too; 70% to orphans; 40% to each child if single parent; 15% to each parent, brother and sister.

A specific social assistance provision earmarked to alleviate poverty in old age is the "social pension". This benefit is granted to the elderly, aged 65 and over, who are Italian citizens and not eligible for the old age pension. Social pensions are paid by the State and are means-tested: in 2008 the annual benefit for a single pensioner with income less

than the amount of the social pension is € 5,142.62, or for a couple with income less than twice the amount of the social pension is € 10,285.34.

While the 1969 pension reform introduced a social pension for over 65 year-olds without other pension entitlements and sufficient income it did not tackle poverty at large. During the 1970s regional governments assumed responsibility for poverty relief, since 1977 private and church-affiliated charities were no longer in charge of the administration of these benefits. However, regional governments were expected to act on their own initiative in the absence of a centrally regulated framework. Thus, a geographically highly differentiated system of welfare assistance evolved over the years (Picot, 2009; Fargion, 1996).

It should be added that in Italy there is not a general minimum income scheme, apart from a recent attempt (the so called reddito minimo di inserimento -- RMI), initially tested in 1998 in very few municipalities, then extended in 2001 to a still limited area, and eventually terminated by the Parliament.

With regard to family benefits, the most important ones – the “assegni per il nucleo familiare” (family allowances) – are means tested and restricted to employees (or benefit recipients, including pensioners and unemployed covered by unemployment insurance schemes). There are also universal family benefits, such as the maternity allowance and the allowance for households with at least three children – introduced in 1998 and reinforced in 2001; these benefits are means-tested through an income and wealth measure known as the Indicator of Economic Situation of the household (ISE) introduced in 1998 as a general instrument to evaluate social benefit eligibility.

3.4 Contracts and labour market regulations

3.4.1 Main features of the labour market and its regulation

The Italian labour market has long been characterized by a lack of flexibility; however there have been some recent changes, as documented below.

The Italian institutional setting in terms of labour contracts is based on the 1970 Labor code. The code is focused on the protection of the open-ended employment contract,

¹¹ This benefit is means tested, it increases after age 70.

which is viewed as the “standard” case. In 1962, the legislation already envisaged a stringent regulation on temporary employment relationships limiting them to seasonal or unusual activities (or top management), and restricting their renewal (with the requirement that it should be turned into an open-ended employment contract). In 1977 a law allowed temporary employment for retail and tourism industries, and in 1983 all sectors were allowed to hire on a temporary basis in case of peaks in demand. In 1984 “Contratti di Formazione e Lavoro” were made possible for young workers (aged 16 to 32), which had a fixed duration (1.5 to 48 months, depending on age and qualifications) and entailed a payroll tax cut for the firm. These contracts were meant to have some training content and to provide a stepping stone to permanent employment, but in practice made temporary hires much easier for employers.

Hence, over time, a variety of limited duration contracts (‘atypical employment arrangements’) were introduced in Italy:

- *fixed-term contracts (employees)*, in which a limited duration is possible because of specific circumstances due to the type of work or to the worker status. For example jobs with limited duration duties or workers deemed as disadvantaged by the law;
- *training contracts*, i.e. apprenticeship and other training-related youth contracts that, at least in principle, should have some training content but do not guarantee a permanent position at the end of the training period.
- *CO CO CO.*, a contract, which is legally framed as self-employment, but very often has the attribute of dependent employment. Indeed, “CO.CO.CO.” (Collaborazione Coordinata e Continuativa) workers include a variety of professional figures, from qualified professionals to *de facto* dependent workers. Up to 1997 these workers were not even required to pay social security contributions (they are still not eligible for maternity leaves, unemployment insurance, and paid vacation). There are no official statistics on the number of CO.CO.CO, but administrative sources estimated more than 2 million contracts only in the year 2000.

3.4.2 Recent reforms in the labour market

Employment pacts have been an essential component of Italy's policy environment in the 1990s. *The Protocol* of July 1993, and *Patto del lavoro* (Work Pact) of September 1996 were important milestones in Italy's path towards EMU. Both were explicitly

oriented to the Maastricht process, the former mainly stipulating wage moderation on the basis of a low target inflation rate, the latter introducing important elements of labor market flexibility.

These pacts stipulate a number of education and training-related measures on the part of the Government, as well as a redesign of fiscal and contributory schemes aimed at reducing labor costs. In exchange, Unions agree to index contractual wage profiles to planned inflation rates (with only partial ex-post recouping of lost purchasing power). This provision played a crucial role in allowing entry in EMU.

The important steps, taking place since 1997, of the reform process can be summarized as follows (Boeri and Garibaldi, 2007).

1997: “Treu Package” is enacted. It stipulates a reduction of the drastic sanctions in case of violation of the fixed-term contracts discipline (conversion of fixed-term contract into an open-ended one) and the legalisation of temporary work agencies. Atypical labour contracts are encouraged by reducing social security contributions and pension provisions and by removing automatic transformations of fixed term contracts into open-ended ones. The package eases regulation of new apprenticeship and work-training contracts and sets incentives for on-the-job training (stages). The “Treu Package” represents a landmark: the law, initially aimed at offering flexible labour supply in response to temporary shocks, turned out to be particularly popular among Italian firms, which exploited it not only as a short run buffer, but also as a gateway toward more permanent employment. At the end of 1992, 7.1 per cent of the employees were on temporary contracts. By the end of 2003 this share had risen to 10.3 per cent.

2001: By means of a Decree-Law, the EU Directive 1999/70/EC on fixed-term work is implemented through a joint statement with the unions. The new legislation removes the explicit list of the specific circumstances in which the use of fixed-term employment is legal. The law made it possible to hire workers on a temporary basis (provided the reasons are clearly stated in the contract), and the standard open-ended contracts were no longer regarded as the default employment relationship.

2003: The “Biagi Law” is adopted: new types of labour contracts: job-on-call, (staff-leasing) job sharing, supplementary work, “lavoro a progetto – Co.Co.Pro.”, which slightly tightened the regime for the already existing Co.Co.Co.

Alongside increased flexibility towards temporary and part-time contracts, other important legislative changes allowed various “special contracts” to be implemented. These changes made the Italian labor market flexible “at the margin”, with a reform process similar to that observed in Spain and in France. According to the OECD (see OECD, 2004) the Employment Protection Legislation Index (EPL) has fallen remarkably in Italy¹². This can be seen in *Figure 3.1* which shows on the left panel the index in 1990 (X-axis) and in 2003 (Y-axis) for fixed-term contracts, while on the right panel it shows the same change in the index for temporary contracts. In both cases the index suggests increased flexibility, but temporary contracts are the ones with a comparatively higher drop in the index.

¹² EPL index is based on a number of characteristics of the market and it goes from 1 (most flexible) to 5 (least flexible)

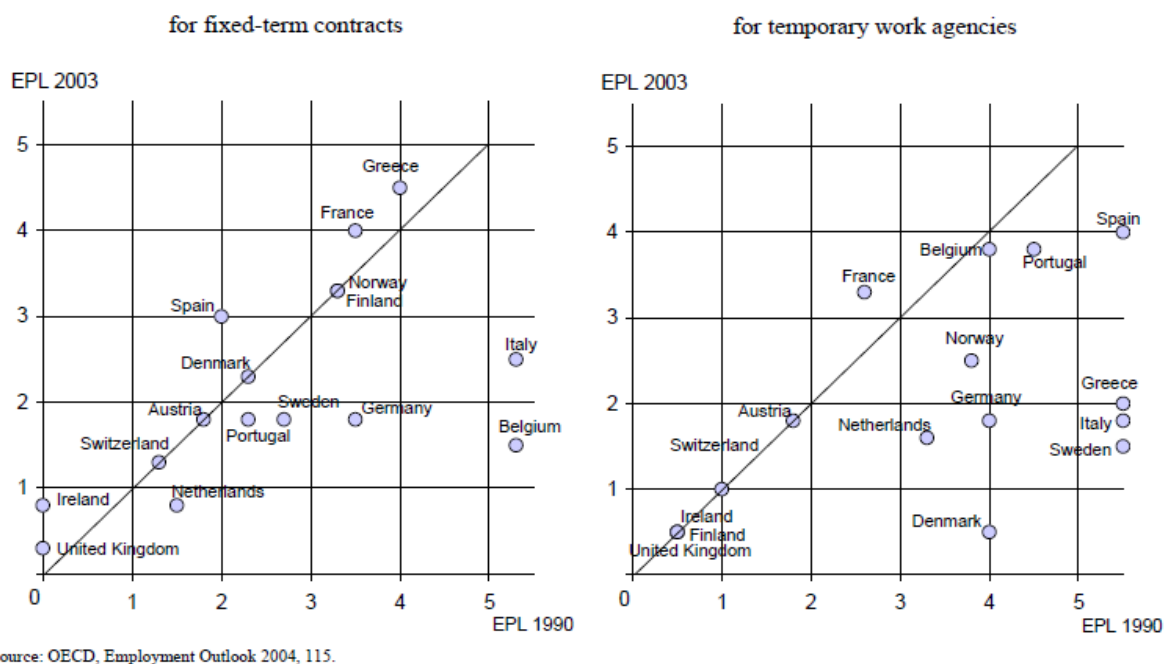


Figure 3.1 Employment protection legislation, 1990–2003

3.5 Unemployment insurance

The Italian unemployment benefit system is a complex one; across the various schemes, there are substantial variation in eligibility conditions, compensation levels, and duration of benefit receipt. It provides income to workers who (involuntarily) lost their job. Currently, one can distinguish between “comprehensive unemployment insurance” and “partial insurance”. The latter is also regarded as a wage supplementation fund; most importantly, individuals collecting partial insurance known as *Cassa Integrazione Guadagni* CIGo (ordinary) or CIGs (special) are not formally recorded as unemployed as they are not laid off.

