Review of Income and Wealth
Series 56, Number 4, December 2010

DIFFERENCES IN EQUIVALENT INCOME ACROSS COHORTS OF HOUSEHOLDS: EVIDENCE FROM ITALY

by Gabriella Berloffa* and Paola Villa

University of Trento

Using Italian SHIW data, this paper explores how the evolution of household equivalent income over the 1989–2004 period has modified the relative position of different cohorts of households, at the same head's age. The descriptive analysis reveals the economic difficulties faced by young generations: while households whose heads were born in the 1930s and 1940s gain about 8 percent over the preceding cohorts, the younger ones record an average loss of about 5 percent. These differences result from the joint occurrence of various events, like the poor performance of the economy and its adverse effects on younger workers, institutional changes to the labor market, the new rules introduced for the pensions system, and an exceptional increase in house prices and rents.

Introduction

The evolution of household equivalent income in Italy over the last 15 years has been characterized by two main phases: the recession of the early 1990s, in which all deciles except the top one experienced real losses; and a subsequent recovery, which was not enough to take the bottom decile back to its 1989 level. As shown by Boeri and Brandolini (2004), different population subgroups—for example, defined by the labor market position of the household's head—have been affected differently by these phenomena. Our conjecture is that decomposition by "cohorts of households," as defined by the age of the household's head, may reveal significant differences in income dynamics across households, with younger ones losing ground to older ones.

Worries about the deterioration of the economic conditions and prospects of young adults in comparison with older cohorts are supported by empirical evidence from various countries on both individual wages and household incomes. With respect to the latter, a worsening situation for young cohorts has been documented for a number of countries, mainly on the basis of LIS data (Smeeding and Sullivan, 1998; see also Osberg, 2003). For Italy, there are no recent studies on household equivalent income by cohort, but the evidence available suggests a deterioration in the performance of the young relatively to the old heads of household (Brandolini and D'Alessio, 2003; Berloffa and Villa, 2007a).

Although household equivalent income depends on a large number of factors (household composition, number of earners, real and financial capital, etc.), by far the most important components are individual wages and/or pensions. Several studies document a deterioration in *individual earnings* for young

*Correspondence to: Gabriella Berloffa, Department of Economics, University of Trento, Italy (gabriella.berloffa@unitn.it).

workers in a number of countries (see Gosling *et al*., 2000, for the U.K.; Beaudry and Green, 2000, and Grenier, 2003, for Canada; Fitzenberger *et al*., 2001, for Germany). For Italy, younger generations who entered the labor market in the 1990s have experienced lower entry wages and lower wage growth along the life cycle; and an increasing share of them are in atypical employment (Biagi, 2003; Rosolia and Torrini, 2007).

Recent reforms of the pension system and the evolution of the housing market have also negatively affected young cohorts in Italy. Since their *pension benefits* will be entirely based on a notional defined contribution scheme, they are required not only to have longer career lengths and to retire at an older age, but also to save a larger share of their current income in order to supplement their future pensions. *Housing prices* and *rents* have increased markedly in the last 15 years. This has given rise to an increase in homeowners' wealth, but also to higher costs of housing services which are likely to have a major impact on the younger households, those in search of affordable accommodation.

This paper intends to document the differences across cohorts of households in terms of equivalent income for Italy. In particular, it assesses how the evolution of household income in the period considered has modified the relative position of different cohorts of households, at the same age. In Section 1 we discuss the reasons for choosing cohorts of households instead of cohorts of individuals as the units of analysis. In Section 2 differences in equivalent income across five cohorts of households at the same age are illustrated. In Section 3 we document how labor market conditions, social security rights, and housing costs have affected different cohorts in the last 15 years. Section 4 concludes.

1. The Unit of Analysis: Cohorts of Households

This paper explores differences in equivalent income across cohorts of households in Italy over the 1989–2004 period. The reason for choosing households instead of individuals as the unit of analysis concerns the nature itself of the household and of household income.

The household is the place where important economic decisions are taken: housing, fertility, human capital investments for children, labor supply, mutual risk insurance, and savings. These decisions depend on the economic resources available to the household (and not only to individuals). Within households, individual incomes may be allocated to the needs of various household members in different ways, and we do not know enough about this mechanism either to attribute a certain amount of income to each individual or to separate individual and collective decisions (see also the recommendations of the Canberra Group, 2001; Haddad and Kanbur 1990). Furthermore, even if one is willing to assume an egalitarian intra-household distribution as implied by the calculation of equivalent household income, the types of economic decisions that depend on the resources assigned to individuals are quite different when one considers young people who have formed a family and those who still live with their parents. Since we want to compare the economic conditions of groups of individuals facing similar choice problems, we focus on families that are already established.

Note that this choice also permits more coherent interpretation of the variables associated with different income levels across households. Indeed, differences in equivalent incomes are in large part related to the number of components and the number of income recipients in the household. The interpretation of these variables is straightforward if we compare individuals who have the same position within the household (i.e. household head, or spouse, or child); but it becomes ambiguous when comparing individuals who have formed their own family against others (of the same generation) who still live with their parents.

This distinction is particularly relevant to Italy because of the difficulties faced by younger cohorts in the family formation process.[1] The delay in marriage and transition to parenthood, and the long permanence of young adults in the parental home, start with the cohorts born in the 1960s and they become more pronounced later on. The share of youngsters aged 20–30 cohabiting with their parents was 54 percent in 1977, around 65 percent at the end of the 1980s, and peaked at 75 percent in 2002 (Banca d'Italia, 2008, p. 8). On the other hand, between 1977 and 1995, the number of household heads aged under 30, already rather low, dropped from 8 to 5 percent, which was markedly below the proportions in other EU countries (Spain 7.5%, France and Germany around 13%, U.K. 15%, the Netherlands 17%, Denmark 22%, Sweden 25%) (Brandolini and D'Alessio, 2003, p. 183).

The emergence of a latest–late pattern of transition to adulthood is related to the deterioration in the economic conditions of young families.[2] Brandolini and D'Alessio (2003, p. 169) show that the situation for heads of household aged under 40 worsened between 1977 and 1995, whilst it improved for heads aged over 65. Testifying to the economic difficulties in the family formation process for youngsters are the lower labor incomes earned by young adults cohabiting with their parents compared with those earned by heads of household of the same age (see Figure A1 in the Appendix).

It is clear from what has just been said that there are endogeneity problems in the analysis of the relationship between equivalent income and the household structure. On the one hand, access to employment and individuals' income levels affect family formation and reproductive decisions. On the other hand, the redistributive process within the household may induce some of its members to remain inactive, unemployed, or in low-paid jobs. It should therefore be stressed that our focus is purely descriptive and that our results should not be interpreted in terms of causal relationships.

[1]As is well known, Italy is one of the countries in the world with the highest expectancy rates, the most marked ageing of the population, the lowest number of children born, and the lowest–low fertility (Dalla Zuanna and Micheli, 2004; GCD, 2007). A key component of Italian lowest–low fertility is the long residence of young adults in their parental homes. Manacorda and Moretti (2006) show that a rise in parents' income significantly raises the children's propensity to live at home.

[2]Changes in the economic conditions faced by youngsters (increasing difficulties in entering standard employment contracts, lower entry wages, higher costs for housing services) combine with changes in social norms and values, all affecting their demographic behavior (home-leaving pattern, union formation, and transition to parenthood).

In what follows we use data from the Survey of Household Income and Wealth (SHIW), a nationally representative survey carried out by the Bank of Italy since 1965. Data are taken from the Historical Archive and refer to the period between 1989 and 2004,[3] with two-year intervals except for 1995 to 1998. The definition of household income that we use is very broad, because it includes wages and salaries, income from self-employment, pensions, public and private transfers, income from financial (net of interest paid on mortgages) and non-financial assets, and imputed rental income from owner-occupied dwellings. All components are net of direct taxes and social security contributions. We obtain the real net household income by using the Household final consumption Expenditure Deflator (HED) available in national accounts. Differences in household size are accounted for by means of the OECD modified equivalence scale, which assigns value 1 to the first adult, 0.5 to any other person aged 14 or older, and 0.3 to any person younger than 14. In order to describe differences in equivalent income, we group households into five cohorts according to the year of birth of the (male) household head:[4] households whose heads were born 1921–30, 1931–40, 1941–50, 1951–60, 1961–70; the sample size of these groups is reported in Table A1 in the Appendix. These cohorts of households will be referred to as *h-cohorts*.

