OXFORD

TOP INCOMES A GLOBAL PERSPECTIVE

Edited by A. B. ATKINSON & T. PIKETTY

12

Top Incomes in Italy, 1974–2004

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12.1 INTRODUCTION

Italy was the home of Vilfredo Pareto, and under his influence the debate about the shape of the income and wealth distributions was very active nationwide during the first half of the twentieth century.[1] However, little could be done in practical terms at that moment to know the actual distributions, mainly due to the unavailability of data. The first household survey was conducted in 1947/8.[2] Since then, the study of income distribution has gained new interest and growing relevance in the public and academic debates. Brandolini and Sestito (1994) and Brandolini (1999, 2000, 2004) provide a comprehensive description of the dynamics of inequality in Italy during the second half of the twentieth century based on survey information.[3] Their estimates offer the best evidence to date in Italy from a historical perspective. The main features can be summarized as follows. First, the level of inequality did not significantly change between 1948 and 1968, the years of the 'Italian economic miracle'. As no comparable data are available for the intermediate years, it is not possible to rigorously establish whether this was

We thank Tony Atkinson, Aldo Barba, Luigi Bernardi, Marco Bartolich, Andrea Brandolini, Riccardo Capocaccia, Piero Cipollone, Cinzia Fortuzzi, Maurizio Franzini, Francesca Gastaldi, Daniela Mon acelli, Michele Raitano, Giacomo Rondina, Antonio Pedone, Thomas Piketty, Romeo Pisano, Em manuel Saez, Simone Tedeschi, Stefano Toso, and Giulio Zanella. Special acknowledgements go to Maria Teresa Pandolfi, the staff of the Bank of Italy library in Rome, SOGEI, and the Dipartimento delle Politiche Fiscali del Ministero dell'Economia e delle Finanze.

[1] Pareto was born in Paris in 1848, during his family's self imposed exile. They moved back to Italy *c.*1858. He died in Geneva in 1923.

[2] Brandolini (1999) gives a detailed account of the development of household surveys in Italy. A private agency (Istituto Doxa) conducted the 1947/8 survey sponsored by public funds. The Italian statistics bureau (ISTAT) organized the first official surveys in 1953/4 and 1963/4. The Bank of Italy has conducted an annual survey of income and wealth between 1965 and 1987 (except for 1985) and every two years between 1989 and 1995 and since 1998 (IBFI, *Indagine sui bilanci delle famiglie italiane*, or SHIW, Survey of Households' Income and Wealth).

[3] An extensive list of works based on the Survey of Households' Income and Wealth can be found in Banca d'Italia (2008). Studies about income and wealth distributions in Italy include, among others, Albertini (2003, 2004), Baldini (1996), Biancotti, D'Alessio, and Neri (2008), Bottiroli Civardi and Targetti Lenti (2001), Brandolini and Cannari (1994), Brandolini et al. (2004), Brandolini, Cipollone, and Sestito (2001), Cannari and D'Alessio (1994, 2006), Clementi and Gallegati (2005), D'Alessio and Signorini (2000), Fiorio (2006), and Roberti (1971).

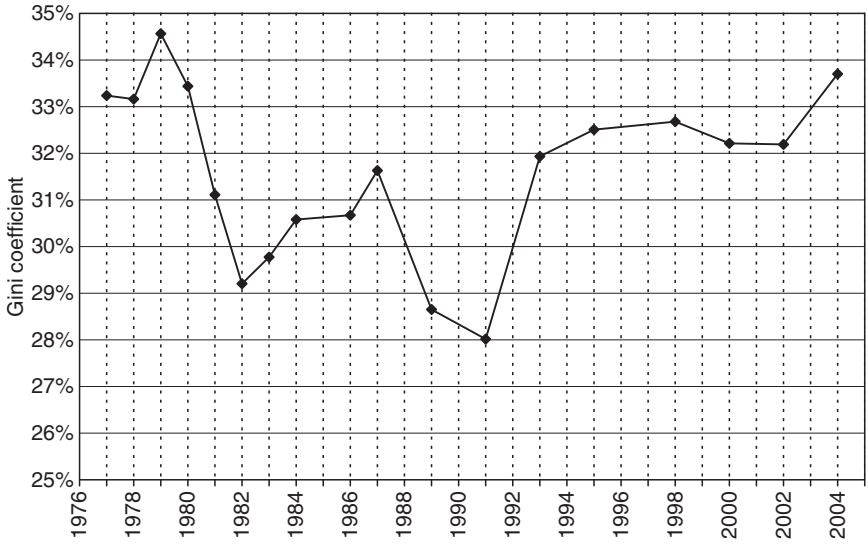

Figure 12.1 Gini coefficient in Italy, 1977 2004

Note: Gini coefficient of household disposable income.

Source: Own calculations based on Survey of Households' Income and Wealth-Historical Archive (SHIW-HA).

the result of a relative stability or, rather, of movements that eventually balanced each other. Second, income distribution markedly improved during the following decade 1968–77. Third, the Gini coefficient has displayed a W-shaped dynamics since the end of the 1970s, with valleys in 1982 and 1991 and peaks in 1979, 1987, and 1995.[4] Fourth, inequality remained fairly stable between 1995 and 2002; an increase was observed in 2004. Estimates of the Gini coefficient from the Bank of Italy's Survey of Households' Income and Wealth between 1977 and 2004 are shown in Figure 12.1. In terms of levels, the inequality of equivalent disposable income in Italy is one of the highest in the European Union, as shown in Smeeding (2000) and the Luxembourg Income Study comparative indicators, but it is still similar to those of Spain and Portugal.[5]

Despite the stability of relative measures of inequality (and the improvement of absolute ones) between 1995 and 2002, Italian households seem to have developed a feeling of impoverishment. Their perceptions about financial hardship and housing conditions had deteriorated since the mid 1990s and, more recently,

[4] Atkinson (2003) gives the same description.

[5] According to the Luxembourg Income Study for years 1999 and 2000 (depending on the country), Italy displayed a Gini index of 0.33, equal to that of Germany, above those of Denmark (0.22), Finland, Norway, the Netherlands, Slovenia, and Sweden (0.25), Austria and Luxembourg (0.26), Switzerland (0.28), Poland, Hungary (0.29), Belgium, France (0.28), Canada (0.30), Ireland (0.31), but below those of the United States (0.37), the United Kingdom, and Spain (0.34). Boeri and Brandolini (2004) give the following values for the Gini of disposable income in 1998: Italy, 0.34, Spain, 0.33, Portugal, 0.35.

their expectations about economic prospects (both personal and of their country) got significantly worse than in other European Union economies. Boeri and Brandolini (2004) discuss several potential explanations for this apparent contradiction between perceptions and facts. A first explanation points to expectations. The strong deceleration of growth since 1993 with respect to the previous two decades, the concerns about the long-term sustainability of the public budget (a Ricardian equivalence argument), and the belief of a weakening of the country competitiveness due to the European monetary policy could have led Italians to drastically revise downwards their expectations of future consumption growth.[6] A second explanation points to possible measurement problems with the data, which the authors rule out by comparing different sources. A third possible cause has to do with the observed widening gap between the incomes of employees and self-employees, suggesting that offsetting movements lie behind the stability of aggregate inequality indices. A final tentative reason is associated to the increased job precariousness: under stagnating incomes and risk aversion, greater uncertainty would reduce the well-being of individuals.

The feeling among the middle class that the rich are progressively becoming even richer can be hypothesized as an additional element to explain the sense of impoverishment among Italian households. In 2003 the Italian tax agency published the names of the top 500 income recipients in tax year 2000, together with their income.[7] First in the list, a businessman with annual revenue of 265 million euros, followed by ten other entrepreneurs and one CEO. In the twelfth place, a soccer player, getting 11.8 million euros, mostly in the form of wages. Close inspection of the list shows that 20 per cent of the individuals (85 people) in the top 0.001 per cent (457 people) were either soccer players or soccer coaches. Such facts seem to follow the 'superstar' theory of Rosen (1981), according to which the expansion of scale associated with globalization and with increased communication opportunities has disproportionately raised the rents of those with the very highest abilities. This pattern could have direct effects on the process of wealth accumulation, as the period of life over which these 'stars' are active and getting fantastic contracts can be (and usually is) very short. As noted in Atkinson (2003) the explanation for income inequality at the top goes well beyond the static picture of earned income.

In this chapter we analyse the performance of the very high-income recipients and describe the evolution of top income shares in Italy between 1974 and 2004. We provide systematic and homogeneous time series of income concentration based on tax records. Tax statistics have hardly been used before to study income concentration in Italy.[8] This is mainly due to the usual limitations of tax-based

[6] Real GDP grew at a rate of 2.3% per year between 1983 and 1992, at 1.7% per year between 1994 and 2003, and at 0.3% per year between 2004 and 2005.

[7] Agenzia delle Entrate (2003). Only 33 out of the 500 individuals in the list are women, that is, less than 7%.

[8] Exceptions are Brandolini (2000, 2004) and ISAE (2002). Income tax statistics have been extensively used for the analysis of fiscal reforms and to predict tax receipts, as in Giarda (2003), and Pellegrino (2006, 2007). The limitations of tax based data are not exclusive to the Italian case.

data: the definitions of income and the income unit follow those of the changing tax legislation; capital gains are mostly untaxed; capital incomes are recorded to different degrees along time; tax data are affected by tax evasion and avoidance.

Unfortunately, we cannot build a secular evolution of top income shares; records based on tax returns are only available since 1974, following the introduction of the modern income tax. In 1923 the government established the *imposta complementare*, which was a surtax (additional to the traditional schedule taxes) levied on high incomes with a progressive tax scale; in 1951 the authorities imposed the requirement of a unique annual tax file detailing all taxable income and schedule taxes paid.[9] The *imposta complementare* remained in existence until 1972 and could have provided information on top incomes, but, to our knowledge, there are no published tabulations showing incomes assessed to it.

Together with the cases of Spain (Alvaredo and Saez 2009 and Chapter 10) and Portugal (Alvaredo 2009 and Chapter 11), the experience of Italy provides new information to compare the evolution of income concentration in Mediterranean Europe. We find a persistent increasing pattern in top income shares since the mid 1980s, mainly driven by top wages and self-employment income. From a new perspective, we confirm that the late 1980s and early 1990s were years of unequal growth (Brandolini and Sestito 1994), and also find that the years that followed combined rising income concentration with a lower growth rate. Notwithstanding the increasing trend, the rise in Italian top shares has been small relative to the surge experienced by top incomes in the United States and other Anglo-Saxon developed economies, as documented in Atkinson and Piketty (2007). Thus, the Italian case is also closer to that of continental Europe countries.