1 Comprehensive insurance (UI)

- Ordinary unemployment benefit
- Special unemployment benefit
- Mobility benefits

2 Partial Insurance

- Cassa Integrazione Guadagni Ordinaria (CIGo)
- Cassa Integrazione Guadagni Straordinaria (CIGs)

The ordinary unemployment benefit (UI) can, in principle, be claimed by all employees. Special unemployment benefits are specific of some sectors such as construction workers. Mobility benefits can be claimed by all employees (apart from construction workers) who have previously benefited from CIGs; hence it is a follow up to CIGs insurance. The CIG can be claimed by workers in specific sectors which are undergoing a business cycle crisis situation or are under restructuring. Contributions are paid by workers and employers at differential rates (in the industrial sector 4.71% of gross wage, of which 4.41% falls on the employer; in trade and commerce 2.51% of gross wage, of which 2.21% on the employer). The government finances the fund with discretionary annual contributions.

3.5.1 Eligibility, benefit duration and benefit levels

a) **UI – Ordinary and special unemployment benefits** are paid to workers laid off in the private sector, who are not eligible for other benefits and have paid contributions for at least 52 weeks during the two-year period preceding unemployment¹³. Some benefits may also be claimed by those who have worked at least 78 days over the last year (reduced requirement). Special, and more favourable, conditions apply to workers in the agricultural and the construction sector (10 monthly benefits are required in the last 2 years before the unemployment spell).

Ordinary unemployment benefits are paid on a 7-day week basis, for a maximum of 180 days (extended to 8 months since January 2008). For unemployed aged over 50, the duration has recently been extended to twelve months (from the previous 9). In the case of reduced requirements, duration is equal to the number of days previously worked. Different durations hold for workers in the agricultural and in the construction sector. Furthermore the benefit is stopped if the beneficiary gets a new job or he refuses a job similar to the one he lost or if he does not accept to be employed in a socially useful job. Benefits are paid as a percentage of average wages over the last 3 months with a ceiling imposed. For the ordinary UI benefits, the replacement rate is initially 60% (for the first 6 months, 50% for the 7th and 8th month, and 40% for the subsequent months)

¹³ Excluding young workers in vocational training

b) **CIG (CIGo and CIGs – Cassa Integrazione Giadagni, Ordinary and Special wage supplementation funds, respectively)**. Ordinary benefits are paid to workers for foregone hours of work (also at zero hours) due to a temporary reduction or a suspension of the activity. Special benefits are paid when the suspension of the activity is not temporary, but is due to sector - or area - specific firm restructuring. Workers of small manufacturing firms (below 15 employees) and of most service activities are excluded from CIG. A large number of firms fall under the special case CIGs, one example is air carriers. Workers on these schemes have (at least formally) an on-going work relationship, as their contracts have not been terminated; hence they do not enter the unemployed records.

CIGo is normally paid for a maximum of 13 weeks and, only under special circumstances, up to 52 weeks. The replacement rate is 80% of the wages foregone. There are ceilings (in 2009 € 886 monthly for wages below € 1917 and 1065 for wages above).

CIGs (special CIG) is normally paid for 12 to 24 months (the length depending on the type of difficulties that the firm faces as well as on the restructuring strategy). There is a possibility to obtain some extension if restructuring lasts more than 24 months. In any case, CIGs cannot be paid for more than 36 months over 5 years.

c) **Mobility benefits (mobility list)** are provided in case of collective dismissals to workers who have been fired by firms eligible for benefit from the CIGs and in case of individual dismissal of workers already in CIGs or under bankruptcy procedure. In other words, mobility benefits insure workers in the period which goes from dismissal from a job which provided partial insurance (CIGs) to a new job or retirement. The worker can collect this benefit if he was employed with the eligible firm for the last 12 months, at least 6 months of which actually working¹⁴. The worker would be granted 100% of the former CIG benefit for the first year and 80% of that benefit afterwards up to the CIGo ceiling. The ceilings in 2009 are € 886 monthly for workers whose total compensation is below € 1.917 gross per month; € 1.065 monthly for workers whose monthly total compensation is above that limit.

¹⁴ Recall that workers in CIGo or CIGs are not formally laid off.

The duration of mobility benefits depends on the age of the recipient and on the location of the job. For instance, workers under 40 are entitled to this benefit for 12 or 24 months, respectively, according to whether they had been working in the Centre-North or in Southern Italy.

Table 3.3 Duration of mobility benefits by age of the worker and geographical location

Age	Location	
	Centre - North	Mezzogiorno
< 40	1 year	2 years
40 – 49	2 years	3 years
> 49	3 years	4 years

Conversely, the benefit duration is extended up to 36 or 48 months respectively for workers over 50. This possibility to pay longer durations to older unemployed was meant to limit the use of early retirement or pre-retirement¹⁵

3.5.2 Unemployment Insurance – Stylized facts and the reforms

During the 1970s, a number of gradual changes occurred to CIG, in terms of coverage and in terms of replacement rates. For example, CIG which has been in place for the construction sector since the beginning, was extended to artisan firms in 1970 and to the mining sector in 1971. In 1972, an additional CIG scheme for the agricultural sector was set up (CIGA), initially with somewhat less generous conditions. However, in 1975 the replacement rate for all CIG schemes was fixed at 80%. Another significant move in 1972 made it possible to extend the duration of the CIGs potentially indefinitely. Furthermore, in 1977 the applicability of the scheme was extended to “corporate crises with a particular social relevance”, hence making the use of CIG widespread. Later, coverage of CIGs was extended to the trade sector firms with more than 200 dependent workers and the CIGO to white-collar workers. Clearly, with these steps the transformation of this program into a *de facto* unemployment benefit was completed: it became a mechanism for firms to shed labour without formally dismissing workers. However it

¹⁵ Pre-retirement schemes were widely used during the 1980’s to lay off older workers in special industrial sectors.

should be noted that this option remained restricted to firms in the industrial sector (including construction) with more than 15 employees.

In contrast to these marked expansions in CIG, only small changes occurred with respect to UI. The benefit level of UI was raised from a daily amount of 400 Italian lira to 800 Italian lira (effective in 1975). This made the net replacement rate rise from 10% to 15%. But over the next 14 years, the flat rate benefit was not changed at all, leading to a continuous loss in real terms.

By the end of the 1970s, Italy had a highly fragmented system of unemployment compensation, in which three broad strands can be distinguished (Sestito and Viviano 2008): first, a very generous scheme in the industrial sector including mainly CIGs insurance, but also of other CIG schemes; second, ordinary UI, which paid low benefits, but had wide coverage; third, unemployment insurance for the agricultural sector, that follows different rules than the general scheme and had the character of income support.

Between the 1970s and the 1980s there was a reduction of CIGs benefits and the introduction of a benefit ceiling for CIGs payments. At first this maximum amount was set at a level slightly higher than 80% of the gross wage of an average production worker. Therefore it did not immediately have strong effects on the living standard of most CIGs beneficiaries. However, it was established that this benefit ceiling should be increased yearly by 80% of the real growth in wages (*scala mobile*), hence the ceiling would become binding over time. Indeed a significant decline of the net replacement rate for the average production worker over the 1980s occurred.

The benefit for ordinary UI had remained at the lump-sum amount of 800 lira per day for a long time. During the 1980s, the benefit was converted to a nominal replacement rate that was initially set at 7.5% of the previous wage. In subsequent years, the benefit level was increased several times. In the last three of these reforms (in 2000, 2005, and 2007) in addition to raising the nominal replacement rate also the maximum durations of UI were increased, differentially by age. Particularly important is the change legislated in 2000 – enacted in 2001— which increased the ordinary UI from 30% to 40% of the wage (see *Figure 3.2*) and prolonged benefit duration for people over 50 to 9 months.