2. Differences in Equivalent Income Across Cohorts of Households

Figure 1 shows median household equivalent income for the five cohorts of households defined in the previous section as it changed between 1989 and 2004 (upper panel), and as a function of the head's mean age[5] (lower panel). The first striking feature is the different evolution of median income for the households whose heads were born in the 1940s compared to all other *h-cohorts*: their median income increased by about 20 percent, whereas for all other *h-cohorts* it remained roughly stable (with variations ranging from −6.5 percent for the oldest to +5 percent for those whose heads were born in the 1950s). The *h-cohorts* that experienced the greatest losses during the first half of the 1990s are the youngest ones; both of them recovered toward the end of the decade and at the beginning of the new century, but this recovery was just enough to take them back to the 1989 level. The consequences of these patterns for the economic resources available to households from different cohorts at the same age can be seen in the lower panel of Figure 1 and in Table 1: positive cohort effects can be clearly identified only for the older *h-cohorts*, which gain on average about 8 percent over the preceding cohorts, whereas the younger ones record an average loss over the previous cohorts of about 5 percent.

[3]We do not consider years prior to 1989 because there have been changes in the sample design of the survey and in some characteristics recorded at the individual level which we use in our analysis.

[4]The choice of this criterion to identify cohorts of households is motivated by the need to use a characteristic that is as stable as possible over time. Therefore, we assigned a male head whenever the self-reported head was a female but had a male partner, and we excluded those households in which the head was a female and was not part of a couple.

[5]This is defined as the difference between the survey year and a single year of birth for each cohort: 1925 for households whose head was born in the 1920s, 1935 for those with heads born in the 1930s, etc.

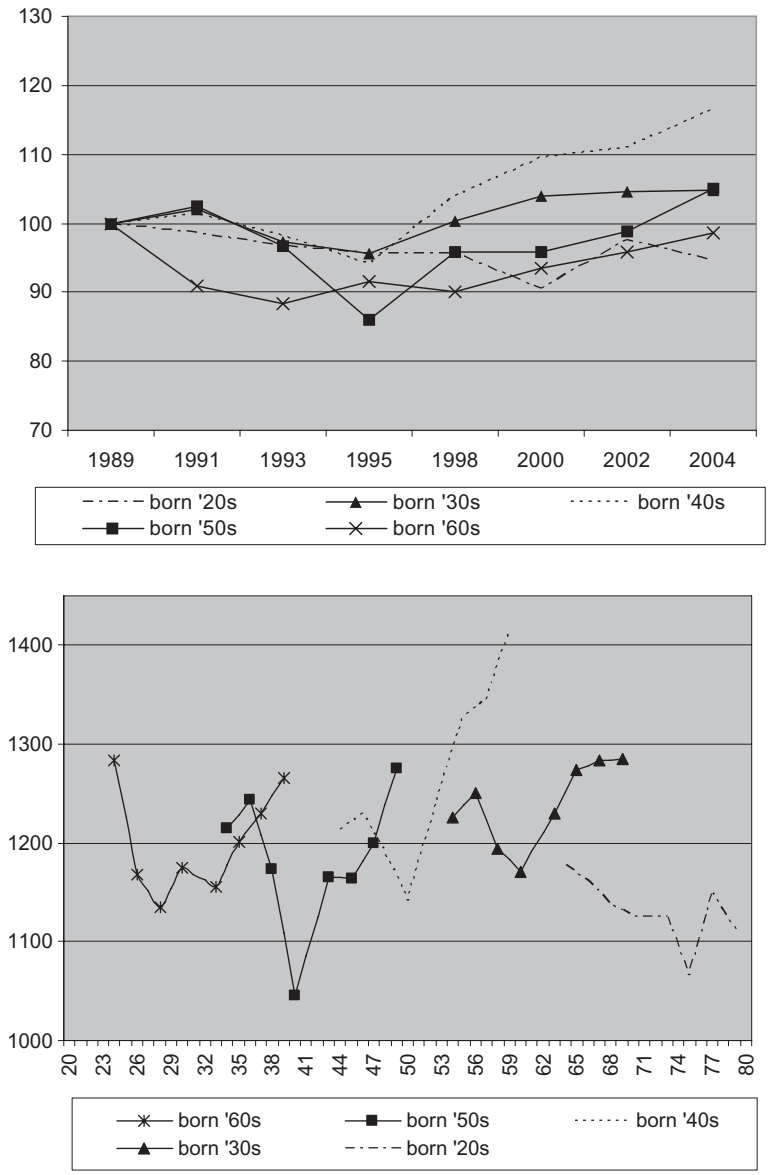

Figure 1. Median Real Monthly Equivalent Household Income by Year (upper, 1989 = 100) and by Age (lower, euros at 2003 prices), for Various Cohorts of Households

Notes: Cohorts are defined by the year of birth of the (male) household head.
Source: Authors' calculations on data from the SHIW-HA (release 3.0).

This result is quite surprising because younger cohorts should have benefitted from higher education, lower unemployment, an increase in female participation, and a reduction in family size. Economic growth was sluggish in the period considered (1989–2004), but it has been associated with an increase in total employment and a decrease in unemployment since 1995. Italian GDP increased at

TABLE 1

EQUIVALENT HOUSEHOLD DISPOSABLE INCOME (VARIOUS PERCENTILES, EUROS AT 2003 PRICES) AND AVERAGE NUMBER OF INCOME RECIPIENTS FOR DIFFERENT COHORTS OF HOUSEHOLDS AT THE SAME HEAD'S AGE

	p10	p25	p50	p75	p90	Mean	Average No. of Income Recip.	Average No. of Earners
Age 35								
Born 1950s	600.3	832.7	1230.6	1768.7	2303.5	1414.8	1.54	1.46
Born 1960s	527.1	767.0	1200.5	1724.7	2347.6	1344.4	1.55	1.43
Gap (%)	–12.2	–7.9	–2.4	–2.5	1.9	–5.0		
Age 45								
Born 1940s	618.7	853.7	1221.2	1763.5	2436.9	1438.5	1.76	1.60
Born 1950s	467.4	772.6	1164.4	1704.6	2391.5	1362.1	1.72	1.57
Gap (%)	–24.5	–9.5	–4.7	–3.3	–1.9	–5.3		
Age 55								
Born 1930s	617.4	865.6	1233.7	1689.7	2297.0	1392.2	2.03	1.61
Born 1940s	559.0	857.7	1329.3	1872.7	2474.8	1517.0	2.06	1.60
Gap (%)	–9.5	–0.9	7.7	10.8	7.7	9.0		
Age 65								
Born 1920s	626.6	843.1	1171.1	1609.3	2257.5	1402.5	1.96	0.74
Born 1930s	553.4	850.6	1274.4	1769.6	2524.1	1520.8	1.95	0.75
Gap (%)	–11.7	0.9	8.8	10.0	11.8	8.4		

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

an annual average growth rate of 1.45 percent.[6] The unemployment rate[7] rose from 9.1 percent in 1989 to 12 percent in 1997–98, but then steadily decreased to 8.8 percent in 2003. The reduction was remarkable for young people: the unemployment rate for those aged 15–24 declined from 34 percent in 1996 to 27 percent in 2003. Therefore, after the difficulties of the early 1990s, the Italian context does not appear particularly unfavorable to younger generations. Furthermore, on average younger cohorts are characterized by higher educational levels. As illustrated in Figure 2, all successive cohorts experienced a rise in the share of individuals with higher education: for example, while only about one third of all individuals born in the 1940s had a high-school diploma or a degree, this percentage rose to 55 percent for those born in the 1960s.

The female employment rate (15–64) increased from 36.3 percent in 1989 to 42.7 percent in 2003. Notwithstanding this increase, the average number of earners per household remained fairly stable for successive cohorts (see the last column in Table 1), because of some composition effects. Table 2 shows that the incidence of two-earner households in the *h-cohort* born in the 1950s is higher—when the head is 45—than in the preceding *h-cohort* (52.5% vs. 44.9%), but this effect is partly offset by a lower share of three-earner households (5.3% vs. 9%). Differences

[6]The performance was however poorer than that of other European countries: in the European Community with 12 countries from 1991 to 2004 the average annual growth rate was 2.04 percent, compared to 1.39 percent for Italy (Eurostat data, Long GDP series for historic EU totals, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/documents/EC6-9-10-12%201970-2006.xls).

[7]After 2003 there was a structural break in the Labor Force Survey data collection process. Since the new series have been reconstructed only from 1993, in what follows we prefer to use the old ones even if they stop in 2003.