The chapter is structured as follows. Section 12.2 describes our data, sources, and methods, and discusses the issue of tax evasion. Section 12.3 presents and analyses the trends in top income shares between 1974 and 2004. Section 12.4 briefly discusses the role of marginal tax rates on top shares. Section 12.5 offers a conclusion. Details on data sources and methods are presented in the appendices.

12.2 DATA AND METHODOLOGICAL ISSUES

Data and Series Construction

Our estimates are based on personal income tax return statistics compiled by SOGEI and the Italian tax administration annually from 1974 to 2004.[10] The published tabulations, structured by range of total before tax income, provide

[9] In essence, the structure of the Italian tax system before 1973 (schedule taxes and a surtax) was similar to that in place in the UK by the first decade of the twentieth century.

[10] SOGEI (Società Generale d'Informatica) is the company established in 1976 to create the tax registry and to help the tax administration implement the complex reform of 1973. Since then it has been in charge of collecting and processing tax data.

information of total income assessed, number of taxpayers, taxable income, deductions, allowances, composition, and tax paid. As far as we can document, no tabulation exists before 1974. Consequently, our analysis is focused by necessity on the thirty years following 1974.

Our top groups are defined relative to the total number of adults (aged 20 and above) from the Italian census (not the number of tax returns actually filed). For example, in 2004, there were 46,811,000 adults in Italy, so the top 1 per cent represents the top 468,110 tax filers. The Italian income tax is individually based since 1976 (in contrast to many countries where joint filing remains optional, in Italy individual filing is mandatory). Until 1975, it was family based. As tax returns statistics for 1974 and 1975 were elaborated after the code change, fortunately published statistics provide both the individual and the family distributions separately. The former are used in our estimations so that no ad hoc corrections are necessary to account for the shift from the family to the individual.

We define income as gross income before all deductions and including all income items reported on personal tax returns: salaries and pensions, self-employment and unincorporated business net income, dividends, farm income, real estate income, and other smaller income items. Interest income is not included, as it is subject to a flat tax withheld at the source without further requirement of reporting. Realized capital gains went mostly untaxed and not reported until 1998; since then, gains from qualified equities have been reported at varying degrees. Consequently, income covers capital income incompletely and excludes most capital gains.[11] We apply several adjustments to make the series consistent along time. Our income definition is before personal income taxes but after corporate income taxes. Details can be found in Appendix 12A.

As the top tail of the income distribution is very well approximated by Pareto distributions, we apply simple parametric interpolation methods to estimate the thresholds and average income levels for each fractile. This method follows the classical study by Kuznets (1953) and has been used in many of the top income studies presented in Atkinson and Piketty (2007) and in this volume.[12] In the case of Italy, there is no public micro-data of tax returns that would allow us to check the validity of our estimations based on the published tax statistics. However, Piketty (2001), Piketty and Saez (2003), and Alvaredo and Saez (2009) (and Chapter 10 in this volume) have validated this method by comparing the results obtained using micro-data available for recent years in France, the United States, and Spain.[13]

In order to estimate shares of income, we need to divide the income amounts accruing to each fractile by an estimate of total personal income ideally defined as total personal income fully reported on income tax returns had everybody been

[11] The treatment of capital incomes and capital gains is a matter of utter importance, given the relevance of those components among top income earners. We warn about the limitations of the Italian data in this respect and refer the reader to the general discussion in Chapter 13.

[12] The mean split histogram method has also been used to estimate top income shares in some of the chapters of Atkinson and Piketty (2007) and in this volume.

[13] These authors find that tabulation based estimates are always very close to the micro data based estimates (within 2 5%), giving confidence that the errors due to interpolation are fairly modest.

Table 12.1 Thresholds and average incomes in top income groups in Italy, 2000 and 2004

Percentile threshold	Income threshold	Income groups	Number of adults (aged 20+)	Average income in each group
(1)	(2)	(3)	(4)	(5)
A. 2004				
		Full adult population	46,811,000	15,860 €
Top 10%	28,815 €	Top 10 5%	2,340,550	32,778 €
Top 5%	38,626 €	Top 5 1%	1,872,440	52,883 €
Top 1%	81,280 €	Top 1 0.5%	234,055	93,268 €
Top 0.5%	108,129 €	Top 0.5 0.1%	187,244	142,993 €
Top 0.1%	216,238 €	Top 0.1 0.01%	42,130	325,946 €
Top 0.01%	670,397 €	Top 0.01%	4,681	1,318,121 €
B. 2000				
		Full adult population	45,710,000	15,104 €
Top 10%	27,582 €	Top 10 5%	2,285,500	31,360 €
Top 5%	37,223 €	Top 5 1%	1,828,400	50,863 €
Top 1%	79,016 €	Top 1 0.5%	228,550	89,878 €
Top 0.5%	104,910 €	Top 0.5 0.1%	182,840	136,914 €
Top 0.1%	207,304 €	Top 0.1 0.01%	41,139	300,100 €
Top 0.01%	582,907 €	Top 0.01 0.001%	4,114	845,737 €
Top 0.001%	1,973,571 €	Top 0.001%	457	4,160,256 €

Notes: Computations based on income tax return statistics and National Accounts. Income defined as annual gross income reported on tax returns, before individual income taxes but net of social contributions, and excluding interest income and most capital gains. Amounts are expressed in current 2004 euros. Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example, an annual income of at least 28,815 euros is required to belong to the top 10% tax units in 2004, etc.

required to file a tax return. We approximate the ideal income denominator as the sum of (1) total wages and salaries from National Accounts net of social security contributions, (2) old-age and disability pensions from the Social Security Administration, (3) 50 per cent of unincorporated business income from National Accounts (we assume that the rest is from the informal sector an escapes taxation), (4) all non-business, non-labour income reported on tax returns (as capital income is very concentrated, non-filers receive a negligible fraction of capital income).[14]

Table 12.1 gives thresholds and average incomes for a selection of top fractiles in Italy in 2000 and 2004. For 2000, in particular, we use the cited list of the top 500 income earners to provide estimates up to the top 0.001 per cent. Tables with remaining information are presented in the appendix to this chapter: Table 12A.1

[14] The control total for income (Table 12A.1, column 4) is thus lower than the ideal economy income as it excludes 50% of unincorporated business revenue. Atkinson (2007a) makes explicit reference to the challenges and difficulties in the definition of the income denominator.

shows reference totals for population, income, and inflation used in our computations; Tables 12A.2 and 12A.3 present the results of shares and incomes for top groups.

Published tabulations also provide information about the composition of income by brackets (composition being available at the individual level since 1976), allowing for an analysis of income sources within each fractile. As no obvious hypothesis on the distribution function of income components within each fractile can be made, we use a simple linear interpolation method to decompose the amount of income for each fractile into real estate rents, employment income, entrepreneurial income, self-employment, business income, and capital income. Table 12A.4 displays the composition results.

The Issues of Tax Avoidance and Evasion

There is a generalized view of tax evasion being extremely high in Italy, and much higher than in other OECD countries. Audits and subsequent scandals involving show business people, well-known fashion designers, and sport stars help support this idea among the general public, even when they also provide evidence about the fact that top income earners are very visible for the tax administration. The publication of the top 500 income earners, probably motivated by a strategy to shame prominent evaders (as done in Spain in the 1930s, see Chapter 10), is an example of such visibility.[15] It is thus necessary to qualify the effect of income tax evasion for our estimates as well as for their comparability. We make reference to three key elements: the level of incomes reported in the tax returns, the existent estimations of income tax evasion, and the amounts evaded through tax havens.

First, it is usually claimed that the average income reported in Italian tax files is excessively low compared to the amounts declared in similar countries (ISAE 2006). However, inspection of published tabulations, of our computations, and of the results in Alvaredo and Saez (2009) show that income thresholds and average incomes corresponding to the *top percentiles* are significantly higher in Italy than in Spain, for example. In 2004, an income of at least 69,191 euros was required to belong to the top 1 per cent in Spain (excluding capital gains), this figure being 81,280 euros in Italy. This represents a 17.5 per cent difference, which more than doubles the gap between average incomes in both countries.[16] The situation seems different at the bottom half of the distribution: also in 2004, the bottom 50 per cent of Italian tax filers had incomes below 13,000 euros, while their Spanish counterparts had incomes below 15,500 euros. However, this last type of comparison, which usually appears in the media and in scholarly papers as supportive evidence of scandalous levels of evasion, is misleading. In Spain, in 2004, only 53 per cent of adults filed a tax return; in Italy 86 per cent of adults did

[15] In 2008 the tax agency published the complete list of taxpayers for tax year 2005 online. Considered a threat to privacy rights, the information was available only for a few hours.

[16] According to the income definition for the purposes of this paper, average income was 15,860 euros in Italy and 14,652 euros in Spain in 2004 (an 8% difference).

so.[17] This means that the bottom 50 per cent of Italian tax filers is not necessarily comparable to the bottom 50 per cent of their Spanish counterparts.

Secondly, existent estimates of tax evasion in Italy over this period agree on the following facts. First, evasion decreases with true income (D'Amuri and Fiorio 2005). Second, as in other OECD countries, it is low for wages, salaries, and pensions at the *top of the distribution*: there is little room for evading those income components that must be reported independently by employers or payers. Third, evasion is important among small businesses and self-employees (traditionally numerous in Italy), for whom there is no double reporting. D'Amuri and Fiorio (2005) compare the incomes from the Bank of Italy survey with a representative sample of 250,000 anonymous tax returns in 2000, taking the discrepancy as a proxy of under-reporting. They find that evasion from wages is virtually zero in the top 10 per cent, while it is 63 per cent in the first decile. For self-employment income, these authors estimate evasion rates of 8 per cent and 70 per cent in the tenth and first deciles, respectively.[18] In any case, estimations must be read with caution due to the various ad hoc assumptions required: they can only be taken as rough approximations.[19]

Finally, recent events have put back in the spotlight the issue of tax havens. The very rich are generally thought to be able to evade tax on important fractions of their incomes through fiscal paradises. In their study of top incomes in Switzerland, Dell, Piketty, and Saez (2007) have addressed this issue. Even when there are many tax haven jurisdictions which are actively used to evade taxes on capital income, their estimates for Switzerland dissipate the myth that the sums earned through secret Swiss accounts are gigantic and capable of modifying the top share estimates in a significant way.[20]

[17] This is due to different exemption thresholds, dissimilar reporting rules, and different taxation unit (mandatory individual filing in Italy and optional family filing in Spain).