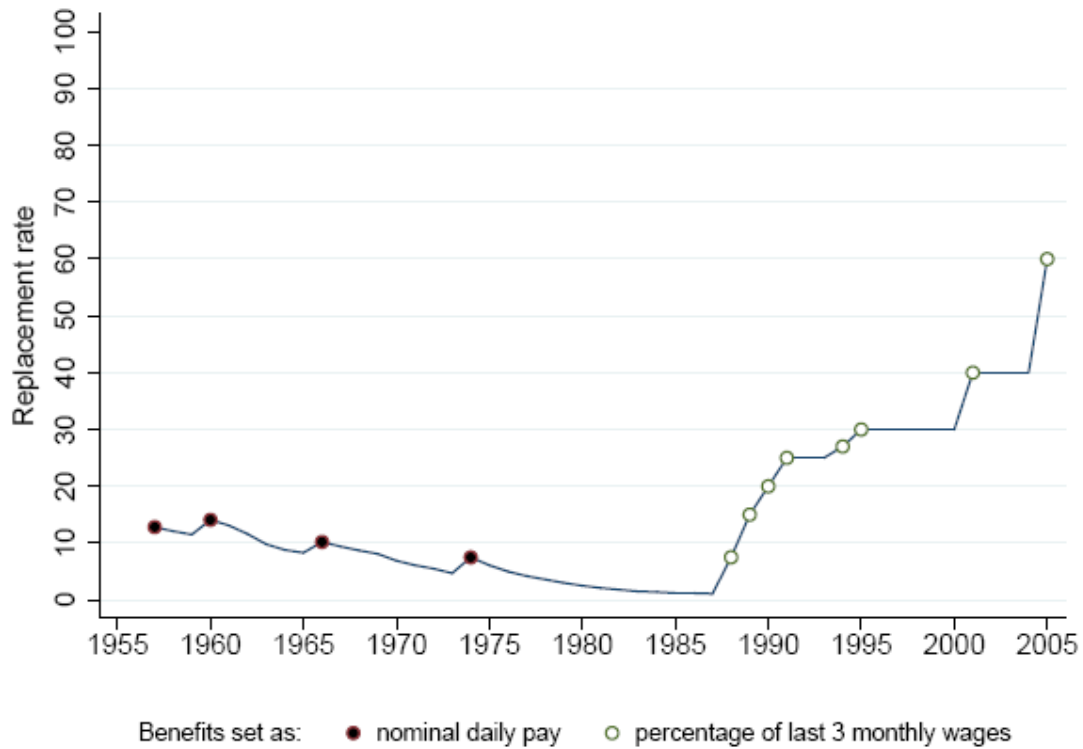


Figure 3.2 Evolution of replacement rates of ordinary UI

In sum, the 20 years between 1987 and 2007 have seen significant moves to reduce the segmentation of unemployment benefits in Italy. The benefit level of UI has been raised from a negligible lump sum to a net replacement rate of about 60% while the generosity of CIG has gradually been reduced.

3.6 Income taxation

It is very hard to describe the Italian tax system because this is characterized by a large number of tax rates (as many as 32 in the old days) attached to different income brackets, by tax deductions related to the type of job (say dependent employment) and deductions or tax credits related to family composition. The tax unit is the individual, unless spouses do not explicitly indicate that they intend to file a joint income-tax form.

Table 3.4 Marginal tax rates by income brackets

		Income brackets (in Euro) and tax rates (in %)						
year		1	2	3	4	5	6	7
1989	Upper bound	3098 .74	6197 .48	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1990	Upper bound	3305 .32	6559 .00	16423 .33	32898 .30	82168 .29	164388 .23	>164388.23
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1991	Upper bound	3511 .91	6972 .17	17404 .60	34912 .49	87177 .92	174407 .49	>174407.49
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1992	Upper bound	3718 .49	7436 .98	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1993	Upper bound	3718 .49	7436 .98	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1994	Upper bound	3718 .49	7436 .98	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1995	Upper bound	3718 .49	7436 .98	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1996	Upper bound	3718 .49	7436 .98	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1997	Upper bound	3718 .49	7436 .98	15493 .71	30987 .41	77468 .53	154937 .07	>154937.07
	Tax rate	10 .00%	22 .00%	26 .00%	33 .00%	40 .00%	45 .00%	50 .00%
1998	Upper bound	7746 .85	15493 .71	30987 .41	69721 .68	>69721.68		
	Tax rate	18 .50%	26 .50%	33 .50%	39 .50%	45 .50%		
1999	Upper bound	10329 .14	15493 .71	30987 .41	69721 .68	>69721.68		
	Tax rate	18 .50%	26 .50%	33 .50%	39 .50%	45 .50%		
2000	Upper bound	10329 .14	15493 .71	30987 .41	69721 .68	>69721.68		
	Tax rate	18 .50%	25 .50%	33 .50%	39 .50%	45 .50%		
2001	Upper bound	10329 .14	15493 .71	30987 .41	69721 .68	>69721.68		
	Tax rate	18 .00%	24 .00%	32 .00%	39 .00%	45 .00%		
2002	Upper bound	10329 .14	15493 .71	30987 .41	69721 .68	>69721.68		
	Tax rate	18 .00%	24 .00%	32 .00%	39 .00%	45 .00%		
2003	Upper bound	15000 .00	29000 .00	32600 .00	70000 .00	>70000.00		
	Tax rate	23 .00%	29 .00%	31 .00%	39 .00%	45 .00%		
2004	Upper bound	15000 .00	29000 .00	32600 .00	70000 .00	>70000.00		
	Tax rate	23 .00%	29 .00%	31 .00%	39 .00%	45 .00%		
2005	Upper bound	26000 .00	33500 .00	100000 .00	>100000.00			
	Tax rate	23 .00%	33 .00%	39 .00%	43 .00%			
2006	Upper bound	26000 .00	33500 .00	100000 .00	>100000.00			
	Tax rate	23 .00%	33 .00%	39 .00%	43 .00%			
2007	Upper bound	15000 .00	28000 .00	55000 .00	75000 .00	>75000.00		
	Tax rate	23 .00%	27 .00%	38 .00%	41 .00%	43 .00%		

Table 3.4 shows the marginal tax rates attached to each income bracket since 1989. For each year the first row is the upper bound of the relevant income bracket (in Euro)

and the second row is the tax rate. The most relevant feature is the reduction in the number of marginal tax rates and the compression of income brackets taking place over time: the general tendency has been to reduce the tax burden. However, there exist no simple estimate of how the average tax rate has evolved over time in Italy; hence one should be careful in concluding that income taxes have actually gone down over time. Tax deductions have been applied differentially in order to protect the lower income families. Before 2003, tax credits and deductions were totally determined by labour market status (differentially for employees, self-employed and retired) and by family composition (dependent spouse and children). In 2003 a “tax exempt income level” was introduced and deductions were applied in a progressive fashion. Hence for example tax deductions are a flat 3000 Euro for each worker, plus (according to the time spent in work) 4500 Euro for an employee, 4000 Euros for a retiree and 1500 for a self-employed. However, the resulting tax deduction (7500 Euro, 7000 Euro and 4500 Euro respectively) is applied in full (i.e. it becomes a tax exemption level)¹⁶ only if the income of the tax-payer falls within specified limits (obtained through a complicated computation), otherwise it decreases with the income level to reach zero for an income level above 33000 Euro.

Tax credits are also related to the income level, for example for an employee, they range in a non-linear fashion, from 130 Euros for incomes between 27000 Euros and 29500 Euros, to reach 25 Euros for incomes between 46000 Euros and 52000 Euros. Finally tax credits apply for: (i) dependent spouse (varying over time and according to income, currently reaching a maximum of 800 Euros) and (ii) each child in the range of 285 Euros (one child, higher incomes) to 516 Euros (second child, third child etc.).

4 The effects of the reforms

4.1 Effects of social security reforms

As I argued, the effects of social security legislation have been very relevant throughout the 1980s and 1990s. The reforms of 1992 and 1995 have been evaluated indirectly in a

¹⁶ In the 2007 Budget the tax exempt income level has been raised to 8000 (employee), 7000 (retiree) and so on.....

series of contributions by Brugiavini (1999) and Brugiavini and Peracchi (2003, 2004, 2007). *Figure 2.3* indicates that the reforms had an effect, since there was a reversal of the trend out of the labour force for individuals aged 50–54 and 55–59, primarily because of the restrictions imposed on early retirement. However a proper evaluation of the reforms and more generally of the trends requires some summary measure of the incentives and a proper identification strategy. One can measure incentives by calculating the “*implicit tax on work*” that an extra year of work induces. The implicit tax is the result of a simulation procedure and it measures the loss that an individual bears by working an extra-year in terms of paying more contributions and foregoing benefits (Gruber and Wise, 1999; Brugiavini, Peracchi and Wise, 2003).