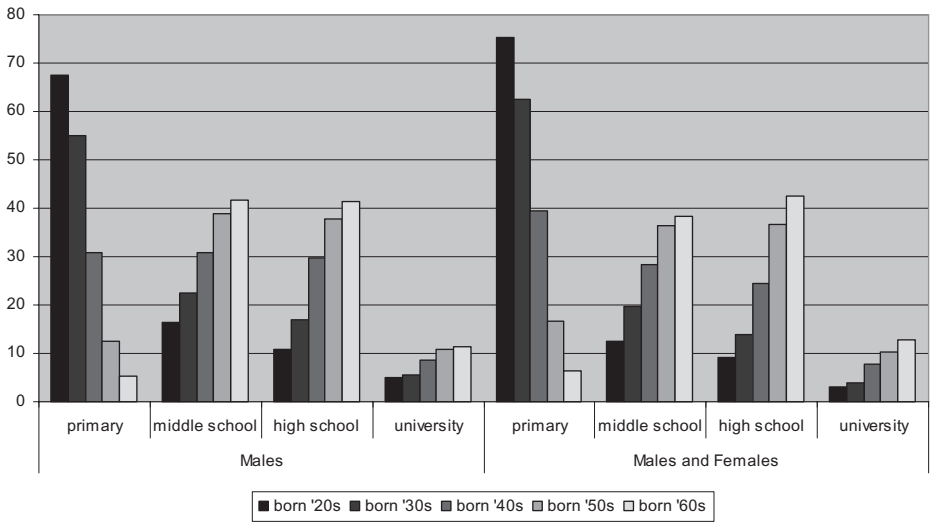

Figure 2. Share of Individuals in Different Cohorts by Educational Levels
Source: Authors' calculations on data from the SHIW-HA (release 3.0).

TABLE 2
Household Number of Earners (% distribution) and Average Size for Different Cohorts of Households at the Same Head's Age

	Age 35		Age 45	
	Born 1960s*	Born 1950s**	Born 1950s*	Born 1940s**
No. earners				
0	1.50	1.05	1.34	1.18
1	47.23	49.16	40.83	44.92
2	51.04	49.27	52.47	44.89
3 and more	0.16	0.54	5.27	8.96
Household size	3.09	3.29	3.56	3.81

Notes: The sample includes only households where a couple is present.
*Proportion in 2000; **average proportion in 1989–91.
Source: Authors' calculations on data from the SHIW-HA (release 3.0).

between the two younger *h-cohorts* at the age of 35 go in a similar direction, but the magnitudes are much smaller. It is worth noting that, even if the average number of earners is similar, family size is smaller for younger cohorts: the average number of household components is respectively 3.81 and 3.56 for *h-cohorts* born in the 1940s and in the 1950s at the age of 45, and 3.29 and 3.09 for *h-cohorts* born in the 1950s and 1960s at the age of 35.

None of the factors mentioned so far points toward unfavorable economic conditions for younger generations. The negative cohort effects described above must therefore be related to other more specific phenomena, like structural changes in the age–earnings profile of different cohorts or in pension benefits, different weights of various household income components across cohorts, etc.

The aim of the next sections is to shed light on the factors that lie behind these gains and losses across cohorts of households.

3. The Evolution of Different Sources of Income

The composition of household income by cohort of households changes through time because of changes occurring along the life cycle of the household. Households whose head was born in the 1920s rely mainly on pension income in all years but the initial ones; the *h-cohort* with heads born in the 1930s is characterized by the transition to retirement, with the median share of labor income ranging from 82 to 0 percent, and that of pension income from 0 to 68 percent over the years considered. For the other cohorts, the main source of income is earnings, but whilst *h-cohorts* with heads born in the 1950s and in the 1960s have percentages that remain between 80 and 90 percent, for the one with heads born in the 1940s the transition to retirement starts in the late 1990s and the early years of the new millennium. The share of non-financial capital income (i.e. received and imputed rents) ranges from 10 to 20 percent, with an increasing trend for all cohorts, which results in a larger share of capital income for younger cohorts at the same age.

In order to understand differences across cohorts of households in terms of total income it is therefore useful to examine separately the evolution of its main sources, i.e. earnings, pension benefits, and imputed income from owner-occupied house.

3.1. *Individual and Household Labor Income*

The distribution of *individual* labor income for male and female workers (employees and self-employed[8]) moved leftwards from 1989 to 2004, with a significant increase in the share of people in the low part of the distribution (see Figure 3). The reduction in average labor income is a phenomenon that persisted over the entire period. Table 3 shows a significant reduction for all percentiles of the distributions from 1989 to 2004, with the exception of the top deciles. The bottom decile decreased by more than 30 percent in 15 years!

As underlined by other authors, this poor performance of individual labor incomes is due partly to the moderate growth of economic activity and productivity slowdown, and partly to the changes in institutional arrangements. As far as wages are concerned, the tripartite income policy agreements of 1992 and 1993, which abolished the wage indexation mechanism (*scala mobile*) and reformed the collective bargaining system,[9] halted the wage inflation spiral and initiated a long period of wage moderation (Brandolini *et al.*, 2007). At the same time, a two-tier

[8]We are aware of the measurement problems that characterize the labor incomes of the self-employed, but we include them in our analysis because of the large proportion that they represent in Italy. In any case, the main trends illustrated in this section are no different if we restrict the sample to employees (see Berloffa and Villa, 2007b).

[9]Contini and Trivellato (2005, p. 77) stress the role played by collective bargaining in the widening of wage differentials by age, which resulted in higher returns on work experience, to the advantage of older workers. Empirical analyses (Borgarello and Devicienti, 2002; Devicienti and Maida, 2005) support this interpretation.

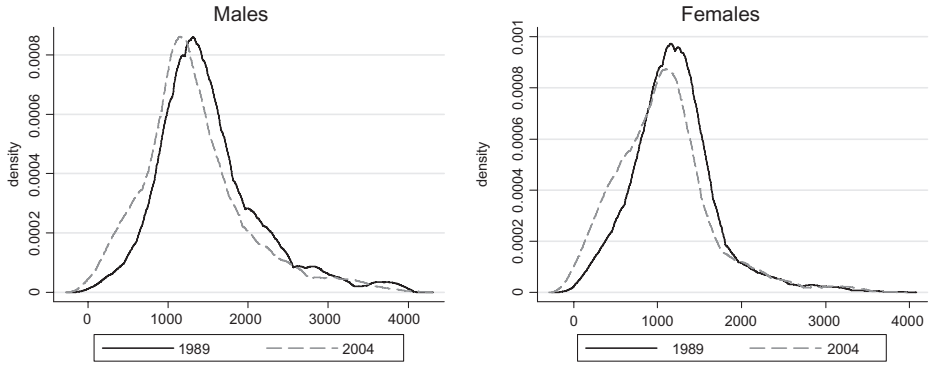

Figure 3. Non-Parametric Density Functions of Individual Monthly Labor Income for Male and Female Workers in 1989 and 2004 (employees and self-employed; euros at 2003 prices)

Note: The sample includes individuals of all ages who received a non-zero labor income in the year of the survey.

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

TABLE 3

Percentiles of Individual Monthly Labor Income for Male and Female Workers (employees and self-employed; euros at 2003 prices)

	Males					Females				
	p10	p25	p50	p75	p90	p10	p25	p50	P75	p90
1989	905.5	1131.8	1373.3	1810.9	2490.1	603.6	905.5	1177.1	1433.7	1735.5
2004	570.5	977.9	1222.2	1629.8	2445.3	407.4	684.6	1059.4	1304.7	1792.8
Change (%)	−37.0	−13.6	−11.0	−10.0	−1.8	−32.5	−24.4	−10.0	−9.0	3.3

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

reform of the labor market was implemented.[10] This affected mainly new entrants, while sheltering the employment relationships of old incumbent workers, and favored remarkable growth in employment (since 1995). However, as employment growth combined with a slowdown in productivity growth, the outcome was a fall in real wages (Tronti, 2007).

The consequences of this general decline in labor income for different cohorts of individuals can be grasped from Table 4. The negative cohort effect for younger cohorts is striking: for both males and females the reduction in the percentiles for younger cohorts is between 7 and 30 percent (with a somewhat lower loss for the top decile and quartile of females born in the 1960s).[11] This loss for younger

[10]A major regulatory change was the introduction in 1984 of the work-and-training contract (*contratto di formazione e lavoro*, CFL), a fixed-term contract with reduced social contributions, a lower entry wage, and no firing costs to be used for the hiring of young unemployed persons. In 1991 some limitations were imposed on the incentives attached to CFL, but the reduction in the diffusion of CFL has been more than offset by the use of other forms of atypical employment contracts (fixed-term contracts, temporary agency work, employer-coordinated freelance work).