[18] Bernardi and Bernasconi (1996) and Bernardi (1996) analyse the issue for the years 1991 and 1996 by comparing reported incomes with national accounts information; they estimate the following under reporting rates: 26% for overall income, 8.5% for wages, and 58.7% for self employment income. Other studies providing similar results include Bernasconi, Marenzi, and Pozzi (1992), Bernasconi and Marenzi (1997) (who obtain an overall evasion rate of 15% for 1991, 11% for wages, 30% for professionals' income, and 53% for other self employees' income), Cannari, Ceriani, and D'Alessio (1997), Cannari and Violi (1990), Marè (1996), SOGEI (1999). Brosio, Cassone, and Ricciuti (2002) analyse geographical differences and unsurprisingly argue that non compliance is more important in the south. ISAE (2006) and Monacelli (1996) provide a review of the literature applied to Italy.

[19] When the estimations of evasion are based on the comparison of tax statistics with National Accounts, the researcher always faces the problem of the mismatch between income definitions. When the estimations are based on the comparison with incomes reported to households' surveys, re ranking issues and under reporting in the survey come into play (see Deaton 2005 and Canberra Expert Group on Household Income Statistics 2001 for an examination of the theoretical relation between the definition of income in National Accounts and the control total for income appropriate for income distribution analysis). The noticeable difficulties in comparing individual incomes from tax statistics and incomes from the Bank of Italy household survey have been analysed in Marenzi (1989), Marino and Rapallini (2003), Pellegrino (2006, 2007).

[20] Dell, Piketty, and Saez (2007) compare a measure of capital income evaded by non Swiss nationals through Swiss accounts with the income reported by top income groups in France. They show that evaded capital income is small relative to the top 1% or even the top 0.1%, although it is comparable in magnitude to total incomes reported by the top 0.01%. If all this evaded capital income (which belongs, noteworthily, also to non French nationals) were added back to the top 0.01% French incomes, the top 0.01% share would double in recent years, still resulting, however, in a very modest figure compared to top income concentration in the United States.

Our top income shares would indeed be underestimated if many high-income individuals were evader self-employees and small business owners. In section 12.3 we conduct some experiments to assess the impact of evasion on our results. Nevertheless, if tax evasion has not changed significantly over the period considered, then our series reflect income concentration dynamics in a proper way. Equivalently, whenever the level of evasion is similar among the top groups, then under-reporting does not affect our estimates of shares within shares.

12.3 THE DYNAMICS OF TOP INCOME SHARES IN ITALY

Figure 12.2 displays the average personal income per adult that is used as the denominator for our top income shares estimations, along with the price index for the years 1974 to 2004. After a period of expansion between 1975 and 1992, the 1992 crisis (linked to a record level of public debt and to the exchange rate crisis, which forced Italy to abandon the fixed exchange rate regime) was followed by important oscillations in real economic growth, resulting in an average income in 2004 that was only 5 per cent higher than in 1992.

Figure 12.3 shows the share of total personal income owned by the top decile divided into three subgroups: the bottom half of the top decile (top 10–5 per cent), the following 4 per cent (top 5–1 per cent), and the top percentile.

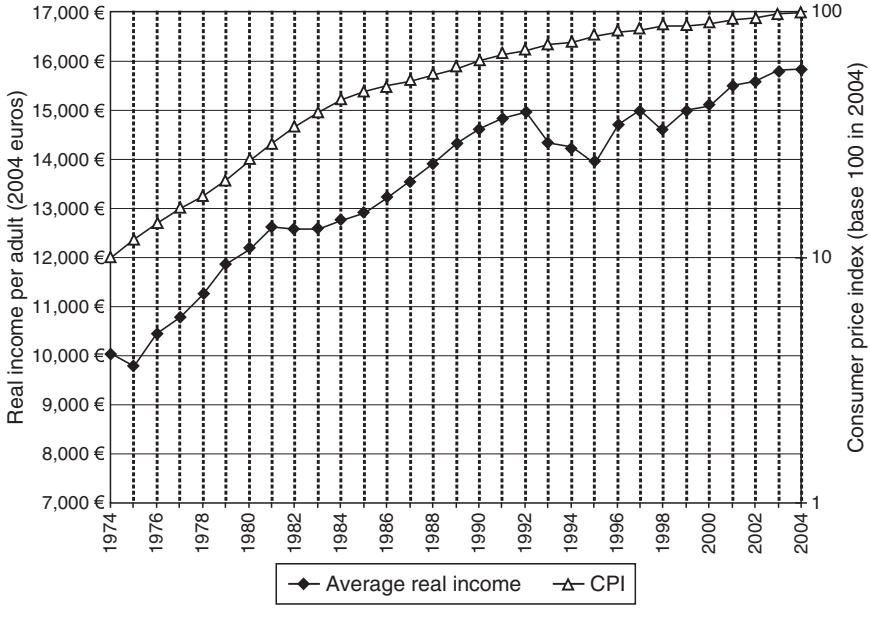

Figure 12.2 Average real income and consumer price index in Italy, 1974 2004

Notes: Figure reports the average real income per adult (aged 20 and above), expressed in real 2004 euros. CPI index is equal to 100 in 2004.

Source: Table 12A.1.

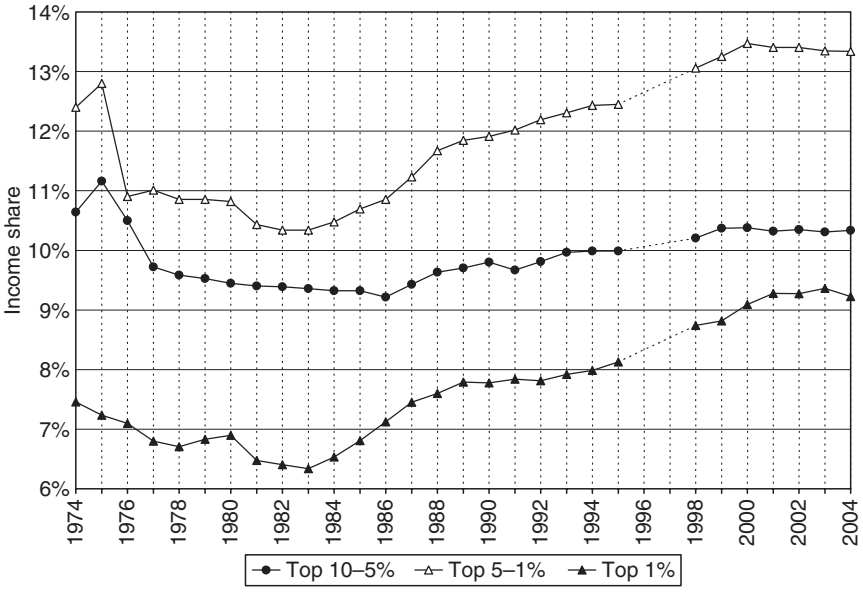

Figure 12.3 The top 10 5%, top 5 1%, and top 1% income shares in Italy, 1974 2004
Note: Income excludes interest and most realized capital gains. See Appendix 12A for details.
Source: Table 12A.2, columns top 10–5%, top 5–1%, and top 1%.

The three series respond to two different patterns. The top 10–5 per cent share has displayed modest fluctuations throughout the period. The top 5–1 per cent and the top 1 per cent have displayed first a U-shaped pattern, with a reduction in income concentration until the mid 1980s, followed later by a rising trend; the top 1 per cent share increased from 6.3 per cent in 1983 to 9.3 per cent in 2003. Consequently, the increase in income concentration which took place in Italy from the mid 1980s has been a phenomenon happening within the top 5 per cent of the distribution, and mainly within the top 1 per cent.[21]

Figure 12.4 analyses concentration further by splitting the top 1 per cent into three groups: the top 1–0.5 per cent, the top 0.5–0.1 per cent, and the top 0.1 per cent. The richer the group considered, the higher the increase in the share from the mid 1980s: the top 1–0.5 per cent increased from 2.2 per cent to 2.9 per cent between 1982 and 2004, while the top 0.1 per cent increased sharply by over 80 per cent from 1.5 per cent in 1983 to 2.7 per cent in 2003.

The presented estimations depend both on the definition of the income denominator and the control total for the number of tax units. The broad conclusions are not likely to be affected by errors in the control totals. However, the more detailed year-by-year changes may *be* sensitive, as may comparison across countries at a point in time. We therefore follow Atkinson (2007b), in

[21] As described in Chapter 10, the increase in income concentration that has taken place in Spain since 1981 has been a phenomenon concentrated within the top 1% of the distribution.

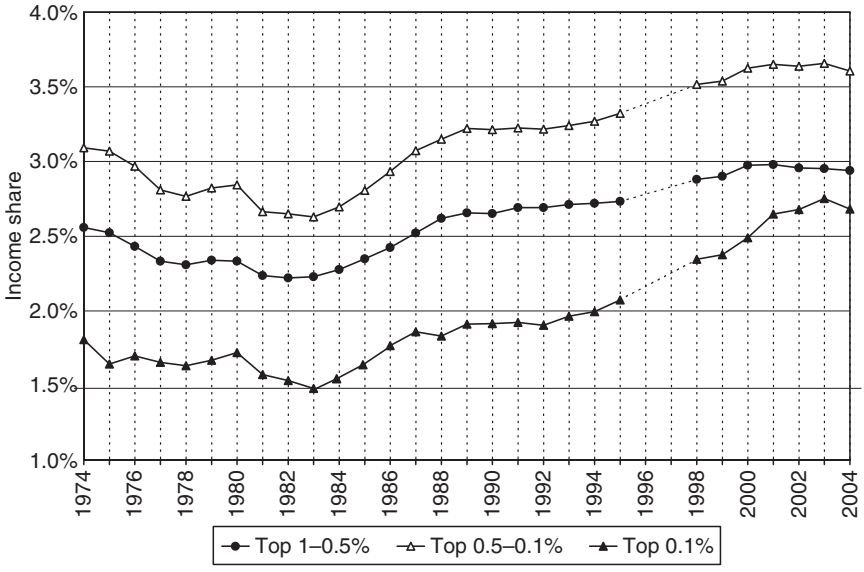

Figure 12.4 The top 1 0.5%, top 0.5 0.1%, and top 0.1% income shares in Italy, 1974 2004

Note: Income excludes interest and most realized capital gains. See Appendix 12A for details.
Source: Table 12A.2, columns top 1–0.5%, top 0.5–0.1%, and top 0.1%.

considering the distribution within the top groups. Figure 12.5 shows the share of the top 1 per cent within the share of the top 10 per cent, the share of the top 0.1 per cent within the share of the top 1 per cent, and the share of the top 0.01 per cent within the share of the top 0.1 per cent. The relative distribution does not depend on the control for total income. This demonstrates in another way the rise of income concentration within the top groups. The fact that figures for shares within shares are so close suggests that the Pareto distribution is a good fit.