Table 4.1 Replacement rates and *Implicit* tax rates on work before the year 2000

Last year of work	Italy		Spain		USA	
	Replacement Rate	Tax/ Subsidy	Replacement Rate	Tax/ Subsidy	Replacement Rate	Tax/ Subsidy
54	...	0	...	...	...	0
55	0,726	0,245	...	0,201	...	-0,022
56	0,744	0,308	...	0,096	...	0,046
57	0,761	0,338	...	0,152	...	0,060
58	0,780	0,372	...	0,355	...	0,069
59	0,798	0,401	0,590	0,279	...	0,072
60	0,799	0,697	0,661	-0,074	...	0,071
61	0,804	0,711	0,730	0,010	0,403	0,064
62	0,805	0,718	0,816	0,032	0,440	-0,028
63	0,805	0,729	0,895	0,167	0,476	-0,005
64	0,809	0,746	0,996	0,264	0,703	0,031
65	0,809	0,756	0,998	0,729	0,749	0,188
66	0,809	0,772	0,996	0,725	0,798	0,225
67	0,809	0,787	0,988	0,718	0,845	0,269
68	0,809	0,803	0,981	0,677	0,872	0,439
69	0,809	0,818	0,973	0,636	0,898	0,455

Table 4.1 clearly shows that Italy, before the reforms of the 1990s, had a very high replacement rate and a high tax on work even at young ages, hence inducing early retirement.

In order to capture the effects of changes in legislation, particularly the ones due to pension reforms, Brugiavini and Peracchi (2007) contrast several measures of incentives

with the labor force time series. They develop a simulation method to construct the incentives measures: this way the incentive variable will embed, in each year, legislation changes in the social security system (i.e. benefit calculation and eligibility rules) and at the same time avoiding the endogeneity problems contaminating actual social security data series. In order to carry out this simulation they make use of the Bank of Italy Survey (Survey of Household Income and Wealth-SHIW) containing detailed information on several characteristics of individuals in Italy.

Before turning to the simulation methodology the authors look at a simple measure capturing changes in eligibility rules: this is the sum of minimum age requirements and number of years of seniority necessary to apply for an early retirement benefit. In fact workers could retire in Italy either with a sufficiently high age (the legal retirement age for old age benefits which is now 65 for men) or with a given number of years of contributions (for example any age if 40 years of contributions have been completed) or a combination of the two (for example 57 years of age and 35 years of contributions). This latter variable is called “**quota**”¹⁷: before 1995 this was equal to 60 because one could retire with 20 years of contributions at “any age”, for example age 40, it then grew suddenly in 1995 to reach level 83 and increased gradually thereafter. *Figure 4.2* shows the relationship between the employment rate of the old and the variable quota. The trend in the “quota” indicator anticipates of a few years the rise in employment of the old group. However the “quota” variable is a rather rough measure of the complex financial incentives of the social security system: we construct incentives which capture different dynamic features of the social security system.

¹⁷ See also Section 3.1.2.

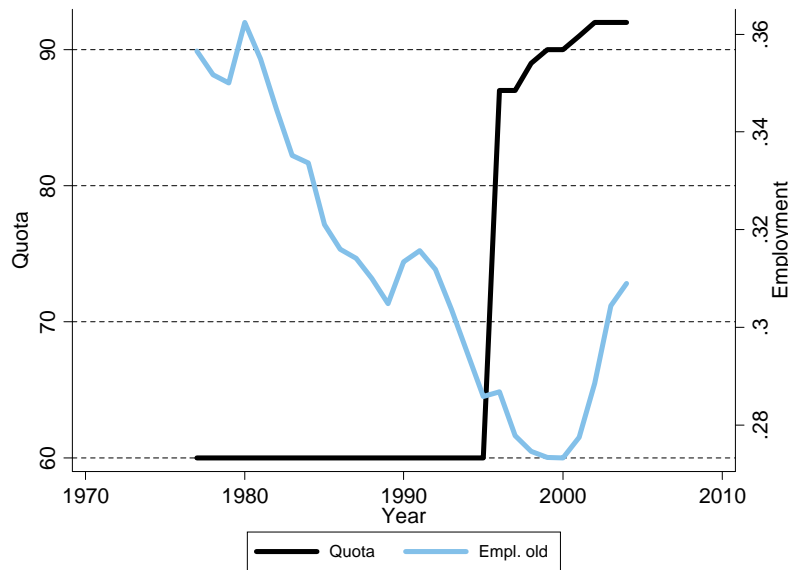


Figure 4.1 Italy: Trends in the employment rate of the old and the “quota” indicator

To compute the simulated benefits, the authors start from the profile of median earnings of a given cohort and focus on cohorts born before the Second World War, in particular individuals born in 1938 and 1939 and carry out the estimate the benefit separately for men and women and by employment type (private-employee, public-employee and self-employed)¹⁸. They smooth the earnings profiles by means of age polynomials and also by non parametric smoothers. The same real earnings profile is then imputed (taking account of the relevant job-gender group) to members of that group. Productivity growth of the different cohorts is taken into account by shifting the age-earnings profile.

Simulated benefits are then obtained according to the prevailing legislation for each employment type, taking account also of eligibility rules. For example, they model the Amato reform (implemented in 1993) as changes affecting both currently retired people (through reduced indexation – based on inflation only) and future retirees through changes in the benefit calculation, eligibility rules, and indexation of future benefits (see Brugiavini and Peracchi, 2004 for details). Hence, the effects on current variables, such as disposable social security benefits, are immediately captured after 1992, both because

¹⁸ In the SHIW sample one has variation with respect to all individual characteristics and can also distinguish whether the pension benefit originates from a private sector occupation, public sector occupation or from self-employment (“employment types” or simply “jobs”)

of the effects on pensioners and because of the changes to newly awarded benefits during the transitional period.

As discussed in Section 2, there were a number of changes to the benefit computation rules; however, eligibility rules were almost unchanged until the 1992 reform. Also the existence of a generous early retirement option allowed retirees to have plenty of flexibility on the timing of retirement, so that the introductions of more restrictive eligibility rules of the 1990's had little impact in the current cohorts of retirees. The effects of the minimum age requirements are relevant after 1995, especially for individuals in the age range 50-55

One key variable to compute incentives is the social security wealth, this is a summary measure of all the characteristics of the system as experienced by one individual. For a worker of age a , we define social security wealth (SSW) in case of retirement at age $h \geq a$ as the expected present value of future pension benefits from time " h " onward. It depends on the flow of future benefits, the discount factor and longevity.

The pattern of SSW is generally hump-shaped over age, i.e. there is a peak value reached at some eligible age and SSW declines thereafter. Changes in the benefit computation rules occurring after 1992 explain why retirees who claim early retirement would have low benefits due to lower average "pensionable earnings", despite the fact that there is no actuarial penalty on early retirement in Italy.

Figure 4.2 shows the change in social security wealth due to the Dini reform (once fully phased in). A typical (median earner) worker would have his pension wealth reduced almost by half if he retired between ages 50 and 59 comparing the entitlements he would benefit from in the pre-1992 regime and the post 1995-regime (once fully phased in). An older workers (age 60 to 64) would have his pension wealth reduced by one third. These reductions are due to both the tighter eligibility conditions for early retirement and the reduced generosity of the pension benefits.

One way to evaluate the reforms is to aggregate the age-year values of the social security wealth one obtains to create an yearly index of the incentives faced by different cohorts in each particular year. Brugiavini and Peracchi (2007) make use of two incentive measures, both are weighted averages: the first one called \bar{W} is the weighted sum of SSW using the labour force participation rates in each year-age cell as weights; the

second, called \bar{I} , combines both the level of social security wealth and its maximum value over the life-cycle (the peak value), again using the labour force participation rates as weights. The index \bar{I} thus combines the wealth effect (yielding incentives to retire early) generated by the social security wealth and the dynamic gains from waiting to retire.

**Age distribution of Gross Social Security Wealth: Dini Regime versus Baseline.
Cohorts Born 1938-1939-1940**

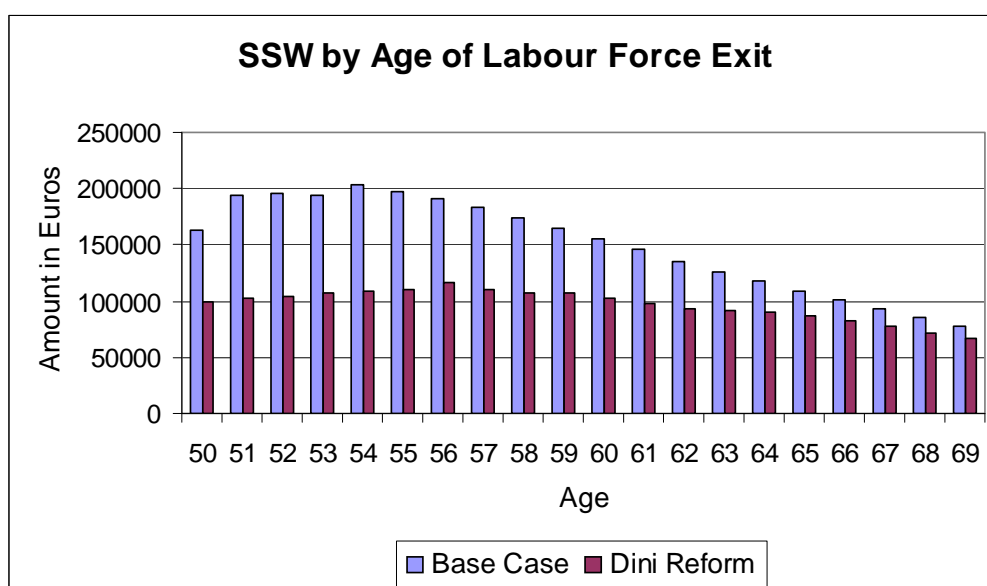


Figure 4.2

In Brugiavini and Peracchi (2007) both indexes \bar{W} and \bar{I} are computed on the basis of data relating to the median worker derived from the SHIW Survey. *Figure 4.3* shows the evolution of the mean \bar{I} -index (taking means over genders and ages). The rapid increase from 1975 onward is due both to a larger number of the included cohorts becoming eligible for social security and to the increasing generosity of the system. After 1990 the onset of the reforms reduced significantly the incentive to retire.