[11]The sizes of these cohort effects are very similar if we consider only employees (see Berloffa and Villa, 2007b). This result is supported by other empirical analyses (Biagi, 2003; Rosolia and Torrini, 2007).

TABLE 4

PERCENTILES OF MONTHLY LABOR INCOME FOR DIFFERENT COHORTS OF INDIVIDUALS AT THE SAME AGE (EMPLOYEES AND SELF EMPLOYED; EUROS AT 2003 PRICES)

	Males					Females				
	p10	p25	p50	p75	p90	P10	p25	p50	p75	p90
Age 45										
Born 1940s	1056.4	1244.0	1526.0	1990.5	2786.7	663.5	980.9	1207.3	1509.1	1857.8
Born 1950s	738.0	1121.7	1402.1	1799.4	2453.7	467.4	841.3	1121.7	1402.1	1635.8
Gap (%)	−30.1	−9.8	−8.1	−9.6	−11.9	−29.6	−14.2	−7.1	−7.1	−11.9
Age 35										
Born 1950s	980.9	1194.3	1388.0	1725.1	2263.7	664.0	947.8	1194.3	1459.7	1773.2
Born 1960s	701.1	1028.2	1238.5	1495.6	2103.2	446.5	701.1	1028.2	1374.1	1682.5
Gap (%)	−28.5	−13.9	−10.8	−13.3	−7.1	−32.8	−26.0	−13.9	−5.9	−5.1

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

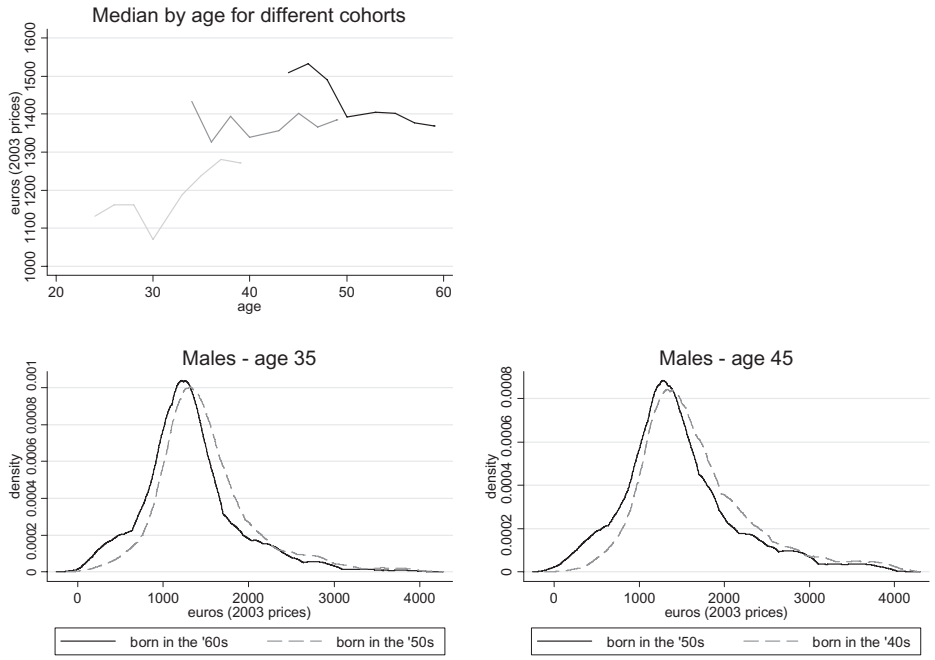

Figure 4. Age Profile of Median Monthly Labor Income for Male Workers and its Distribution for Different Cohorts of Individuals at the Same Age (employees and self-employed; euros at 2003 prices)

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

cohorts is further documented in Figure 4, where we plot the age profile of median earnings for males born in the 1940s, 1950s, and 1960s, as well as the difference in the distribution of these earnings for different cohorts at the same age.

These negative cohort effects also emerge when we consider household equivalent labor income. As shown in Table 5, there is a significant reduction in all percentiles between 1989 and 2004 for the two youngest *h-cohorts* considered

TABLE 5

PERCENTILES OF EQUIVALENT LABOR INCOME FOR DIFFERENT COHORTS OF HOUSEHOLDS (EUROS AT 2003 PRICES)

	Born 1950s					Born 1960s				
	p10	p25	p50	p75	p90	p10	p25	p50	p75	p90
1989	574.9	754.6	1056.4	1593.0	2012.2	553.3	804.9	1167.8	1572.0	2163.1
2004	390.9	619.5	992.0	1376.4	2038.4	460.9	631.8	1005.5	1495.0	2119.8
Change (%)	–32.0	–17.9	–6.1	–13.6	1.3	–16.7	–21.5	–13.9	–4.9	–2.0

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

TABLE 6

PERCENTILES OF EQUIVALENT HOUSEHOLD LABOR INCOME FOR DIFFERENT COHORTS OF HOUSEHOLDS AT THE SAME AGE (EUROS AT 2003 PRICES)

	p10	p25	p50	p75	p90	Mean
Age 45						
Born 1940s	521.3	707.7	995.2	1458.8	1967.9	1191.7
Born 1950s	400.6	634.3	934.7	1350.2	1869.5	1091.3
Gap (%)	–23.2	–10.4	–6.1	–7.4	–5.0	–8.4
Age 35						
Born 1950s	539.0	718.6	1056.4	1548.1	1976.2	1213.1
Born 1960s	435.9	654.3	995.7	1424.4	1807.2	1110.8
Gap (%)	–19.1	–8.9	–5.7	–8.0	–8.6	–8.4

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

(except in the top decile). Moreover, household equivalent labor income is on average 8 percent lower for younger *h-cohorts*, with much larger losses for the bottom decile (Table 6). This means that the increase in the number of earners and the decrease in family size for younger cohorts have not been big enough to compensate for the loss in individual labor incomes.

To sum up, the disappointing performance of individual labor incomes in 1989–2004 hit younger cohorts more severely than older ones. As discussed in the literature, the former experienced not only a significant drop in entry wages but also a slower wage progression and an increase in the precariousness of employment conditions. This meant increasing difficulties for these cohorts in forming a family, and in having and raising children. Indeed, for successive cohorts, household size is lower (given the declining fertility rate), and average number of earners within the family is slightly higher (given the rising female participation). But these two effects are not big enough to compensate for the loss in individual labor incomes. As a consequence, household equivalent labor income is about 8 percent lower for younger cohorts of households at the same age.

3.2. *Pension Income*

A completely different picture emerges if we look at the evolution of pensions. The distribution of individual pension income moved rightwards from 1989 to 2004, for both males and females (see Figure 5). As a result, all percentiles of these distributions have increased, by between 10 and 30 percent, with the sole exception

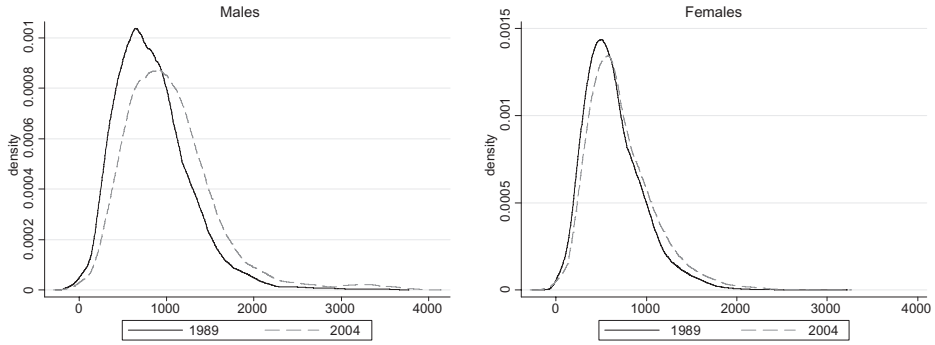

Figure 5. Non-Parametric Density Functions of Individual Monthly Pension Income in 1989 and 2004 (euros at 2003 prices)

Note: The sample includes individuals of all ages who received a non-zero pension income in the year of the survey.

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

TABLE 7

Percentiles of Individual Monthly Pension Income (euros at 2003 prices)

	Males					Females				
	p10	p25	p50	p75	p90	p10	p25	p50	p75	p90
1989	421.8	510.1	784.7	1079.0	1373.3	343.3	441.4	539.5	791.5	1016.2
2004	488.9	688.6	953.4	1271.1	1588.9	423.6	453.3	635.5	869.1	1165.6
Change (%)	15.9	35.0	21.5	17.8	15.7	23.4	2.7	17.8	9.8	14.7

Note: The sample includes individuals of all ages who received a non-zero pension income in the year of the survey.