To understand the mechanisms of this increase in income concentration at the top we move on now to the analysis of the composition of incomes. Figures 12.6, 12.7, and 12.8 display the share and composition of the top 0.01 per cent, top 0.1 per cent, and top 10 per cent income fractiles from 1976 to 2004. They show that the increase in top shares is mainly due to two components: wage income and self-employment income. The importance of top wages (especially top executive compensation) to explain the rise in top income shares during the last quarter of the twentieth century is not new and has been a standard result in all the studies analysing concentration in Anglo-Saxon countries. However, top wages did not surge in continental Europe or Japan to the same extent and even the results for Italy are very modest compared to the existent estimations for North America (see Piketty and Saez 2003; Saez and Veall 2005).

The published list of taxpayers cited in the introduction seems to support the 'superstars' theory, as mentioned in the introduction. Nevertheless, Italy also has

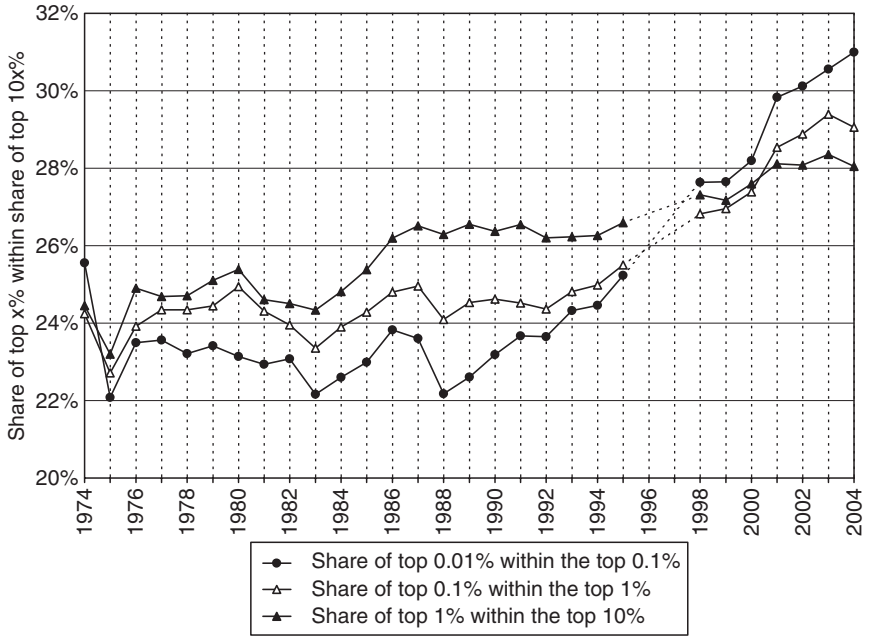

Figure 12.5 Shares within shares in Italy, 1974 2004

Note: Income excludes interest and most realized capital gains. See Appendix 12A for details.

Source: Table 12A.2, columns top 10%, top 1%, top 0.1%, and top 0.01%.

other specificities. It has been argued that the drop in earnings inequality during the 1970s was in fact the result of labour market institutions created in that decade. The *Scala Mobile* was a wage indexation mechanism granting the same absolute wage increase to all employees as prices rose. More specifically, it provided a fixed increment in nominal wages according to a special price index (*Indice Sindacale*). By granting the same absolute (as opposed to the same percentage) wage increase to every worker, this institution tended to compress the wage distribution and played a key role in the reduction of earnings inequality between the mid 1970s and the mid 1980s, years of harsh social conflict. Manacorda (2004) claims that when the *Scala Mobile* was abandoned, the subsequent rise in inequality was largely a reaction to the compression differentials generated before.[22] The impact of such a mechanism on top wages and executive compensation was presumably

[22] In the early 1980s the equalizing power of the *Scala Mobile* started to decline both due to the drop in inflation and to the weakening of unions' power. In 1980, 40,000 white collar workers demon strated against the equalizing effects of the *Scala* in front of the FIAT headquarters in Turin. The growing dissatisfaction forced the government to progressively lower the scope of the *Scala Mobile* until its total abolition in 1992, when a system of proportional wage increases contingent on expected inflation was established. A phase of moderation in wage adjustments (*Concertazione*) started in 1993. See also Erickson and Ichino (1995) and Signorini and Visco (2002).

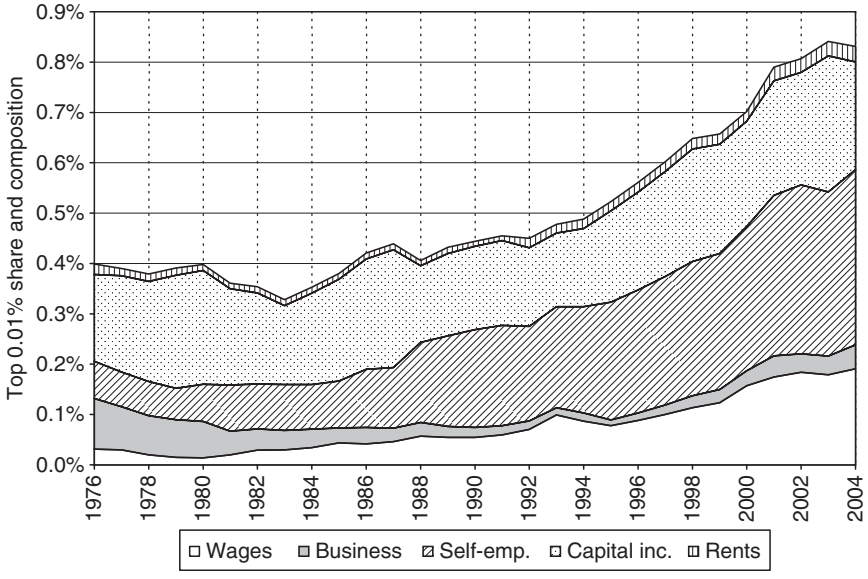

Figure 12.6 The top 0.01% income share and composition in Italy, 1976 2004

Notes: The figure displays the income share of the top 0.01% tax units, and how the top 0.01% incomes are divided into the following income components: wages and salaries (including pensions), business income, self-employment income, capital income (mainly dividends), and rents. Income excludes interest and most realized capital gains. See Appendix 12A for details.

Sources: Table 12A.2, top 0.01% income share, and Table 12A.4, composition columns for top 0.01%.

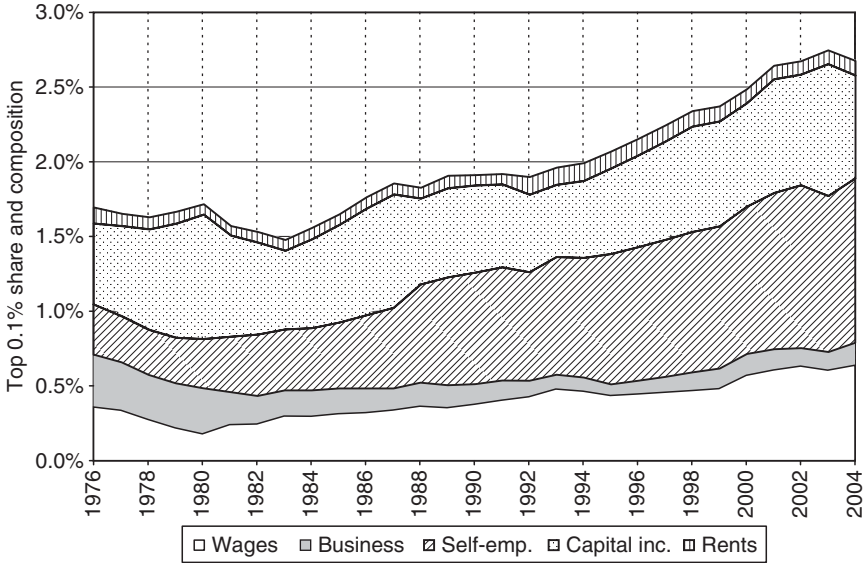

Figure 12.7 The top 0.1% income share and composition in Italy, 1976 2004

Notes: The figure displays the income share of the top 0.1% tax units, and how the top 0.1% incomes are divided into the following income components: wages and salaries (including pensions), business income, self-employment income, capital income (mainly dividends), and rents. Income excludes interest and most realized capital gains. See Appendix 12A for details.

Sources: Table 12A.2, top 0.1% income share, and Table 12A.4, composition columns for top 0.1%.

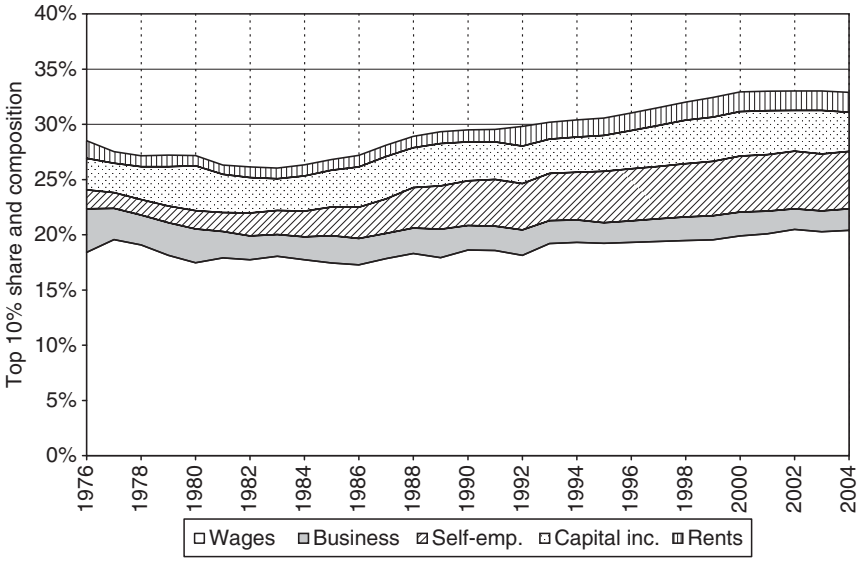

Figure 12.8 The top 10% income share and composition in Italy, 1976 2004

Notes: The figure displays the income share of the top 10% tax units, and how the top 10% incomes are divided into the following income components: wages and salaries (including pensions), business income, self-employment income, capital income (mainly dividends), and rents. Income excludes interest and most realized capital gains. See Appendix 12A for details.

Sources: Table 12A.2, top 10% income share, and Table 12A.4, composition columns for top 10%.

very limited, but the decline in top shares in the late 1970s and their subsequent rise since the first half of the 1980s matches the evolution of the Gini coefficient (based on survey data) between 1982 and 1987.