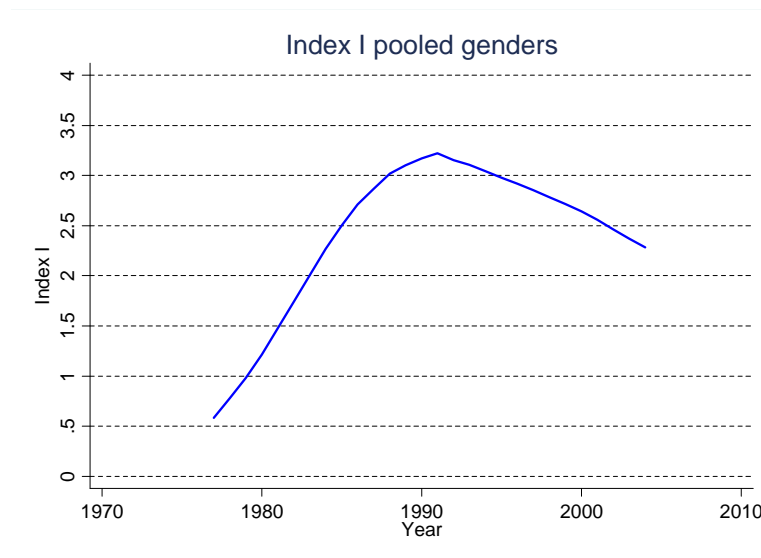


Figure 4.3 Mean values of the I-index over time

The incentive variable \bar{I} is used by Brugiavini and Peracchi as an explanatory variable in regressions explaining the decision to retire. Results are summarized in Table 4.2 in the Appendix, the incentive variable has the expected sign and it is significant when controlling for a number of relevant characteristics: hence the authors conclude that reforms have indeed been relevant for the labour supply decision of individuals on the verge of retirement.

4.2 Effects of the labour market reforms

As shown in Section 2, Italy spends just 0.5–1.5% of GDP for unemployment insurance, which is very low compared with the other countries. Furthermore I highlighted the characteristics of UI in Italy, which is limited to a relatively small number of workers and, though originating from an extremely generous system, is now paying quite low replacement rates.

There are few “clean experiments” which can be used to study the effects of unemployment insurance in Italy. In any case, before addressing that issue it is important to discuss what impact the labour market reforms of the 1990s had on labour market outcomes.

Underneath the broad time-series picture, Italy features a complex structure of disaggregated unemployment rates. The evidence presented in Section 2 shows that the Ital-

ian unemployment is characterized by three key dimensions of heterogeneity: a *regional differential*, an *age differential* and a *gender differential*.

Over time, the percentage of prime-age unemployed is decreasing, but the percentage of young unemployed individuals increases both for men and for women (women are characterized by higher unemployment rates at all ages). One important strand of the empirical literature in Italy has addressed the problem of high unemployment rates, particularly youth unemployment in Southern Italy.

In order to explain the peculiarity of the Italian labour market some authors have resorted to the issue of mismatch. In particular, these authors explored the hypothesis that the unbalanced evolution of labour demand and supply across different geographical areas, i.e. regional mismatch, is partly responsible for the increase in aggregate and youth unemployment, in particular in the Southern regions (Manacorda and Petrongolo, 2005). According to this view, the determinants of the regional unemployment differential can be seen in the following elements: labor force mobility from the Southern to the Northern Central areas has declined with the reduction of earnings differentials and with the increase in social transfers per head; real wages in the South are not affected by local unemployment conditions but depend on the unemployment rate prevailing in the leading areas, i.e. Northern countries. In other words, despite the increasing unemployment in the South, labor mobility from South to the North has remained low and relative wages have not adjusted to reflect worsened local labor market conditions. This has happened because the North-Central areas of the country have acted as a leading region in wage settlements. As a result, regional differences have widened.

Together with regional mismatch and the lack of geographical mobility, skill mismatch plays a role on determining high unemployment rate for the young in Italy. Some authors (see Caroleo and Pastore 2001) underline the fact that new entrants into the labor market are more highly educated but the educational mix has not evolved in a similar way as far as demand for labour is concerned. Hence, the increasing level of school participation has not only delayed the entrance of the young in the labor market but has created a mismatch between the skills offered by the young entering in the labor market and the skills demanded by the firm.

The high level of youth unemployment in Italy, particularly in the South, is mostly explained by first-job seekers. The strong protecting role of the family has contributed to the low mobility patterns of young job seekers (in Italy people stay with their parents well beyond their 20's, especially in the South). Moreover, in particular in the South, the public sector has represented for long time the only way to have a “regular” job and young people have built their own human capital and their own aspirations on this type of job, hence making it more difficult to move to Northern regions.

A very popular explanation of youth unemployment is the rigidity of the Italian labour market. The institutional feature which is mainly considered is Employment Protection Legislation (EPL)¹⁹. One of the main empirical regularities is that EPL modifies the composition of employment: countries, like Italy, with stricter EPL have higher youth unemployment. *Figure 4.4* shows the relationship between EPL and youth unemployment for some European countries in 2001.

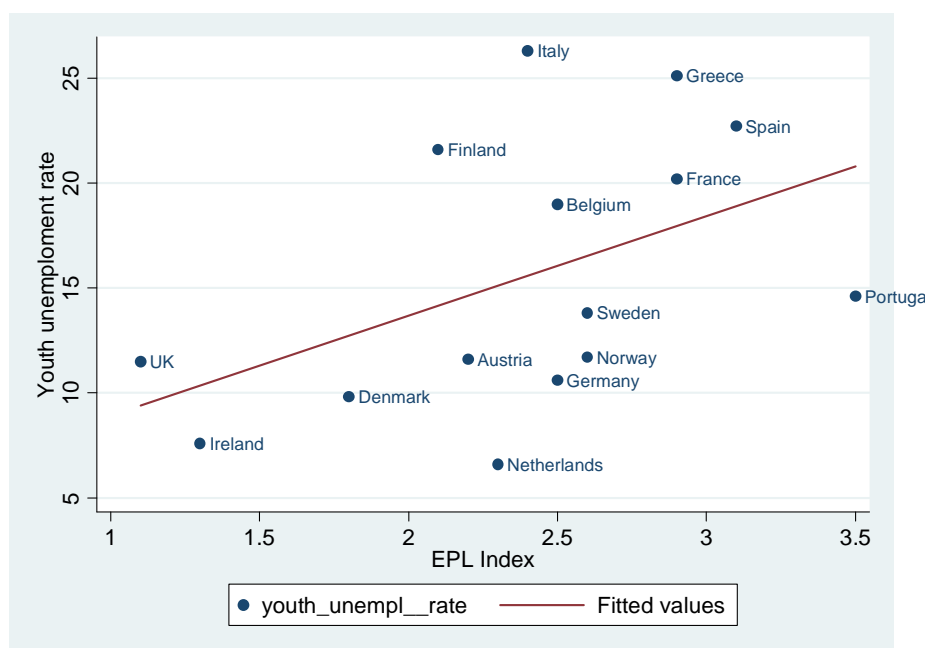


Figure 4.4 EPL and youth unemployment rate in Europe (2001), OECD 2004

The “young-in-old-out” paradigm seems to have prevailed in Italy between 1985 and 1990, as a result of incentives for firms to hire younger workers and the possibility to retire at very young ages (before age 55) with basically no actuarial penalty on the bene-

¹⁹ See, for example, Bertola and Garibaldi (2002).

fit payments. However, the overall effect on total labour force participation was basically close to zero as the inflow of workers balanced out with the outflow into retirement (Contini, 2005). Thus, the substitutability between workers of different age groups seems just temporary.