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

of the lowest quartile for females (see Table 7). The ratio of the average pension benefit over average earnings increased from about 50 percent in 1989 to 65 percent in 2004.

The shift in the distribution of pensions seems due to higher pensions of successive cohorts of retirees. This is suggested by the stability of the percentiles of individual pensions for males born in the 1920s, i.e. the cohort not affected by successive retirements (see Appendix, Table A2). And it is confirmed if we consider differences in the distribution of pension income between different cohorts at the same age.[12] As Figure 6 and Table 8 show, there are major positive cohort effects for individual pensions: at 68 years of age, males born in the 1930s can rely on individual pensions that are on average 16 percent higher than those of males born in the 1920s.

The reason for these differences can be traced back to the time when the Italian pension system was constructed, and to the changes that occurred during

[12]Obviously, we can use only those years in which composition effects are likely to be small (i.e. those in which more than 50 percent of individuals are retired); for individuals born in the 1940s we have shown only median pension income for the latest years available, and we limit comparison of different cohorts at the same age to the two oldest cohorts.

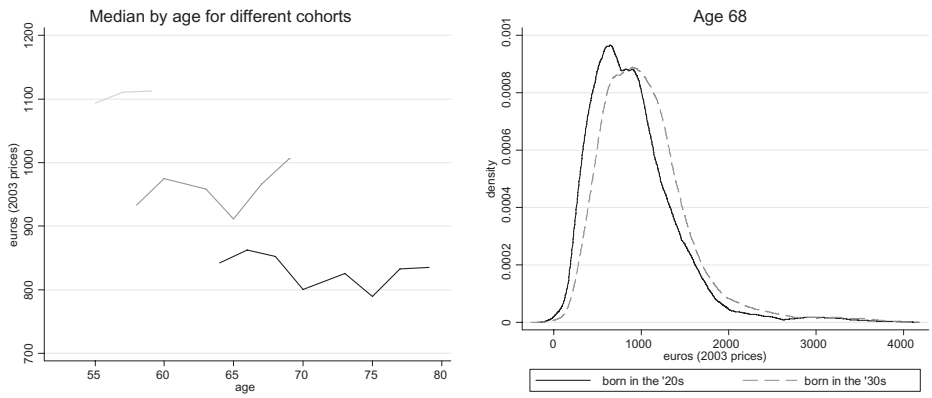

Figure 6. Monthly Pension Income (males; age profile by cohort; euros at 2003 prices)
Source: Authors' calculations on data from the SHIW-HA (release 3.0).

TABLE 8
Monthly Pension Income of Different Cohorts of Individuals at the Same Age (males; euros at 2003 prices)

	p10	p25	p50	p75	p90	Mean
Age 68						
Born 1920s	429.1	516.8	852.3	1146.7	1472.2	918.3
Born 1930s	512.5	688.7	999.4	1271.5	1642.3	1066.4
Gap (%)	19.4	33.3	17.3	10.9	11.6	16.1

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

the 1960s and 1970s. Construction of the public PAYGO (pay-as-you-go) pension system started in the second half of the 1950s, when individuals born in the 1920s had already been in the labor market for 10–15 years, whereas individuals born in the 1930s were just entering it. The pension schemes for public and private employees were frequently changed in the 1960s and early 1970s, the years of high economic growth, with the generosity of the system almost invariably being increased especially for core workers. These changes were seen as a major achievement in guaranteeing pensioners a high standard of living (preserving the standard of living enjoyed during active life).[13]

Individuals born in the 1930s and many born in the 1940s have been (or will be) able to enjoy the full generosity of the pension system. Since their labor incomes are higher than those of individuals belonging to previous cohorts, their pensions will also be higher. Even if only 34 and 43 percent of males born in the 1940s were retired in 2002 and 2004, respectively, the data suggest that their pensions are significantly higher than those for previous cohorts: at 58 years of age, their pension benefits were 19 percent higher than those for males born in the 1930s. Moreover, the reforms of the pension system that occurred in the 1990s (which will be described below) affected individuals from this cohort only

[13]For more details on the Italian pensions system see Brugiavini (1999), Franco (2002), and Brugiavini and Galasso (2003).

marginally. It is therefore reasonable to expect that median pensions for individuals born in the 1940s will be similar to what the data suggest for 2002 and 2004.

To complete the analysis, we have to consider the implications (in terms of future retirement benefits) of the pension reforms undertaken in the 1990s across cohorts. Major reform efforts were undertaken in the 1990s in order to stabilize public pension expenditure and to control the future spending dynamics.[14] They modified three key features of the pensions system: (i) benefit computation rules (from earnings-related to contributions-related schemes); (ii) indexation rules (benefits are no longer indexed to real wage growth); and (iii) retirement age and eligibility criteria (modified on actuarial bases). As a result, pension reforms have reduced expectations concerning the future level of pension benefit: the replacement rate (i.e. the ratio between the first pension benefit and last wage) has been cut down, and the changes introduced in the indexation mechanism have reduced the dynamic of pension benefits after retirement. However, the implementation of the pension reforms has been planned with a very long transitional period, implying considerable differences in terms of pension benefits for the cohorts that we constructed. The changes introduced by the pension reforms of the 1990s apply differently to individuals, mainly according to their seniority at the time of the 1995 reform.

All individuals born in the 1940s, and most of those born in the 1950s, entered the labor market before 1977 (i.e. with at least 18 years of contributions at the end of 1995). These workers will have their pensions computed on the old defined benefit system, as amended by the reforms. By contrast, workers born in the 1960s will either have only a small share of their future pensions computed on the old defined benefit scheme (i.e. all entrants to the labor market before 1996) or they will have pension benefits computed exclusively on the new notional defined contribution scheme (i.e. all entrants to the labor market after 1995), which entails a much lower replacement rate.[15]

A report commissioned by the Italian Ministry of Labor (CAPP, 2005) has used a micro-simulation model to compute the effects of the reforms from 2002 to 2050. The model uses historical data to compute conditional transition probabilities with respect to both demographic and labor market transitions, and imputes future earnings by using the coefficients of a regression on 2002 SHIW data, and an annual growth rate of 1.5 percent (see CAPP, 2005, for more details). The report shows that the ratio between average pensions and average earnings is constantly decreasing from about 63 percent in 2002 to about 33 percent in 2050. As a consequence, the share of pensioners with total benefits amounting to less than 50 percent of median earnings increases from 45 percent in 2002 to 73 percent in 2050. Similarly, the average gross replacement ratio decreases from about 65–70 percent in the early 2000s to about 30 percent in 2050, and the share of pensioners aged under 75 from 71 to 42 percent.

[14]These include the *Amato reform* in 1992, the *Dini reform* in 1995, and the *Prodi reform* in 1997. For a description of these reforms see Baldini *et al*. (2002), Franco (2002), and Brugiavini and Galasso (2003). Another reform was enacted in 2004 (the *Maroni-Tremonti reform*), which raised the retirement age and tightened the minimum eligibility requirements for retirement in the transition period.

[15]Under the earnings-related scheme (pre-1992 reform) a representative employee, retiring at the age of 60 (with 37 years of contributions), was expected to have a replacement rate of around 75 percent; under the contributions-related scheme (post-1995 reform) the same individual is expected to have a replacement rate of around 58% (if an employee) and 35% (if self-employed) (Baldini *et al*., 2002).

But the most interesting result from our perspective is the evolution over time of the ratio of the average pension for different age groups over the average of all pensions. For pensioners older than 85 this ratio increases from about 78 percent in the early 2000s to about 100 percent after 2045. In order to read these results in terms of our cohorts, we need to observe first that in 2016 this group corresponds to pensioners born in the 1920s, in 2026 to those born in the 1930s, etc. Thus the growth of pensions for successive cohorts is quite clear, and indeed it stops at around 2045 when this group is mainly formed by pensioners born in the 1950s. Similarly, the ratio of the average pension for those aged 76–85 over the average of all pensions rises from about 87 to 103 percent after 2035. At the same time, the ratio for those under 65 decreases from about 117 to 85 percent around 2040. Again, the positive growth of pensions for those aged 76–85 can be explained by the entrance into this group of successive cohorts, and indeed it stops at around 2035, when the group is mainly formed by those born in the 1950s.