It is instructive to compare the trends in income concentration between Italy and other countries. Figure 12.9 shows the top 0.01 per cent income share in Italy, Spain, France, and the United States. As in the case of Spain, although income concentration has increased in Italy during the last twenty years, the change is very small relative to the surge experienced by top incomes in the United States. Thus, the Italian experience is also closer to continental Europe countries. Figure 12.10 plots the same variables but excluding the United States. The top 0.01 per cent income share in Italy is initially below those of Spain and France, but approaches and eventually surpasses them.[23]

The behaviour of the shares within shares can be expressed in terms of the Pareto coefficient. Comparing distributions relative to the mean, a higher Pareto coefficient denotes less concentration. The Pareto coefficients computed from the share of the top 0.1 per cent within the top 1 per cent in Spain, Italy, France, the

[23] Given the large number of adjustments made in raw data, it is not obvious how to rigorously establish whether the values presented in Figure 12.10 are statistically different. It should be noted, however, that income tax information refers to the universe of taxpayers and not to a sample.

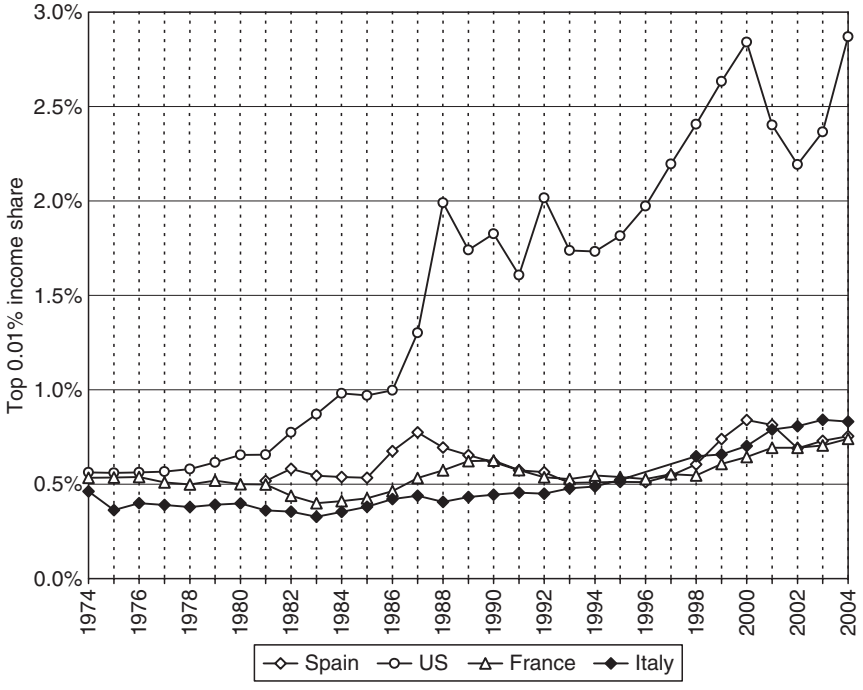

Figure 12.9 The top 0.01% income share in Italy, Spain, USA, and France, 1974 2004

Note: Income excludes most realized capital gains (and interest income in the case of Italy).

Sources: US: Piketty and Saez (2003); France: Piketty (2001) and Landais (2007); Spain: Alvaredo and Saez (2009) and Chapter 10; Italy: Table 12A.2.

UK, and the USA are shown in Figure 12.11, which reproduces the patterns observed in Figure 12.10 but unaffected by the income denominator: commonality between continental Europe countries, and marked increase in concentration in the UK and the USA. For instance, the Pareto exponent fell from 3.02 in 1977 to 1.77 in 2000 in the UK, while in Italy it moved from 2.81 in 1975 to 2.14 in 2003.

Sensitivity of Results

Given the comparisons with other European countries presented in the previous section, and the concern about the effects of evasion and non-compliance on our estimates, it is reasonable to ask how sensitive these results are to changes in the personal income numerator and denominator. Reducing the income denominator to 90 per cent of the series used (Table 12.A, column 4) would mean that the share of the top 0.01 per cent in 1988 became 0.45 per cent in place of 0.41 per cent and that the share of the top 0.1 per cent became 2.0 per cent in place

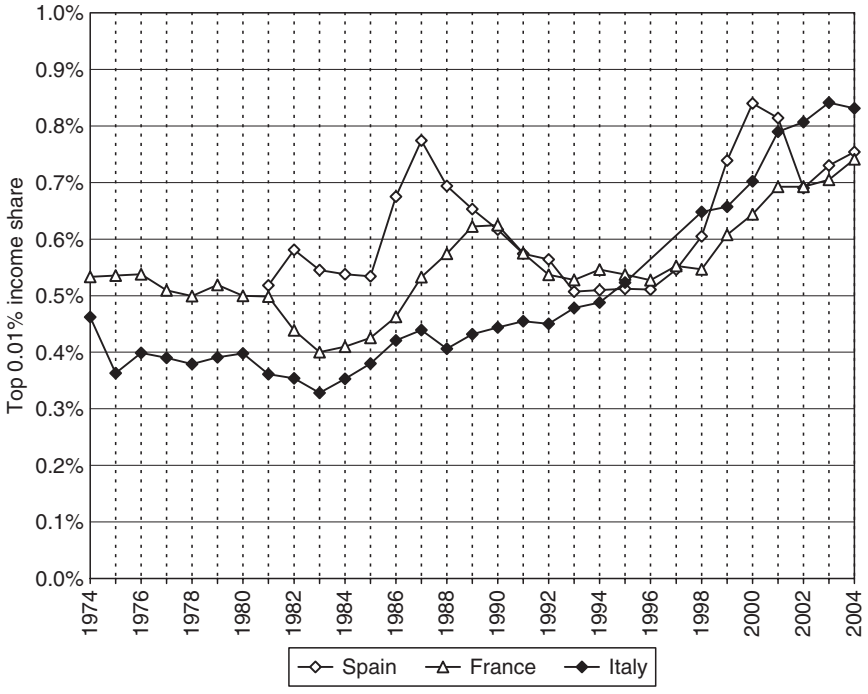

Figure 12.10 The top 0.01% income share in Italy, Spain, and France, 1974 2004

Note: Income excludes most realized capital gains (and interest income in the case of Italy).

Sources: France: Piketty (2001) and Landais (2007); Spain: Alvaredo and Saez (2009) and Chapter 10; Italy: Table 12A.2.

of 1.83 per cent. These changes would not affect the comparisons presented in Figures 12.9 and 12.10.

A second important question refers to the impact of tax evasion and, in particular, of evasion from self-employment income, on our top share estimates. Which is the effect of a 10 per cent under-reporting rate in self-employment income among high-income earners? Such a change would mean that the share of the top 10 per cent is adjusted upwards by 1 per cent *on average* (not 1 percentage point); for example, the top 10 per cent share in 1995 becomes 31 per cent instead of 30.5 per cent. Along the same lines, the share of the top 0.1 per cent is increased by 2.7 per cent *on average* (not 2.7 percentage points): the top 0.1 per cent share in 1995 becomes 2.15 per cent in place of 2.07 per cent. Full results for this exercise are shown in Table 12A.5.

These magnitudes seem to suggest that evasion from self-employment and small business income is unlikely to account for the gap in top incomes between Italy and Anglo-Saxon countries. Evasion would not imply either that true income concentration in Italy is much higher than in other European countries.

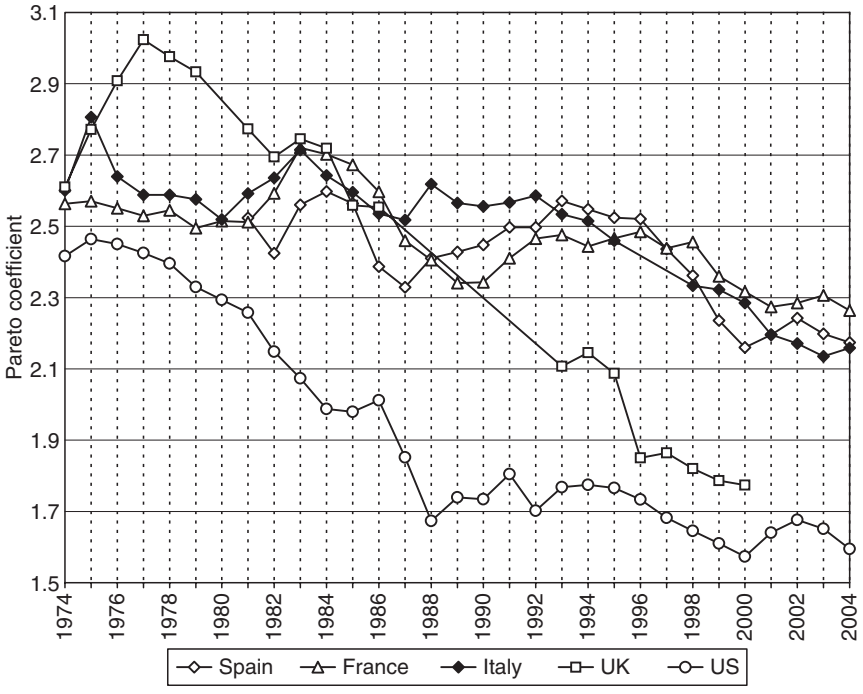

Figure 12.11 The Pareto coefficients in Italy, Spain, France, UK, and USA, 1974 2004

Note: Based on the share of the top 0.1% within the share of the top 1%.

Sources: France: Piketty (2001) and Landais (2007); UK: Atkinson (2007); USA: Piketty and Saez (2003); Spain: Alvaredo and Saez (2009) and Chapter 10; Italy: Table 12A.2.

12.4 THE EFFECTS OF MARGINAL TAX RATES ON REPORTED TOP INCOMES

The literature on behavioural responses to taxation stresses the important role that income taxes can have on incomes reported for tax purposes. At least until the beginning of the 1980s, the income tax in Italy had a very progressive structure with many brackets and a very high statutory top marginal rate (82 per cent in 1974). However, few taxpayers had enough income to be in the top bracket. In the last thirty years the system has evolved to a much smaller number of brackets with a lower top statutory rate (Table 12B.1).[24]

[24] This has been a common pattern of personal income tax systems in most developed countries. Top statutory marginal tax rates were reduced in 1975 (from 82% to 72%), 1983 (from 72% to 65%), 1989 (from 62% to 50%), in 1998 (from 51% to 46%), in 2000 (from 46% to 45.5%), and in 2001 (from 45.5% to 45%).