The effects of labour market reforms such as the "Treu package" of 1997 are controversial: Boeri and Garibaldi (2007) refer to the outcome as a "two-tier labour market". The authors theoretically argue that a transition into such a setting should induce a permanent reduction in the share of firms not adjusting employment levels. They validate their model using matched employer-employee Italian data referring to the 6 years period around the introduction of the Treu package. Moreover, using standard survey data, they document a temporary positive effect on average employment (the "honeymoon effect" of the reform), as well as a negative association with average productivity. Leombruni (2008) finds a significant increase in the probability of finding a job for individuals coming from the pool of unemployed as well as increased wage mobility associated with the reduction of employment protection

Sciulli (2006) finds that controlling for personal characteristics, job duration and number of previous atypical experiences the introduction of the Treu Law increases the transitions towards an atypical job, both starting from an atypical contract and an out-of-work state. Bison, Rettore and Schiozzerotto (2009), analyzing the effect of the aforementioned reform on the labour market career of new entrants show that while the reform had a major positive impact on the probability of being hired on a temporary basis at the first employment spell, the proportion of individuals attaining a stable occupation three years after their entrance into the labour market is slightly lower after the reform than before it. Ichino, Mealli and Nannicini (2005) focus on Temporary Work Agencies (TWA), a feature introduced with the Treu reform: they find that being employed by a TWA nearly doubles the chances of finding a permanent job within 18 months. Lodovici and Semenza (2008), though acknowledging the positive effect of temporary jobs on permanent employment probability compared to the unemployed, underline the growing risk of being trapped in temporary jobs by the weaker workers, namely women and workers in Southern Italy. Their conclusion is that the labour market reforms adopted in Italy in recent years reinforced its segmentation and inequalities. On the other

hand, Barbieri and Sestito (2008) analyzed the ISTAT Labour Force Survey and found a reduction in inequalities associated with the diffusion of temporary employment. For instance, the share of women transiting to a “satisfactory job” one year after being temporarily employed is higher than the corresponding share of men, and the same is true for other “weak” worker categories.

Evidence on the effects of unemployment benefits on labour market outcomes is scarce in Italy. The most interesting recent paper is by Rosolia and Sestito (2009) who look at the changes in UI of 2001.

The changes of 2001 involved (i) an increase in the replacement rate from 30% to 40% and (ii) an extension from 6 months to 9 months of benefit payment only for workers 50 and over.

Rosolia and Sestito (2009) run regressions exploiting the policy changes as “natural experiments”. The sample period is restricted to the years 1998 to 2002. For illustrative purposes, I focus here on the extension of benefit duration. The regressions run are of the type:

$$d_{it} = \theta E_{it} + X_{it}\beta + u_{it}$$

d_{it} : individual i 's completed time on benefits for a spell beginning in year t

E_{it} : dummy for exposure to change

X_{it} : individual and aggregate controls

The interesting estimates pertain to the effect of potential duration ($E = 1$ if $t \geq 2001$ and $\text{age} \geq 51$). The identification of this effect relies on the comparison over time for people of the same age groups. The two changes (i) and (ii) took place at the same time, but while younger workers were only affected by a higher replacement rate, older workers could also benefit from a longer potential duration, hence the 50+ are regarded as the “treatment group”. The main finding is that benefits spells increased significantly (by 20-30 days) for the population entitled to 90 additional days of benefits (the 50+) after the 2000. Benefit spells did not change significantly for the population entitled only to a higher replacement rate. In terms of take-up rates, the increase in take-up in 2001 is likely to reflect the reform but the authors cannot rule out macroeconomic conditions.

4.3 The effects of changes in income tax rates

Finally, very little work has been done on the effects of the tax rates (and their changes) on labour supply. The only convincing evidence is a paper by Colombino and Del Boca (1989) who model the tax rates in Italy for the year 1979, when as many as 32 different tax rates existed. They estimate a standard labour supply function for married men and women on SHIW data and find that married women labour supply is elastic to changes in wages and other incomes, while men's labour supply is inelastic. Indeed a recent proposal by Alesina, Ichino and Karabarbounis (2009) suggests that lower tax rates should be applied to women, particularly in Italy.

5 Conclusions

Italy has experienced important social security reforms in the 1990s and important labour market reforms. The social security reforms aimed at reducing fiscal imbalances and restricting eligibility to early retirement, which was widespread and very generous. I show that these reforms had some effect on the reduction of early retirement take-ups, particularly through the age-eligibility restrictions on workers aged 50 to 55. However the important reform of 1995, which introduced a notional defined contribution (NDC) system has a long transitional period and will be fully phased in after 2032, when workers will retire completely under the new rules (currently workers retire under a "pro rata" system which is a mixture of the old and new regime). Hence, although the new NDC system will be much less generous, it did not bring the desired budget saving effects because of the long transition. Also the effects on participation (keeping people in the labour force) are still of moderate relevance. Many authors would argue that in fact the effects of these reforms will come too late, once the game is over.

Currently the debate on social security is on the necessary actuarial adjustments to make the system sustainable. In fact, even within the new NDC system the updates of the parameters which govern the actual benefit payment, explicitly envisaged by the law, have not been implemented. The aim of these actuarial "coefficients" was to insulate the pension system from increasing life expectancy, by reducing benefits *automatically* as life expectancy increased. But this supposed automatic process has been slowed. The coefficients should have been reviewed after the first ten years of the opera-

tion of the new system (1995-2005). Life expectancy in Italy, as in other countries, continued to grow in this period and the postponement of the introduction of new coefficients has had a negative impact on the finances of the system.

The other issue which is currently debated is the most needed increase in the legal retirement age as well as further restrictions to early retirement. In fact, there have recently been yet more delays in introducing increases in the minimum retirement age.

The Italian labour market has long been characterized (and still is) by lack of flexibility, this is well documented by the Employment Protection Legislation (EPL) indexes where Italy has scored very high for a long time. In order to reduce the rigidities of the market, two important laws were passed in 1997 and 2003, which regulated short-term contracts. The laws made it possible for firms to hire without having to transform the short-term contract into an open-ended one. This has somewhat eased the EPL index in this segment of the labour market. But as a consequence of the reforms, workers on short-term contracts lack welfare protection.

The unemployment insurance system is limited to workers who lose their jobs through provisions such as ordinary (or special) UI or as a wage supplement (CIG). Both these schemes cover the work force typically engaged in open-ended contracts and only a fraction of fixed-term contracts. The empirical evidence shows that raising the level and duration of UI had some minor impact (and only on older workers), presumably as a bridge to retirement, hence the concern on the negative incentive on work of these UI benefits should be of a second order importance if compared with the welfare gains to workers.

In Italy, there is no centrally governed system of poverty alleviation, as this is responsibility of local governments. The problem is particularly acute for the young and unemployed, who have very little protection. Only a few experiments have been carried out in parts of Italy which introduce a non-contributory minimum income, specifically for the young (*reddito di inserimento*), but the conditions of the experiment have made it very hard to carry out a proper evaluation exercise.

One main conclusion of this report is that in Italy public old age spending crowds out other social expenditures in social policy such as benefits for children or unemployment. The second most striking evidence is that the UI system is still segmented and in

any case restricted to people who lost their jobs in the form of open-ended contracts. Hence the most serious challenges for the Italian welfare system are related to the welfare of workers, of the out of work people (especially young) and families with children.

References

- Alesina A., A. Ichino and L. Karabarbounis (2009), Gender based taxation of family chores, Harvard University, mimeo
- Barbieri, G. and P. Sestito “Temporary Workers in Italy: Who Are They and Where They End Up”, *Labour*, vol 22 (1) pp 127-166
- Bertola G. and P. Garibaldi (2002), “The Structure and History of Italian Unemployment” (CESifo Conference)
- Bison, I., Rettore, E. and Schizzerotto, A. (2009) *La riforma Treu e la mobilità contrattuale in Italia. Un confronto tra coorti di ingresso nel primo impiego*, IRVAPP Progress Report n. 2009-02, Trento.
- Boeri T., Brugiavini A., Peracchi F. (2003) “Italy's pension system in the midst of transition”, *FRDB, Milan*
- Boeri, T., P. Garibaldi (2007) “Two tier reform of employment Protection: a honeymoon effect?”, *The Economic Journal*, 117, pp 357-385
- Brugiavini A. (1999) Social Security and Retirement in Italy, *Social Security and Retirement around the World*, J. Gruber and D. Wise. eds., The University of Chicago Press
- Brugiavini A., F. Peracchi and D. Wise (2003) Pensions and retirement incentives, a tale of three countries: Italy, Spain and USA, *Giornale degli Economisti e Annali di Economia*, vol.61, n.2, pp. 131-170.
- Brugiavini A. and V. Galasso (2004) The Social Security Reform Process in Italy: Where Do We Stand? , *Journal of Pension Economics and Finance*, vol.3, n2.
- Brugiavini A. and F. Peracchi (2004) Micro-Modeling of Retirement Behavior in Italy, in: “*Social Security Programs and Retirement around the World: Micro-Estimation*”, J.Gruber e D. A. Wise (eds.) , The University of Chicago Press, Chicago, p. 345-399
- Brugiavini A. and F. Peracchi (2007) Fiscal Implications of Pension Reforms in Italy In: J. Gruber e D. Wise. *Social Security Programs and Retirement Around the World*,