In the report, the net present value ratio (i.e. the ratio between the discounted sum of pension benefits and the discounted sum of social contributions paid) is computed by cohort, confirming significant differences: it goes from 1.5 for those born before 1950, to about 1.4 for those born in the 1950s, to about 1.25 for those born in the 1960s, and to about 1 for successive cohorts.

Since the annual growth rate for earnings used in the simulation is almost the same as the annual GDP growth rate for the years between 1989 and 2004, the difference in pension benefits between cohorts described in the report cannot be attributed to different macro performances over time, but is clearly the result of the changes introduced in the pension system design. It should be emphasized that this simulation does not explicitly consider the group of temporary workers, which would make the picture for the younger generations even worse.

To sum up, the implications of the pension reforms differ across cohorts. The performance of pension income is good for old cohorts (in our analysis, those born in the 1930s and 1940s), because they have maintained defined benefit pensions (earnings-related) and they have enjoyed better earning age profiles with respect to older cohorts (born in the 1920s). For younger cohorts (especially those born after 1960), the pension reforms have created significant drawbacks: they have to work longer and save more to secure decent pension benefits in old age, but they are also required to pay high social contributions in order to award generous pension benefits to older cohorts; their defined contribution pensions will be not only low (given the lower replacement rate) but also uncertain; indeed, they will be based exclusively on their working life histories, and for a non-negligible number, the work history will be characterized by non-standard, unstable, and low-paid jobs.[16]

3.3. *The Role of Housing Rental Costs*

An important determinant of household income is rental income from owner-occupied housing. Indeed, in Italy the vast majority of households live in owner-occupied housing, and only a low, and declining, share of households live in rental housing. The high proportion of households that own their dwellings is the

[16]Recent studies suggest that the probability of being caught in precarious and unstable jobs is on the increase (see Barbieri and Scherer, 2005; Brandolini *et al*., 2007).

outcome of a long-term trend recorded by census data: it was 59.2 percent in 1981, but 68 percent in 1991 and 71.4 percent in 2001. In the SHIW sample, in 2004 about 68 percent of all households owned the dwelling in which they lived, and another 10 percent could live in the dwelling without paying any rent (usufruct or free use). In 1989, these percentages were 63 and 8.5 percent, respectively.

In the period considered here, the housing market underwent significant changes. Brandolini *et al.* (2004) report an increase in housing prices between 1989 and 2000 which exceeded by 40 percent that of consumer prices.[17] Nomisma (2005) documents that mean prices of new housing increased by 70.4 percent in the period 1998–2004. Housing demand was boosted by the high market values of the housing stock, the expectations of further price increases, the liberalization of the mortgage market, and the historically low interest rate experienced in the last decade. The upward trend in real property prices in the latest years was also related to the massive portfolio reallocation of institutional investors since 2000 and housing quality upgrading. A lack of housing policy (providing social rented housing and/or subsidies) resulted in a further increase in the already large share of home ownership, as well as in further price increases.

Because movements in housing prices and rents are related, rents markedly increased as well. In the SHIW sample, paid rents increased dramatically: the median rose from about 190 euros per month in 1989 (2003 prices) to almost 300 euros per month in 2004, with a percentage increase of 58 percent. A somewhat lower but still remarkable increase can be observed for imputed rents,[18] which rose from about 350 euros per month in 1989 (2003 prices) to about 500 euros in 2004, with an increase of 36 percent.[19]

The consequences of this phenomenon have been twofold. On the one hand, the difference between housing prices and rents has diminished (given the improvement in financial conditions for loans), favoring home ownership. Indeed, the percentage of households with rented accommodation is lower for successive cohorts at the same age (see Table 9). On the other hand, households not able to afford a mortgage (for example, owing to a lack of a standard employment contract) face very high rents and a reduction in the supply of houses to rent.[20] The magnitude of rents is systematically higher for successive cohorts at the same age.

The effect of these phenomena on the evolution of household income and on inequality can be grasped from Figure 7, where we have plotted the trend in median equivalent income and the Gini index for two different measures: a gross measure that refers to the sum of disposable household income and imputed rents (i.e. the one we have used in Section 2), and a net one obtained by subtracting

[17]According to recent estimates by Cannari *et al.* (2006), over the period 1962–92 housing prices increased by around two and half times more than consumer prices; after a brief reduction during the recession of 1992–93, housing prices have reverted to a new phase of steep growth since 2000.

[18]SHIW surveys contain a specific question about homeowners' subjective evaluations of the rent that they could obtain if they let the dwelling. We use the answers to this question as our measure of "imputed rent."

[19]Even if we drop the latest year, for which the largest change has been reported, the increase in imputed rental income is still about 25 percent, far exceeding the growth of other income components.

[20]In recent years, there has been an increase in the supply of unrented properties, and the demand for low rents has gone largely unmet (Nomisma, 2005).

TABLE 9

HOUSEHOLDS WITH RENTED HOUSE BY COHORT (%) AND MEAN OF ACTUAL AND IMPUTED RENTS (EUROS PER MONTH PER HOUSEHOLD AT 2003 PRICES)

	Age 35		Age 45		Age 55		Age 65	
	Born 1960s	Born 1950s	Born 1950s	Born 1940s	Born 1940s	Born 1930s	Born 1930s	Born 1920s
% with rented house	28.9	35.5	22.6	26.6	15.8	21.8	12.8	16.4
Mean of paid rents	315.4	238.4	314.7	243.3	278.9	225.9	237.0	206.0
Mean of imputed rents	373.4	302.8	439.5	389.0	556.9	404.1	486.0	373.8

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

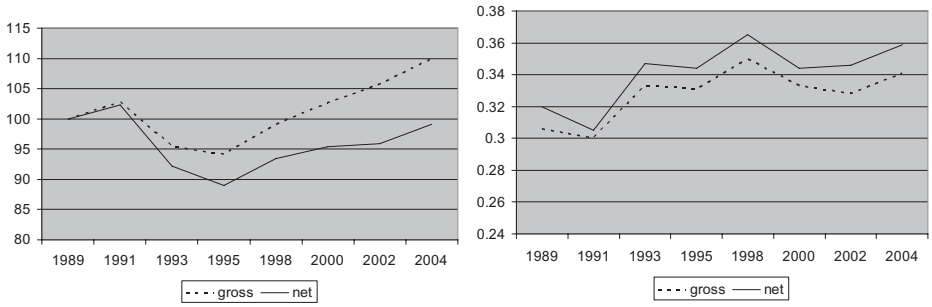

Figure 7. The Evolution of Median Household Equivalent Income (left) and of the Gini Index (right) for Income Gross and Net of Housing Rental Costs

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

actually paid rents from disposable income.[21] Over the 15 years considered, the gap between the two medians has widened and the one referring to disposable income minus paid rents presents no growth at all (the recovery after 1995 is only enough to take the median back to its 1989 value). Furthermore, the level of inequality for net income is systematically higher than for the gross measure, and also in this case there is some evidence of a growing gap.

These general trends are mirrored in the evolution of household equivalent income net of housing rental costs (both imputed and actual rents) for different cohorts (see Figure 8). Not surprisingly, the only *h-cohort* for which equivalent income increased during the 1990s is again the one with heads born in the 1940s. For this cohort, median equivalent net income in 2004 was about 10 percent higher

[21]SHIW data provide information on mortgage payments, but it is difficult to disentangle capital reimbursements from interest payments. Another variable that can be used is the total amount of debt for housing (acquisition and restructuring) at the beginning of each year; however, this can refer both to the house where the family lives or to other properties. In any case, in order to check for the effect of the cost of debt, for households not in rented accommodation we have considered the declared amount and computed an annual interest of 4 percent. The percentage of non-renters that declare that they have a debt goes from 7.3 percent in 1989 to 15 percent in 2004; also the amount of debt doubles over the period considered. However, the effect of deducting interest payments from disposable income on the analysis that follows is negligible: both the medians and the Gini coefficients are virtually the same as those obtained by using disposable income for non-renters and subtracting paid rents from disposable income for renters.