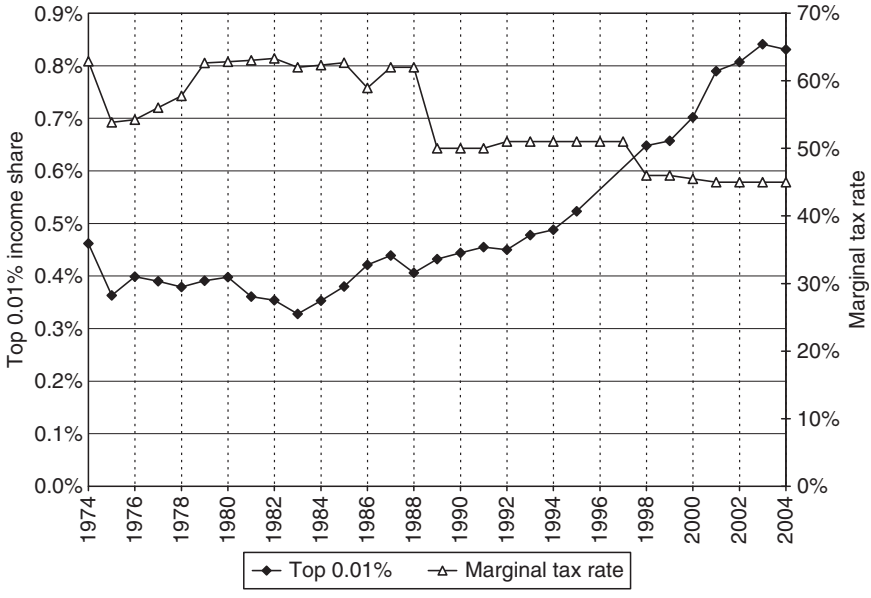

Figure 12.12 The top 0.01% income share in Italy and marginal tax rate, 1974 2004

Sources: Top 0.01% income share 1974–2004 from Table 12A.2 (column top 0.01%). Marginal tax rate: Own computations. Details in Appendix 12B.

We computed the average marginal tax rate (weighted by income) for the top 0.01 per cent group and plot it in Figure 12.12 together with the top 0.01 per cent income share.[25] Several elements are worth noticing. First, the tax rate cut of 1975 is associated with a decrease in the top income share from 1974 to 1975. Second, the relative stability of the top 0.01 per cent income share between 1976 and 1988 happens in a period of stable (or increasing in 1976–9) marginal rates. Finally, the rising trend of top shares started by the end of the 1980s is associated with a non-trivial reduction in tax rates (the statutory top marginal rate goes down 17 percentage points from 62 per cent in 1988 to 45 per cent in 2001–4). The inherent noise in top income shares from year to year, however, would make it difficult to detect systematic effects unless the elasticity of response is very large. New research and better data are required to analyse whether the elasticity of reported income with respect to tax rates is not an intrinsic parameter but might vary with the degree of enforcement and the ability of taxpayers to avoid and evade taxes, as proposed by Slemrod (1995).

[25] Details about the estimation of the income weighted marginal tax rates are given in Appendix 12B.

12.5 FINAL REMARKS

This chapter has analysed income concentration in Italy between 1974 and 2004 using income tax statistics. Unfortunately, as tax returns tabulations are only available since 1974, it is not feasible to provide an account of the long-run evolution of top shares. Despite their limited time scope, tax records provide interesting insights on income concentration for the last three decades, which are not adequately caught by existent survey data. Top income shares have increased steadily since the mid 1980s, a phenomenon happening within the top 5 per cent of the distribution, and mainly within the top 1 per cent; a large fraction of the increase is due to the growing importance of top wages and self-employment income. Notwithstanding this trend, the rise is much smaller than the one that took place in Anglo-Saxon countries. Consequently, the Italian case, together with the results obtained for Spain in Chapter 10 and Portugal in Chapter 11, shows that Mediterranean Europe has evolved closer to the trends observed in continental Europe. Our series measure only top income concentration and hence are silent about changes in the lower and middle part of the distribution. As a result, our series follow different patterns from broader measures of inequality such as Gini coefficients or macro-based estimates.

APPENDIX 12A: TOP INCOME SHARE SERIES

The Income Tax in Italy

Between 1864 and 1877 Italy reorganized the different taxes already in place in the pre unification states into a new tax system, which emulated that of the Kingdom of Piemonte and Sardegna (Law 1830 of 14/7/1864 and Royal Decree 4021 of 24/8/1877). The reform relied on the traditional schedule taxes on salaries, rents, corporate profits, business profits, self employment and capital income, estate and gifts (*imposta sul reddito domin icale dei terreni*, *imposta sul reddito dei fabbricati*, *imposta sul reddito agrario*, *imposta sui redditi di ricchezza mobile* (wages, salaries, pensions, business income, capital income, self employment income), *imposta fondiaria*). Under such a complicated system, with with holdings at the source and different schedules covering different sources of income, the authorities did not know the total income of individuals, which were the subject of different assessments.

The *Progetto Meda* and the *Riforma De Stefani* (Royal Decree 3062 of 30/12/1923) introduced a surtax (*imposta complementare*), which was an additional income tax levied on personal incomes, with a progressive tax scale, the bottom marginal rate being 2 per cent and the top marginal rate evolving from 65 per cent (1923 50) to 50 per cent (1951 73). Only in 1951 (Law 25 of 11/1/1951, *Riforma Vanoni*) did the authorities impose the requirement of a unique annual tax return per taxpayer detailing all taxable income and schedule taxes paid. The *imposta complementare* remained in existence until 1972. Even if it could have provided information on top incomes, to our knowledge there are no published tabulations by ranges of income covering the income assessed to the *imposta complemen tare* over this period.

Local governments imposed an additional personal income tax, the *imposta di famiglia*, with progressive rates ranging from 2 per cent to 12 per cent (Law 4513/1868; abolished by Presidential Decree DPR 597 of 29/9/1973). For an account of the facts around the main tax reforms between 1950 and 1970, see Botarelli (2004).

After almost a decade of studies on tax reforms,[26] the modern personal income tax (*imposta sui redditi delle persone fisiche*, *IRPEF*) was introduced by the Law 10/9/1971. It fully came into force in the year 1974 and since then, detailed official tax statistics began to be recorded on a yearly basis. The reform caused a shift from a limited overall income tax system with 2.2 million returns for the *imposta complementare* in 1972 to a mass tax with more than 15 million family based tax returns or 23.3 million individual based tax returns in 1974 (Table 12A.1, column 2).

Initially, taxation was based on the family unit, but in 1976 the Constitutional Court decided that the obligation to file jointly for married couples was thereafter unconstitu tional (Court Decision 179/1976), joint filing interfering with the choice of creating or dissolving a conjugal tie. Published tabulations by range of income provide both the individual and the family distributions separately both for 1974 and 1975.

Taxable income covers (a) urban and rural rents, (b) wages and salaries, (c) pensions, (d) self employment income, (e) farm income, (f) business income, (g) capital income,

[26] On the work done by the ad hoc commission on the tax reform, see Cosciani (1964).

and (h) other income (a small fraction of non financial capital gains, copyrights, income from games of chance).[27]

Despite the original intentions to create a true comprehensive income tax, several components of capital incomes were excluded from the tax base, being subject to 'substi tutive' tax regimes usually at flat rates. This is the case of the tax on interest income, withheld at the source. The choice to leave a fraction of capital incomes under a separate and proportional regime was mainly motivated by the fear of capital flight abroad.

Dividends are included in the tax base. A distinct treatment was introduced in 1998 for dividends from qualified shares (completely included until 2003; only 40 per cent of them have to be reported to the income tax since 2004) and from non qualified shares (until 2003, subject to the option of applying a flat tax of 12.5 per cent or including them in the tax base; the flat tax becoming compulsory in 2004).

As a practical matter, capital gains were mostly exempted (and not reported) until 1998. In principle, gains on equities were subject to the income tax if the relevant transactions were undertaken with speculative intent. Since the definition of speculative intent was not objective and the burden of proof lay with the tax revenue service, gains were not reported. The speculative intent was presumed for shares held for less than five years and only in some exceptional cases (until 1984, the sale of unlisted shares of real estate companies; between 1984 and 1990, the sale of more than 2 per cent of the value of listed companies, more than 10 per cent (5 per cent after 1987) of unlisted companies, and more than 25 per cent (15 per cent between 1987 and 1992 and 10 per cent after 1993) of unincorporated companies).[28] Between 1999 and 2003, capital gains from qualified equities, although subject to separate taxation, had to be fully reported, while only 40 per cent of them had to be reported in 2004. Since 1998 capital gains from non qualified equities are not included in the income tax base. For an account of the changes in capital income and capital gains taxation, see Ricotti and Sanelli (2005), Baldini and Bosi (2002), Visco (1995), and Bosi and Guerra (2008, and previous editions).

Tax tabulations do not offer separate information about capital gains; their revenues are added to other small income components, making a very small amount relative to total assessed income. Consequently, our income definition excludes interest and most realized capital gains.

In 1974 tax rates ranged from 10 per cent to 82 per cent with thirty two brackets; a ten point reduction in top marginal rates followed in 1975, the number of brackets being fairly stable up to 1982 (see Table 12A.1). In 2004 there were only five brackets with a top marginal tax rate of 45 per cent. As pointed out in Saez and Veall (2005), the evolution of many brackets extending very far into the distribution of incomes and a high nominal top rate toward a much smaller number of brackets with a lower top rate is a common pattern of personal income tax systems of developed countries. However, the top marginal rate is a very defective measure of tax burden: in 1974 very few taxpayers had enough income to be in the top bracket and taxed at 82 per cent. Fixed bracket limits along time together with a positive inflation rate implied an increase in effective marginal rates between 1975 and 1979 (Figure 12.12) even when there were no changes in the statutory schedule.

Despite the frequent changes in the tax code, the fundamentals of the Italian personal income tax have not changed in a radical way since the introduction of the *IRPEF*. A detailed description of the evolution of the *IRPEF* between 1974 and 1998 can be

[27] Non financial capital gains mainly refer to capital gains from real estate sold within five years after purchase, if not used as main dwelling.

[28] See, for example, Law 853 of 19/12/1984 and Law 17 of 17/2/1985.

found in Herr (2002). For a general view of the Italian taxation structure, see Bernardi (1996, 2002, 2005) and Bosi and Guerra (2008 and previous editions).

References on Data Sources for Italy

Following the requirement of a unique annual tax file per taxpayer established in 1951, the tax agency launched an annual publication detailing the number of tax files and total assessed income, disaggregated by provinces, which appeared annually from 1951 to 1973: Ministero delle Finanze, Direzione Generale delle Imposte Dirette, *Dichiarazione unica dei redditi presentata nell'anno* 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, Rome: Istituto Poligrafico dello Stato. Unfortunately no tabulations by range of income are provided; the only information available displays total assessed income and total number of tax returns. We report these references for bibliographical purposes.

Much more detailed data describe the evolution of the income tax between 1974 and 2004. Income tax statistics are published by the Ministry of Finance every year since 1974, when a taxpayers' register was organized and an information system for recording and processing tax returns was set up in order to deal with the large number of tax files.