- Fiscal Implications of Reforms.* (pp. 253 -294) Chicago: The University of Chicago Press
- Caroleo F. and F. Pastore, (2001). "How fine targeted is ALMP to the youth long term unemployed in Italy?," *CELPE Discussion Papers* 62, CELPE (Centre of Labour Economics and Economic Policy), University of Salerno, Italy. Colombino U. and D. Del Boca (1989), The effects of taxes on labour supply in Italy, mimeo
- Contini B., (2005) Invecchiamento e precarizzazione giovanile nell'occupazione italiana: è possibile una chiave di lettura unificata?, *Rivista di Politica Economica*, marzo-aprile, pp.323-335
- Fargion, V. 1996. "Social Assistance and the North-South Cleavage in Italy." *Southern European Society & Politics* I (3):135-54.
- Gruber J. and D. Wise (1999), *Social Security and Retirement around the World*, The University of Chicago Press
- Ichino, Mealli and Nannicini (2005). "Temporary work agencies in Italy: a springboard toward permanent employment?" *Giornale degli Economisti e annali di economia*
- Leombruni R. (2008) Le carriere dei lavoratori dipendenti prima e dopo le riforme: un' esplorazione su WHIP, *Laboratorio Revelli, Working Paper no. 85*
- Lodovici, M.S. and R. Semenza "The Italian Case: From Employment Regulation to Welfare Reforms?", *Social Policy & Administration*, vol 42, pp 160-172
- Manacorda, M. and Petrolongo, B. (1996). Skill mismatch and unemployment in OECD countries. *Centre for Economic Performance Discussion paper series*. London School of Economics and Political Science.
- OECD (2004) *Employment Outlook*, OECD Publishing
- OECD, (2007) "Social Expenditure 1980-2003. Interpretative guide", http://stats.oecd.org/OECDStatDownloadFiles/_OECDSOCX2007InterpretativeGuide_En.pdf
- OECD - Social Policy Division - Directorate of Employment, Labour and Social Affairs
Country chapter - Benefits and Wages (www.oecd.org/els/social/workincentives)

- Picot, G. (2009). Politics of Segmentation: Party Competition and Unemployment Compensation in Italy and Germany, Ph.D. dissertation, *Università degli Studi di Milano*.
- Rosolia A. and P. Sestito, (2008) "The effects of unemployment benefits in Italy", Bank of Italy, mimeo.
- Ragioneria Generale dello Stato, (2009) Relazione Unificata sull'Economia e sulla Finanza Pubblica RUEF. <http://www.rgs.mef.gov.it/VERSIONE-I/Finanza-Pu-Relazione-1/2009/index.asp>
- Sestito P and E. Viviano, 2008. "Reservation wages: explaining some puzzling regional patterns," WP 696, *Bank of Italy, Economic Research Department*.
- Sciulli, D. (2006). "Making the Italian Labor Market More Flexible: An Evaluation of the Treu Reform," Economics Working Papers we063408, Universidad Carlos III, Departamento de Economía

APPENDIX

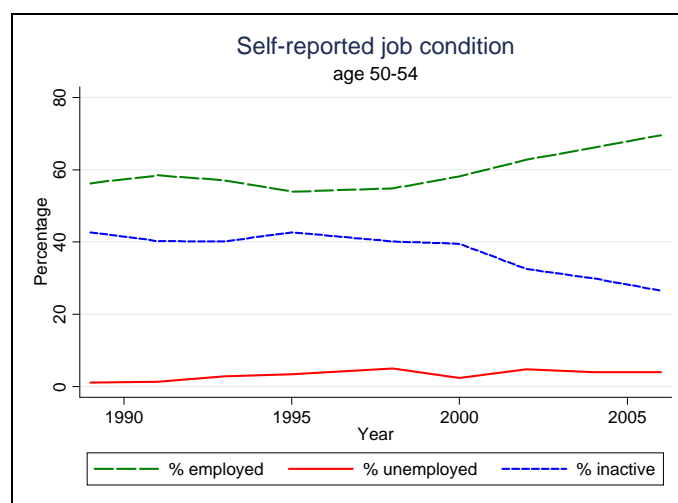


Figure A.1 Self-reported activity in percentage of individuals in the age group 50–54

Source: Bank of Italy Survey SHIW

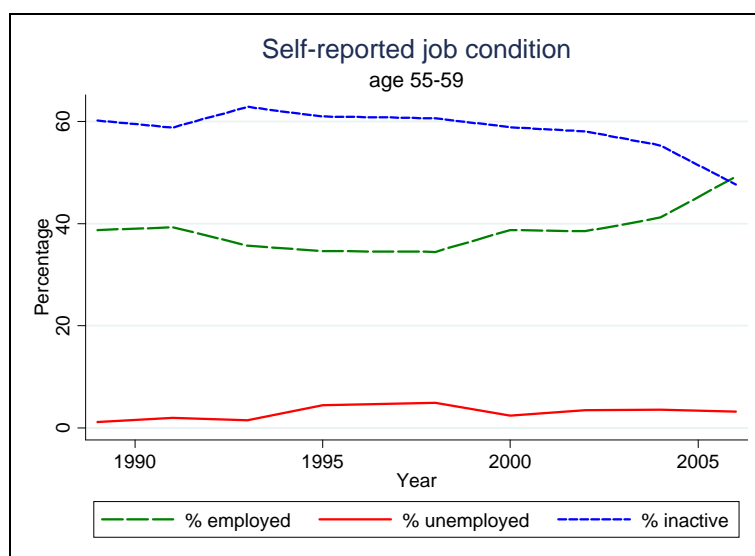


Figure A.2 Self-reported activity in percentage of individuals in the age group 55–59

Source: Bank of Italy Survey SHIW

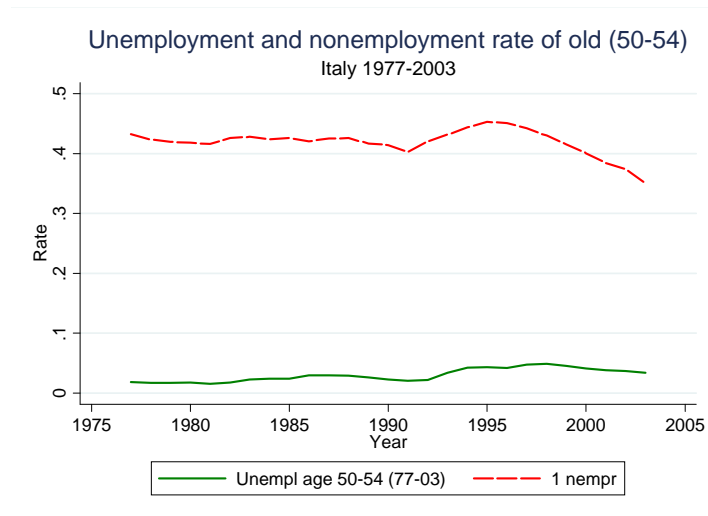


Figure A.3 Unemployment rates versus non-employment rates for the age group 50-54
 (Source: Labour Force Survey)

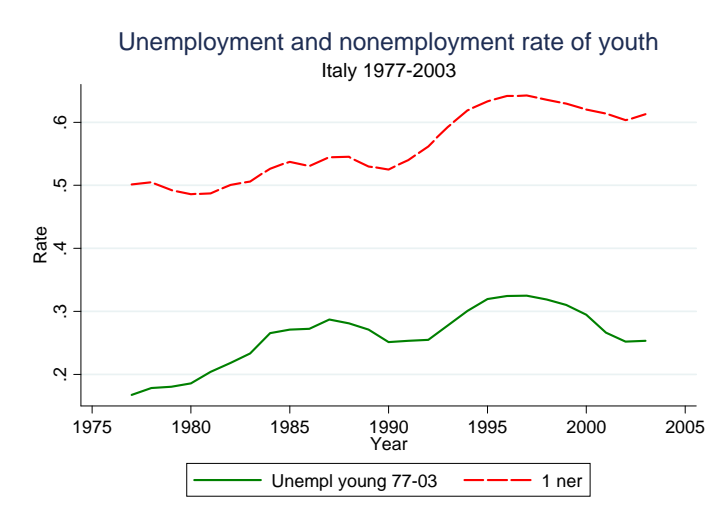


Figure A.4 Unemployment rates versus non-employment for the age group 20-24
 (Source: Labour Force Survey)

Table A.1 Regression results for the retirement decision

TABLE 3: RETIREMENT DECISIONS AS A FUNCTION OF INCENTIVES						
	OV		PV		IT	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
<i>Incentive measure</i>	-0.018 **	0.002	-0.024 **	0.002	0.041 **	0.005
<i>ssw</i>	-0.117 **	0.013	-0.128 **	0.013	-0.102 **	0.013
<i>sex</i>	0.137 **	0.006	0.137 **	0.005	0.072 **	0.007
<i>public sector</i>	-0.023 **	0.011	-0.022	0.011	0.185 **	0.014
<i>self-employed</i>	-0.177 **	0.007	-0.175 **	0.007	-0.174 **	0.010
<i>low edu</i>	0.463 **	0.045	0.459 **	0.045	1.001 **	0.061
<i>sec edu</i>	0.338 **	0.047	0.335 **	0.047	0.277 **	0.064
<i>south</i>	-0.053 **	0.025	-0.054 **	0.025	-0.098 **	0.036
<i>age dummies</i>	v		v		v	
<i>year dummies</i>	v		v		v	
<i>_cons</i>	0.558 **	0.048	0.570 **	0.048	-0.060	0.064
<i>N</i>		2226		2226		2784
<i>R-squared</i>		0.8408		0.8418		0.7563