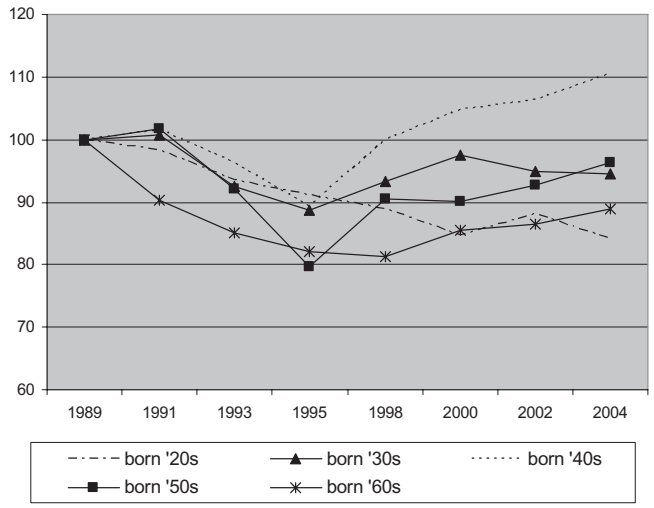

Figure 8. Median Monthly Equivalent Household Income Net of Housing Rental Costs by Year for Various Cohorts of Households (1989 = 100)

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

than in 1989 (compared to a 20 percent increase in gross income), whereas all other cohorts experienced a significant decline: around 4–5 percent for those born in the 1930s and in the 1950s (compared to an increase of about 5 percent for gross income), 11 percent for those born in the 1960s, and 16 percent for those born in the 1920s (compared to −1.2 and −6.5 percent for gross income, respectively).

Table 10 shows the differences across cohorts at the same head's age in terms of net income; and, in order to facilitate comparisons, it reports the gaps for gross income presented in Table 1. Indeed, the average loss for *h-cohorts* born in the 1950s and in the 1960s (compared to the preceding cohorts at the same age) is about 10 percent in terms of net equivalent income, whereas it was only 5 percent in terms of gross income. For these two *h-cohorts*, the leftward shift of the whole distribution is larger for net income than for the gross measure. For *h-cohorts* born in the 1940s and in the 1930s at the age of 55 and 65 respectively, the average gain over the preceding cohorts decreases from 8–9 to 4 percent when we move from the gross to the net measure of income. In this case it is the rightward shift of the distribution that is smaller when we consider household income net of paid rents instead of the gross definition used in Section 2.

To sum up, the housing market has undergone significant changes that have differently affected young and old cohorts. Increases in house prices have led to an increase in homeowners' wealth, but they have also given rise to higher costs of housing services, interest to be paid on loans, and rents. The higher cost of housing services (both actual and imputed rents) has resulted in larger losses in terms of net income for younger cohorts of households, and in smaller gains for the older cohorts. Inequality across households is larger for income net of housing costs than for the gross measure. Clearly, the situation is particularly difficult for young people in search of an affordable house tenancy.

TABLE 10

Equivalent Household Disposable Income Net of Actual and Imputed Rents: Various Percentiles for Different Cohorts of Households at the Same Head's Age (euros at 2003 prices)

	p10	p25	p50	p75	p90	Mean
Age 35						
Born 1950s	501.9	696.7	1046.3	1518.3	1956.8	1195.6
Born 1960s	395.0	614.9	940.9	1389.9	1878.5	1074.7
Gap (%)	−21.3	−11.7	−10.1	−8.5	−4.0	−10.1
Gap (table1)*	−12.2	−7.9	−2.4	−2.5	1.9	−5
Age 45						
Born 1940s	513.1	703.3	1029.7	1488.5	2041.3	1224.2
Born 1950s	365.8	598.6	935.3	1394.1	2013.6	1104.9
Gap (%)	−28.7	−14.9	−9.2	−6.3	−1.4	−9.7
Gap (table1)*	−24.5	−9.5	−4.7	−3.3	−1.9	−5.3
Age 55						
Born 1930s	499.8	718.2	1048.3	1460.0	2013.3	1181.8
Born 1940s	426.5	688.9	1070.6	1544.2	2043.3	1228.6
Gap (%)	−14.7	−4.1	2.1	5.8	1.5	4.0
Gap (table1)*	−9.5	−0.9	7.7	10.8	7.7	9
Age 65						
Born 1920s	487.4	673.6	991.7	1354.9	1929.3	1173.8
Born 1930s	407.9	671.5	1021.4	1422.7	2010.7	1222.7
Gap (%)	−16.3	−0.3	3.0	5.0	4.2	4.2
Gap (table1)*	−11.7	0.9	8.8	10	11.8	8.4

Note: *This row reports the gaps for gross income presented in Table 1.
Source: Authors' calculations on data from the SHIW-HA (release 3.0).

4. Conclusions

In this paper we have documented a deterioration in the economic conditions and prospects of "young households" in comparison with older cohorts: while equivalent income for households whose heads were born in the 1930s and 1940s is about 8 percent higher than for the preceding cohorts, the younger ones record an average loss of about 5 percent. In order to understand the phenomena lying behind these gains and losses, we have considered the effects of labor market conditions (in terms of both earnings profiles and participation), changes in social security rights, and housing costs.

Our analysis shows that monthly *individual labor income* is lower for younger cohorts of individuals, with a reduction that ranges from 7 to 30 percent according to the age and the percentile considered. This has meant increasing difficulties for these cohorts in forming families, and in having and raising children. Indeed, household size is lower for successive cohorts, but this effect—together with a small increase in the number of earners within the family—is not large enough to compensate for the loss in individual earnings. As a consequence, *household equivalent labor income* is about 8 percent lower for younger cohorts of households at the same age.

At the same time, *individual pensions* display a completely different pattern. Retired individuals from younger cohorts can rely on pensions much higher than those of the previous cohorts, as they have been able to enjoy the full generosity of

the earning-related pension system. But the reforms of the pension system introduced in the 1990s will completely reverse this trend in the future. Workers born after the mid-1960s will have pension benefits computed exclusively on the new notional defined contribution scheme, with the result that their pension incomes will be not only low but also uncertain.

Young cohorts are also negatively affected by the changes that have characterized the housing market in the last 15 years. *Housing prices* and *rents* have markedly increased; the liberalization of the mortgage market, and the lack of housing policy have resulted in a further increase in the already large share of home ownership, further limiting the supply of accommodation to rent. These changes have led to an increase in homeowners' wealth, but also to higher costs of housing services, interest to be paid on loans, and rents. And the higher cost of housing services results in a greater (negative) impact on the younger households, those in search of an affordable house tenancy.

The analysis presented in this paper describes the economic difficulties faced by young generations due to the joint occurrence of various events, like the poor economic performance of the economy and its adverse effects on younger workers, institutional changes to the labor market, the new rules introduced for the pensions system, and an exceptional increase in house prices and rents. Since our analysis is purely descriptive, the first step for future research is clearly to explore the precise way in which these events affect, or are the result of, individual decisions. The low levels of individual wages, the higher costs of housing, and the need to save a larger share of income to ensure decent pension benefits for the future imply increasing difficulties in the family formation process, as well as an increase in the number of earners needed to provide a sufficient level of income within the household. The consequences of these circumstances on marriages and fertility decisions, on the resources available for children's education and for public spending, as well as on the welfare costs associated with less time for both leisure and caring, remain to be explored.

Appendix

TABLE A1

Sample Size of Different Cohorts of Households by Year

	Born 1920s	Born 1930s	Born 1940s	Born 1950s	Born 1960s	Total
1989	1219	1615	1646	1339	363	6182
1991	1201	1524	1615	1322	399	6061
1993	1117	1407	1504	1340	556	5924
1995	1048	1403	1579	1299	755	6084
1998	741	1119	1491	1342	825	5518
2000	754	1216	1556	1426	986	5938
2002	737	1212	1441	1355	990	5735
2004	685	1121	1421	1313	1082	5622
Total	7502	10617	12253	10736	5956	47064

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

TABLE A2

PERCENTILES OF MONTHLY PENSION INCOME (MALES BORN IN THE 1920s; EUROS AT 2003 PRICES IN THE FIRST ROW)

	p10	p25	P50	p75	p90	Mean
1989	441.4	568.9	842.1	1177.1	1471.4	911.7
1989	100.0	100.0	100.0	100.0	100.0	100.0
1991	97.7	101.6	102.4	98.1	99.7	101.3
1993	97.2	90.8	101.2	97.4	100.1	100.7
1995	97.8	91.8	95.1	94.9	104.1	99.6
1998	101.3	101.0	98.0	97.7	100.2	100.6
2000	99.1	96.1	93.8	96.8	99.1	99.1
2002	105.7	99.5	98.9	97.4	104.2	103.9
2004	105.4	102.4	99.1	99.0	108.0	104.0