1974: Ministero delle Finanze, Anagrafe Tributaria, *Analisi delle dichiarazioni dei redditi delle persone fisiche presentate nel 1975*. Table DU 74 12 01: Distribuzione del reddito individuale comprensivo del reddito da lavoro dipendente dichiarato col modello 101 rispetto al reddito complessivo individuale. Two previous preliminary publications exist: Ministero delle Finanze, Anagrafe Tributaria, *Elaborazioni statistiche sulle dichiarazioni delle persone fisiche (modello 740) relative ai redditi del 1974*; and Ministero delle Finanze, Direzione Generale delle Imposte Dirette, Centro Informativo, *Elaborazioni statistiche generali sulle dichiarazioni dei redditi delle persone fisiche (modello 740) presentate nel 1975*.

1975: Ministero delle Finanze, Anagrafe Tributaria, *Le dichiarazioni dei redditi delle persone fisiche presentate nel 1976*. Table DU 75 12 01: Distribuzione del reddito indivi duale comprensivo del reddito da lavoro dipendente dichiarato col modello 101 rispetto al reddito complessivo individuale.

1976: Ministero delle Finanze, Anagrafe Tributaria, *Le dichiarazioni dei redditi delle persone fisiche presentate nel 1977*. Table 3.2.2: Composizione dell'Ammontare dei Tipi di Redditi per Classi di Reddito Complessivo and Table 3.4.1: Riepilogo Generale delle Dichiarazioni per Classi di Reddito Complessivo.

1977: Ministero delle Finanze, Anagrafe Tributaria, Centro Informativo delle Imposte Dirette, *Analisi delle dichiarazioni dei redditi delle persone fisiche presentate nel 1978*. Table 3.2.2: Distribuzione dell'ammontare dei redditi del totale percettori in relazione al reddito complessivo; Table 3.4.1: Distribuzione del numero complessivo dei dichiaranti e degli ammontari di redditi, deduzioni, detrazioni e imposte individuali rispetto al reddito complessivo.

1978 91: Ministero delle Finanze, Direzione Generale delle Imposte Dirette, *Analisi delle dichiarazioni dei redditi delle persone fisiche presentate nel 1979*, *1980, 1981*, *1982*, *1983*, *1984*, *1985*, *1986*, *1987*, *1988*, *1989*, *1990*, *1991*, *1992*. Table 3.2.2: Distribuzione dell'am montare dei redditi del totale dichiaranti in relazione al reddito complessivo; Table 3.4.1: Distribuzione del numero complessivo dei dichiaranti e degli ammontari di redditi, deduzioni, detrazioni e imposte individuali rispetto al reddito complessivo.

1992 5: Ministero delle Finanze, *Analisi delle dichiarazioni dei redditi delle persone fisiche presentate nel 1993*, *1994*, *1995*. Table 2.2: Distribuzione dell'ammontare dei redditi del totale dichiaranti in relazione al reddito complessivo.

1996 7: No tax statistics available.

1998 2004: Ministero dell'Economia e delle Finanze. Dipartimento per le Politiche Fiscali. Ufficio Studi e Politiche Economico Fiscali. Sistema Statistico Nazionale. *Le dichiarazioni in cifre. Analisi statistiche anno d'imposta 1998*, *1999*, *2000*, *2001*, *2002*, *2003*, *2004. Persone fisiche* (electronic publication). Table 1.2.2. Distribuzione dell'ammon tare dei redditi per classi di reddito complessivo.

Additional information in: Ministero delle Finanze. Direzione Generale delle Imposte Dirette. Ufficio di Statistica. *Analisi dei redditi delle persone fisiche suddivisi per categorie omogenee di contribuenti. Dichiarazioni presentate nel 1982*, *1983*, *1984*, *1985*, *1986*, *1987*, *1989*, *1990*, *1991*, *1992*, *1993*.

Tax statistics are affected by the evolution of the different individual tax forms as well as by the changes in the requirements to file. Form 740 (valid over the whole period 1974 2004) is the general form. Form 730 (introduced in 1992) is reserved for employees and pensioners receiving also real estate income and partnership income, and benefiting from specific deductions. Form 101 (Form 201 after 1984) corresponds to employees and pensioners with no other sources of income beyond wages, salaries, and pensions.

Since 1980 pensioners with no other income source were exempted from filing Form 101 (Law 119 of 31/3/1981). Since 1991 employees receiving only wages and salaries and not benefiting from specific deductions have also been exempted from filing tax returns through Form 101. This fact affects tax statistics only in 1991 and 1992 and not in a relevant way for our top income shares estimates. First, because many individuals kept sending the Form 101 even if it was not required (Herr 2002). Secondly, because employers as well as the social security administration (INPS, INPDAP) must report individuals' incomes to the tax agency through Form 770 since 1993; the information in Form 770 is then matched with tax returns (Forms 740 and 730) in order to add the incomes of exempted (from reporting) employees and pensioners to tax statistics. Thirdly, because the reduction in the number of tax files in 1991 and 1992 due to the mentioned exemption unsurprisingly occurred at the lower part of the distribution.

Control Total for Individuals

For the period 1974 2004, the total number of tax units is computed as the number of individuals in the Italian population aged 20 and above. Figures are reported in Table 12A.1, column 1. Column 2 indicates the total number of tax returns actually filled and column 3 the fraction of the adult population filing a tax return.

For 1974 80 the data are taken from Capocaccia and Caselli (1990) *Popolazione residente per età e sesso nelle province italiane: anni 1971 1981*, Università degli Studi di Roma La Sapienza, Dipartimento di Scienze Demografiche, Fonti e Strumenti, No. 2. For 1981 2004 the series are obtained from ISTAT Istituto Nazionale di Statistica, *Ricostruzione intercen suaria della popolazione al 1° gennaio 1982 1991*; ISTAT Istituto Nazionale di Statistica, *Ricostruzione intercensuaria della popolazione al 1° gennaio 1992 2001* and ISTAT Istituto Nazionale di Statistica, *Popolazione totale per singolo anno di età 2002*, *2003*, *2004*.

Control Total for Income

Total income is defined as: (i) wages and salaries from National Accounts net of effective social security contributions (paid by employers and employees) plus (ii) old age and disability pensions (which have to be reported) plus (iii) half of unincorporated business income plus (iv) all capital income (all non business non labour income) reported on tax

returns: we follow this strategy because capital income in National Accounts is substantially different from capital income on tax returns due to imputed rents of homeowners, imputed interest to bank account holders, returns on (non taxable) pension funds, etc.; this amounts to assuming that non filers receive a negligible fraction of capital income (for example, in 2004, the top 10 per cent income earners obtained 62 per cent of total reported capital income). See Park (2000) for a comprehensive comparison in the case of the United States, where over 90 per cent of adults file tax returns.

Regarding the estimation of the unincorporated business income in the denominator, business income in National Accounts statistics includes an estimation of the black market economy. This is captured by a very large unincorporated business sector, which is disproportionately larger than business income assessed in income tax returns. We estimate that about half of such business income is from the informal sector and hence escapes taxation (see Chapter 10 on Spain, where the control total for income includes two thirds of unincorporated business income from National Accounts).

Wages from National Accounts also include an estimation of under reporting. Not correcting them may be seen as introducing an inconsistency between numerator and denominator. However, we assume that the bulk of wage under reporting takes place at the left of the income distribution. Under this assumption, adjusting the denominator by subtracting an estimation of aggregated non declared wages would cause an overestimation of top income shares. Consequently, our control total for income includes the total amount of wages.

The income denominator relies, thus, on the following statistical sources:

GDP, wages, and salaries:

(a) Istituto Nazionale di Statistica (ISTAT), *Contabilità nazionale: conti economici nazionali 1970 2005*. For real GDP 1974 2004: Produzione a prezzi base (Reference year 2000). For nominal GDP 1974 2004: Conto della produzione a prezzi correnti. For wages and salaries 1974 2004: Conto dell'attribuzione dei redditi primari (current values).

Prices:

(b) Istituto Nazionale di Statistica (ISTAT), Consumer Price Index 1974 2004 (also in OECD, Statistical Compendium, 2007.1).

Social security contributions:

(c) Istituto Nazionale di Statistica (ISTAT), *Conti e aggregati economici delle amministrazioni pubbliche 1980 2006*, Table 1: Conto Economico Consolidato delle Amministrazioni Pubbliche for effective social security contributions 1980 2004 and Table 20: Contributi Sociali Prelevati dalle Amministrazioni Pubbliche per tipo 1980 2006. For the effective social security contributions for 1974 9 we assumed that their ratio to GDP was equal to the ratio observed in 1980.

Pensions:

(e) Istituto Nazionale di Statistica (ISTAT), *Le prestazioni pensionistiche in Italia dal 1975 al 2000*. For pensions 1975 2000: Table 2: Spesa pensionistica totale per tipo, settore, ente erogatore, categoria, gestione e ripartizione territoriale, al 31 dicembre.
(f) Istituto Nazionale di Statistica (ISTAT), *Annuario statistico italiano 2001*, chapter 4 Assistenza e previdenza sociale, Table 4.9: Pensioni e relativo importo annuo per comparto, ente erogatore e tipo Anno 2001.

(g) Istituto Nazionale di Statistica (ISTAT), *Le prestazioni pensionistiche in Italia 2002*, *2003*, *2004*. Table. 1.1 and Table 2.1: Spesa pensionistica IVS e pensioni indennitarie per tipo, settore, ente erogatore, categoria, gestione e ripartizione territoriale, al 31 dicembre.

Unincorporated profits:

(h) Istituto Nazionale di Statistica (ISTAT), *Conti nazionali per settore istituzionale*, Table 4: Ripartizione del reddito primario, Quota di reddito misto trasferita alle famiglie consu matrici, 1990 2002.
(i) OECD, Statistical Compendium, 2007#1. Simplified Accounts for Households and Non Profit Institutions Serving Households (NPISH) and for Corporation. Mixed income, Gross, Current prices. This series was used to extrapolate the series from source (h) to 1974 89 and to 2003 4.

The total denominator series expressed in 2000 euros is reported in Table 12A.1, column 4. The average income per adult (not per income earner) is reported in column 5, and the CPI index (base 100 in year 2000) is presented in column 6.

Basic Pareto Interpolation

We follow the basic Pareto interpolation technique described in Chapter 10, Appendix 10D.

Adjustments to Raw Pareto Interpolations

Shift from family to individual taxation in 1976: Until 1975, taxation was based on the family unit (as in the United States today). Starting in 1976, individual filing became compulsory. Since tax returns statistics for 1974 and 1975 were elaborated after the tax code change, fortunately published tabulations by range of income provide both the individual and the family distributions separately. The former are used in our estimations so that no ad hoc corrections were necessary to account for the shift.