Notes: N=number of observations. ** Significant at the 5 percent level

Dependent variable is a measure of retired at that age in that year (50-75 years old)

Incentive measure is the Option Value (OV), the Peak Value (PV) and the Implicit Tax (IT)

Source Brugiavini-Peracchi, 2007

Note: dependent variable is a dummy taking value 1 if the individual is retired and 0 if he is working

Publication series published by the Institute for Labour Market Policy Evaluation (IFAU) – latest issues

Rapporter/Reports

- 2009:1** Hartman Laura, Per Johansson, Staffan Khan and Erica Lindahl, "Uppföljning och utvärdering av Sjukvårdsmiljarden"
- 2009:2** Chirico Gabriella and Martin Nilsson "Samverkan för att minska sjukskrivningar – en studie av åtgärder inom Sjukvårdsmiljarden"
- 2009:3** Rantakeisu Ulla "Klass, kön och platsanvisning. Om ungdomars och arbetsförmedlars möte på arbetsförmedlingen"
- 2009:4** Dahlberg Matz, Karin Edmark, Jörgen Hansen and Eva Mörk "Fattigdom i folkhemmet – från socialbidrag till självförsörjning"
- 2009:5** Pettersson-Lidbom Per and Peter Skogman Thoursie "Kan täta födelseintervaller mellan syskon försämra deras chanser till utbildning?"
- 2009:6** Grönqvist Hans "Effekter av att subventionera p-piller för tonåringar på barnafödande, utbildning och arbetsmarknad"
- 2009:7** Hall Caroline "Förlängningen av yrkesutbildningarna på gymnasiet: effekter på utbildningsavhopp, utbildningsnivå och inkomster"
- 2009:8** Gartell Marie "Har arbetslöshet i samband med examen från högskolan långsiktiga effekter?"
- 2009:9** Kennerberg Louise "Hur försörjer sig nyanlända invandrare som inte deltar i sfi?"
- 2009:10** Lindvall Lars "Bostadsområde, ekonomiska incitament och gymnasieval"
- 2009:11** Vikström Johan "Hur påverkade arbetsgivaransvaret i sjukförsäkringen lönebildningen?"
- 2009:12** Liu Qian and Oskar Nordström Skans "Föräldraledighetens effekter på barnens skolresultat"
- 2009:13** Engström Per, Hans Goine, Per Johansson and Edward Palmer "Påverkas sjukskrivning och sjukfrånvaro av information om förstärkt granskning av läkarnas sjukskrivning?"
- 2009:14** Goine Hans, Elsy Söderberg, Per Engström and Edward Palmer "Effekter av information om förstärkt granskning av medicinska underlag"
- 2009:15** Hägglund Pathric "Effekter av intensifierade förmedlingsinsatser vid Arbetsförmedlingen – erfarenheter från randomiserade experiment"
- 2009:16** van den Berg Gerard J. and Johan Vikström "Hur påverkas de arbetslösa av sanktioner i arbetslöshetsförsäkringen?"
- 2009:17** Gartell Marie "Val av högskola och inkomster – hur stabil är rangordningen? En metodstudie"
- 2009:18** Edin Per-Anders, Peter Fredriksson, Hans Grönqvist and Olof Åslund "Bostadssegregationens effekter på flyktingbarns skolresultat"

- 2009:19** Blomskog Stig and Johan Bring "Hur bör en arbetsvärderingsmodell specificeras? – en analys baserad på mångdimensionell beslutsteori"
- 2009:20** Böhlmark Anders, Oskar Nordström Skans and Olof Åslund "Invandringsålderns betydelse för social och ekonomisk integration"
- 2009:21** Sibbmark Kristina "Arbetsmarknadspolitisk översikt 2008"
- 2009:22** Eliason Marcus "Inkomster efter en jobbförlust: betydelsen av familjen och trygghets-systemet"
- 2009:23** Bennmarker Helge, Erik Grönqvist and Björn Öckert "Betalt efter resultat: utvärdering av försöksverksamhet med privata arbetsförmedlingar"
- 2009:24** Hensvik Lena, Oskar Nordström Skans and Olof Åslund "Sådan chef, sådan anställd? – Rekryteringsmönster hos invandrade och infödda chefer"

Working papers

- 2009:1** Crépon Bruno, Marc Ferracci, Grégory Jolivet and Gerard J. van den Berg "Active labor market policy effects in a dynamic setting"
- 2009:2** Hesselius Patrik, Per Johansson and Peter Nilsson "Sick of your colleagues' absence?"
- 2009:3** Engström Per, Patrik Hesselius and Bertil Holmlund "Vacancy referrals, job search and the duration of unemployment: a randomized experiment"
- 2009:4** Horny Guillaume, Rute Mendes and Gerard J. van den Berg "Job durations with worker and firm specific effects: MCMC estimation with longitudinal employer-employee data"
- 2009:5** Bergemann Annette and Regina T. Riphahn "Female labor supply and parental leave benefits – the causal effect of paying higher transfers for a shorter period of time"
- 2009:6** Pekkarinen Tuomas, Roope Uusitalo and Sari Kerr "School tracking and development of cognitive skills"
- 2009:7** Pettersson-Lidbom Per and Peter Skogman Thoursie "Does child spacing affect children's outcomes? Evidence from a Swedish reform"
- 2009:8** Grönqvist Hans "Putting teenagers on the pill: the consequences of subsidized contraception"
- 2009:9** Hall Caroline "Does making upper secondary school more comprehensive affect dropout rates, educational attainment and earnings? Evidence from a Swedish pilot scheme"
- 2009:10** Gartell Marie "Unemployment and subsequent earnings for Swedish college graduates: a study of scarring effects"
- 2009:11** Lindvall Lars "Neighbourhoods, economic incentives and post compulsory education choices"
- 2009:12** de Luna Xavier and Mathias Lundin "Sensitivity analysis of the unconfoundedness assumption in observational studies"
- 2009:13** Vikström Johan "The effect of employer incentives in social insurance on individual wages"

- 2009:14** Liu Qian and Oskar Nordström Skans "The duration of paid parental leave and children's scholastic performance"
- 2009:15** Vikström Johan "Cluster sample inference using sensitivity analysis: the case with few groups"
- 2009:16** Hägglund Pathric "Experimental evidence from intensified placement efforts among unemployed in Sweden"
- 2009:17** Andersson Christian and Per Johansson "Social stratification and out-of-school learning"
- 2009:18** van den Berg Gerard J. and Johan Vikström "Monitoring job offer decisions, punishments, exit to work, and job quality"
- 2009:19** Gartell Marie "Stability of college rankings – a study of relative earnings estimates applying different methods and models on Swedish data"
- 2009:20** Åslund Olof, Per-Anders Edin, Peter Fredriksson and Hans Grönqvist "Peers, neighborhoods and immigrant student achievement – evidence from a placement policy"
- 2009:21** Åslund Olof, Anders Böhlmark and Oskar Nordström Skans "Age at migration and social integration"
- 2009:22** Arni Patrick, Rafael Lalive and Jan C. van Ours "How effective are unemployment benefit sanctions? Looking beyond unemployment exit"
- 2009:23** Bennmarker Helge, Erik Grönqvist and Björn Öckert "Effects of outsourcing employment services: evidence from a randomized experiment"
- 2009:24** Åslund Olof, Lena Hensvik and Oskar Nordström Skans "Seeking similarity: how immigrants and natives manage at the labor market"
- 2009:25** Karlsson Maria, Eva Cantoni and Xavier de Luna "Local polynomial regression with truncated or censored response"
- 2009:26** Caliendo Marco "Income support systems, labor market policies and labor supply: the German experience"
- 2009:27** Brewer Mike "How do income-support systems in the UK affect labour force participation?"
- 2009:28** Gautier Pieter A. and Bas van der Klaauw "Institutions and labor market outcomes in the Netherlands"
- 2009:29** Brugiavini Agar "Welfare reforms and labour supply in Italy"
- 2009:30** Forslund Anders "Labour supply incentives, income support systems and taxes in Sweden"
- 2009:31** Võrk Andres "Labour supply incentives and income support systems in Estonia"
- 2009:32** Forslund Anders and Peter Fredriksson "Income support systems, labour supply incentives and employment – some cross-country evidence"

Dissertation series

- 2009:1** Lindahl Erica "Empirical studies of public policies within the primary school and the sickness insurance"
- 2009:2** Grönqvist Hans "Essays in labor and demographic economics"