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

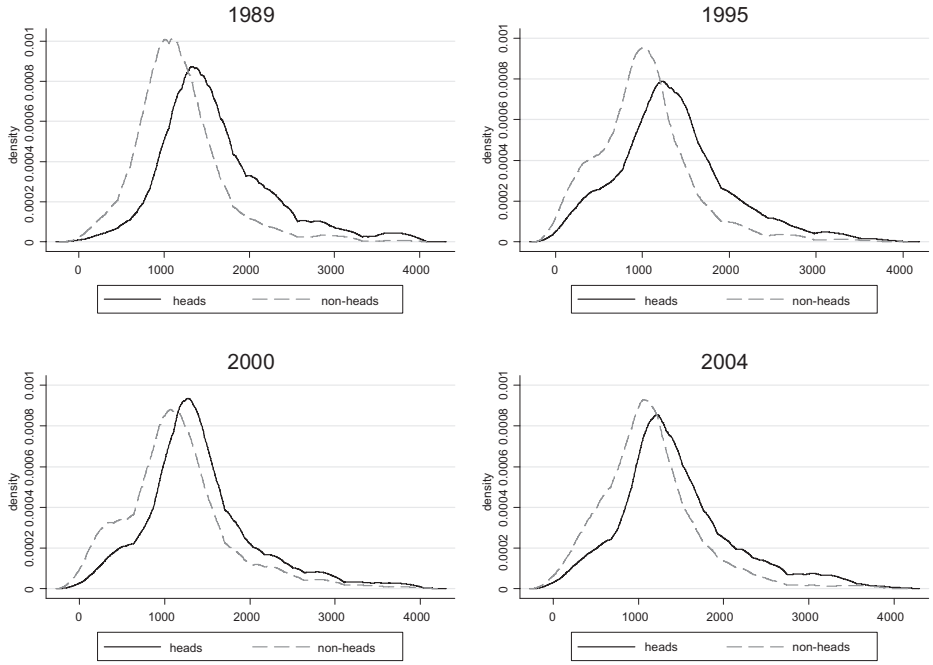

Figure A1. Non-Parametric Density Functions of Individual Monthly Labor Income for Males Born in the 1960s (heads of households and non-heads, selected years, euros at 2003 prices)

Source: Authors' calculations on data from the SHIW-HA (release 3.0).

REFERENCES

Baldini, M., C. Mazaferro, and P. Onori, "The Reform of the Italian Pension System, and its Effects on Saving Behaviour," Mimeo, Prometeia and University of Bologna, 2002.

Banca d'Italia, "I bilanci delle famiglie italiane nel 2006," *Supplementi al Bollettino Statistico*, XVIII, 7(28), 2008.

Barbieri, P. and F. Scherer, "Le conseguenze sociali della flessibilizzazione del mercato del lavoro in Italia," *Stato e Mercato*, 74, 291–321, 2005.

Beaudry, P. and D. Green, "Cohort Patterns in Canadian Earnings: Assessing the Role of Skill Premia in Inequality Trends," *Canadian Journal of Economics*, 33, 907–36, 2000.

Berloffa, G. and P. Villa, "Evoluzione dei redditi familiari e rischi di povertà per le famiglie giovani," in G. Rovati (ed.), *Povertà e lavoro*, Carocci, Rome, 121–57, 2007a.

———, "Inequality Across Cohorts of Households: Evidence from Italy," Discussion Paper No. 11/2007, Department of Economics, University of Trento, 2007b.
Biagi, F., "Characterizing Cohort Patterns for Italian Wages," Dipartimento di Scienze Economiche, Università degli Studi di Padova, Mimeo, 2003.
Boeri, T. and A. Brandolini," The Age of Discontent: Italian Households at the Beginning of the Decade," *Giornale degli Economisti e Annali di Economia*, 63(3–4), 449–87, 2004.
Borgarello, A. and F. Devicienti, "Tendenze nella distribuzione dei salari," in B. Contini (ed.), *Osservatorio sulla mobilità del lavoro in Italia*, Il Mulino, Bologna, 267–318, 2002.
Brandolini, A. and G. D'Alessio, "Household Structure and Income Inequality in Italy: A Comparative European Perspective," in D. Del Boca and M. Repetto-Alaia (eds), *Women's Work, The Family & Social Policy*, Peter Lang, New York, 148–91, 2003.
Brandolini, A., L. Cannari, G. D'Alessio, and I. Faiella, "Household Wealth Distribution in Italy in the 1990s," Banca d'Italia, Temi di discussione, No. 530, 2004.
Brandolini, A., P. Casadio, P. Cipollone, M. Magnani, A. Rosolia, and R. Torrini, "Employment Growth in Italy in the 1990s: Institutional Arrangements and Market Forces," in N. Acocella and R. Leoni (eds), *Social Pacts, Employment and Growth*, Physica-Verlag, Heidelberg, 31–68, 2007.
Brugiavini, A., "Social Security and Retirement in Italy," in J. Gruber and D. Wise (eds), *Social Security and Retirement around the World*, University of Chicago Press, Chicago, 181–237, 1999.
Brugiavini, A. and V. Galasso, "The Social Security Reform Process in Italy: Where Do We Strand?" Working Paper 2003-052, University of Michigan, Michigan Retirement Research Center, 2003.
Canberra Group (The), Expert Group on Household Income Statistics, *Final Report and Recommendations*, Ottawa, 2001.
Cannari, L., I. Faiella, R. Sabbatini, and F. Zollino, "House Prices in Italy: The Statistics Used at the Bank of Italy," OECD-IMF Workshop on Real Estate Price Indexes, Paris, November 6–7, 2006.
CAPP, "Aspetti distributivi del sistema pensionistico nella prospettiva del passaggio al sistema contributivo," research commissioned to the Centro di Analisi delle Politiche Pubbliche (University of Modena and Reggio Emilia) by the Italian Ministry of Labor, 2005.
Contini, B. and U. Trivellato, "Dinamiche e persistenze nel mercato del lavoro italiano: una sintesi," in B. Contini and U. Trivellato (eds), *Eppur si muove. Dinamiche e persistenze nel mercato del lavoro italiano*, Il Mulino, Bologna, 13–84, 2005.
Dalla Zuanna, G. and G. A. Micheli (eds), *Strong Family and Low Fertility: A Paradox?* European Studies of Population, Kluwer Academic, Dordrecht, 2004.
Devicienti, F. and A. Maida, "Rigidità salariali e ruolo delle istituzioni: un'analisi microeconometrica," in B. Contini and U. Trivellato (eds), *Eppur si muove. Dinamiche e persistenze nel mercato del lavoro italiano*, Il Mulino, Bologna, 541–66, 2005.
Fitzenberger, B., R. Hujer, T. MaCurdy, and R. Schnabel, "Testing for Uniform Wage Trends in West-Germany: A Cohort Analysis Using Quintile Regressions for Censored Data," *Empirical Economics*, 26, 41–86, 2001.
Franco, D., "Italy: A Never Ending Pension Reform," in M. Feldstein and H. Siebert (eds), *Social Security Pension Reform in Europe*, University of Chicago Press, Chicago, 211–51, 2002.
GCD (Gruppo di Coordinamento per la Demografia) (eds), *Rapporto sulla popolazione*, Il Mulino, Bologna, 2007.
Gosling, A., S. Machin, and C. Meghir, "The Changing Distribution of Male Wages in the U.K.," *Review of Economic Studies*, 67, 635–66, 2000.
Grenier, G., "In Which Year Is It Better to Be Born? The Earnings of Men and Women in Canada During a Quarter of a Century," Department of Economics, University of Ottawa, Working Paper No. 0102E, 2003.
Haddad, L. and R. Kanbur, "How Serious is the Neglect of Intra-Household Inequality?" *Economic Journal*, 100, 866–81, 1990.
Manacorda, M. and E. Moretti, "Why Do Most Italian Youths Live With Their Parents? Intergenerational Transfers and Household Structure," *Journal of the European Economic Association*, 4, 800–29, 2006.
Nomisma, "The Italian Property Market in 2004: Trends, Forecasts and Players," *Nomisma Real Estate*, March 2005.
Osberg, L., "Long Run Trends in Income Inequality in the United States, UK, Sweden, Germany, and Canada: A Birth Cohort View," *Eastern Economic Journal*, 29, 121–41, 2003.
Rosolia, A. and R. Torrini, "The Generation Gap: Relative Earnings of Young and Old Workers in Italy," Bank of Italy, Temi di discussione, No. 639, September 2007.
Smeeding, T. and D. Sullivan, "Generations and the Distribution of Economic Well Being: A Cross-National View," *American Economic Review*, 88, 254–58, 1998.
Tronti, L., "The July Protocol and Economic Growth: The Chance Missed," in N. Acocella and R. Leoni (eds), *Social Pacts, Employment and Growth*, Physica-Verlag, Heidelberg, 69–95, 2007.