Changes in reporting rules for capital income: Until 2003, dividends from qualified shares were completely reported and included in the tax base. Since 2004 only 40 per cent of them has to be reported to the income tax. Also until 2003, dividends from non qualified shares were subject, at the taxpayer's option, either to the income tax (by adding them to the taxable income) or to a flat tax of 12.5 per cent. In 2004 the flat tax became compulsory. These changes created a clear discontinuity in the amounts reported as capital income between 2003 and 2004. We applied an ad hoc adjustment of 1/0.40 to capital incomes in 2004.

Results of top income shares are presented in Table 12A.2 while top fractile income series are reported in Table 12A.3.

Estimation of Income Composition Series

Besides the number of taxpayers and total income for each income bracket, income tax tabulations also indicate the separated amounts for each type of income, as well as the deductions and the tax paid. This information has been exploited in order to show the breakdown of income into the various components.

The composition of income within each top group was estimated from these tables using linear interpolations. Such a method is less satisfactory than the Pareto interpolation used

to estimate top income thresholds; however no obvious law seems to fit composition patterns in a stable way. Estimates perform satisfactorily when compared to micro data (see, e.g., Piketty and Saez 2003 for a more precise discussion of this method and Alvaredo and Saez 2009 and Chapter 10 for the comparison between tax data and micro data in the case of Spain).

Tax records provide income composition (individual distribution) between 1976 and 2004. We consider five types of income: rents, wage income, self employment income, entrepreneurial income, and capital income. Rents include income from rural and urban real estate. Wage income includes wages, salaries, and pensions, net of social security contributions. Self employment income is income from professionals (such as dentists, lawyers, etc.) and independent workers, while entrepreneurial income includes small business income (income from sole proprietorship, partnerships income) and farm in come. Finally, capital income includes mainly dividends and a small portion of capital gains. Discrepancies between total assessed income and the sum of components are usually very small until 1998; larger discrepancies are recorded for some of the last years, and they have been added to business income to correct for evident discontinuities in that com ponent.

Results are presented in Table 12A.4.

Adjustments to Raw Composition Series

Changes in composition due to changes in the tax code: Starting in 2001 income from the *Collaborazioni Coordinate e Continuative* (Co.Co.Co.) had to be reported under the form of wages and salaries (Law 342 of 21/11/2000). Before, it was considered self employment income for tax purposes. As this is an important source of income among top taxpayers, the shift generates a spurious and visible change in the raw compositional patterns of top fractiles from self employment towards wage income since 2001. To correct this for 2001 2, we assumed that the distribution between wages and self employment income remained at the level of 2000. Consequently, Co.Co.Co. income is always included in self employ ment income in our composition series.

Table 12A.1 Reference totals for population, income, and inflation, Italy, 1974 2004

	Tax units and population			Total income		Inflation	Taxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Adults ('000s)	Number of tax returns ('000s)	(2)/(1) (%)	Total income (millions 2000 euros)	Average income (2000 euros)	CPI (2000 base)	Top marginal tax rate (%)
1974	37,867	23,293	61.5	343,478	9,071	11.07	82
1975	38,120	21,924	57.5	336,299	8,822	12.95	72
1976	38,367	15,654	40.8	362,894	9,459	15.10	72
1977	38,634	21,126	54.7	376,395	9,743	17.69	72
1978	38,896	22,468	57.8	395,196	10,160	19.82	72
1979	39,177	23,639	60.3	420,998	10,746	22.76	72
1980	39,466	24,005	60.8	434,611	11,012	27.55	72
1981	39,778	23,477	59.0	454,220	11,419	32.50	72
1982	39,778	23,850	60.0	453,458	11,400	37.86	72
1983	40,091	24,387	60.8	456,103	11,377	43.41	65
1984	40,415	24,822	61.4	466,040	11,531	48.09	65
1985	40,829	25,226	61.8	476,673	11,675	52.52	65
1986	41,218	25,886	62.8	491,815	11,932	55.58	62
1987	41,616	26,437	63.5	509,851	12,251	58.21	62
1988	42,004	27,373	65.2	528,140	12,574	61.16	62
1989	42,387	27,857	65.7	549,360	12,961	64.99	50
1990	42,796	28,604	66.8	566,417	13,235	69.18	50
1991	43,178	24,586	56.9	580,747	13,450	73.51	50
1992	43,821	26,422	60.3	594,647	13,570	77.38	51
1993	44,154	28,625	64.8	572,170	12,959	80.96	51
1994	44,473	29,110	65.5	571,741	12,856	84.24	51
1995	44,781	29,290	65.4	564,876	12,614	88.65	51
1996	45,049			599,041	13,298	92.21	51
1997	45,276			613,384	13,548	94.09	51
1998	45,458	30,960	68.1	600,490	13,210	95.93	46
1999	45,599	38,315	84.0	618,449	13,563	97.53	46
2000	45,710	38,504	84.2	624,709	13,667	100.00	45.5
2001	45,825	38,794	84.7	643,259	14,037	102.79	45
2002	45,935	39,939	86.9	648,493	14,118	105.32	45
2003	46,282	40,582	87.7	661,345	14,289	108.13	45
2004	46,811	40,492	86.5	671,760	14,350	110.52	45

Notes: Population and tax units estimates based on populations census.
Tax units estimated as number of adults aged 20 and over in Italy. Total income defined as wages and salaries from National Accounts (net of social contributions) plus pensions plus 50% of unincorporated business income, plus all non-business, non-labour income reported on tax returns.
Consumer Price Index is the official CPI index (see Appendix 12A for details).
The total number of tax returns in 1976 does not include individuals filing Form 101; the actual number of taxpayers was not very different from that observed in 1975 and 1977.

Table 12A.2 Top income shares in Italy (excluding capital gains), 1974 2004

	Top 10% (2)	Top 5% (3)	Top 1% (4)	Top 0.5% (5)	Top 0.1% (6)	Top 0.01% (7)	Top 10 5% (10)	Top 5 1% (11)	Top 1 0.5% (12)	Top 0.5 0.1% (13)	Top 0.1 .01% (14)	Top 0.01% (7)
1974	30.50	19.86	7.46	4.90	1.81	0.46	10.64	12.40	2.56	3.09	1.35	0.46
1975	31.20	20.04	7.24	4.71	1.64	0.36	11.16	12.80	2.52	3.07	1.28	0.36
1976	28.50	18.00	7.10	4.67	1.70	0.40	10.50	10.90	2.43	2.97	1.30	0.40
1977	27.53	17.81	6.80	4.47	1.66	0.39	9.72	11.01	2.33	2.81	1.27	0.39
1978	27.15	17.56	6.71	4.40	1.63	0.38	9.58	10.86	2.31	2.77	1.25	0.38
1979	27.21	17.69	6.83	4.49	1.67	0.39	9.53	10.86	2.34	2.82	1.28	0.39
1980	27.17	17.72	6.90	4.56	1.72	0.40	9.45	10.82	2.33	2.84	1.32	0.40
1981	26.31	16.91	6.47	4.24	1.57	0.36	9.40	10.43	2.24	2.66	1.21	0.36
1982	26.14	16.75	6.40	4.18	1.53	0.35	9.39	10.34	2.22	2.65	1.18	0.35
1983	26.04	16.68	6.34	4.11	1.48	0.33	9.36	10.34	2.23	2.63	1.15	0.33
1984	26.34	17.01	6.54	4.26	1.56	0.35	9.32	10.48	2.28	2.70	1.21	0.35
1985	26.83	17.50	6.81	4.46	1.65	0.38	9.32	10.70	2.35	2.81	1.27	0.38
1986	27.20	17.98	7.13	4.70	1.77	0.42	9.22	10.86	2.42	2.93	1.35	0.42
1987	28.12	18.68	7.45	4.93	1.86	0.44	9.43	11.23	2.52	3.07	1.42	0.44
1988	28.91	19.27	7.60	4.98	1.83	0.41	9.64	11.67	2.62	3.15	1.43	0.41
1989	29.34	19.64	7.79	5.13	1.91	0.43	9.70	11.85	2.66	3.22	1.48	0.43
1990	29.50	19.69	7.78	5.13	1.92	0.44	9.80	11.91	2.65	3.21	1.47	0.44
1991	29.53	19.86	7.84	5.15	1.92	0.46	9.67	12.02	2.69	3.22	1.47	0.46
1992	29.81	20.00	7.81	5.12	1.90	0.45	9.81	12.19	2.69	3.22	1.45	0.45
1993	30.19	20.23	7.92	5.21	1.97	0.48	9.97	12.31	2.71	3.24	1.49	0.48
1994	30.41	20.42	7.99	5.26	2.00	0.49	9.99	12.43	2.72	3.27	1.51	0.49
1995	30.57	20.58	8.13	5.40	2.07	0.52	9.99	12.45	2.73	3.32	1.55	0.52
1996												
1997												
1998	32.01	21.80	8.74	5.86	2.35	0.65	10.21	13.06	2.88	3.52	1.70	0.65
1999	32.44	22.07	8.82	5.91	2.38	0.66	10.37	13.25	2.90	3.54	1.72	0.66
2000	32.94	22.56	9.09	6.12	2.49	0.70	10.38	13.47	2.98	3.63	1.79	0.70
2001	33.00	22.68	9.28	6.30	2.65	0.79	10.32	13.40	2.98	3.65	1.86	0.79
2002	33.03	22.68	9.28	6.32	2.68	0.81	10.35	13.40	2.96	3.64	1.87	0.81
2003	33.02	22.71	9.36	6.41	2.75	0.84	10.31	13.35	2.95	3.66	1.91	0.84
2004	32.90	22.56	9.23	6.29	2.68	0.83	10.33	13.34	2.94	3.61	1.85	0.83

Notes: Computations based on tax return statistics. Taxpayers are ranked by gross income (excluding capital gains).
The table reports the percentage of total income accruing to each of the top groups. Top 10% denotes top decile, top 10–5% denotes the bottom half of the top decile, etc. The income definition excludes interest income as well as most capital gains (see Appendix 12A for details).

Table 12A.3 Top fractiles income levels (excluding capital gains) in Italy, 1974 2004 (fractiles defined by total income (excluding capital gains); incomes expressed in 2000 euros)

	P90 100 (1)	P95 100 (2)	P99 100 (3)	P99.5 100 (4)	P99.9 100 (5)	P99.99 100 (6)	P90 95 (7)	P95 99 (8)	P99 99.5 (9)	P99.5 99.9 (10)	P99.9 99.99 (11)	P90 (12)	P95 (13)	P99 (14)	P99.5 (15)	P99.9 (16)	P99.99 (17)
1974	27,668	36,032	67,656	88,887	164,020	418,960	19,305	28,125	46,425	70,103	135,693	17,043	22,339	41,531	54,441	100,384	243,745
1975	27,524	35,358	63,843	83,157	145,045	319,951	19,690	28,236	44,530	67,684	125,611	17,577	22,573	38,955	52,834	95,188	214,655
1976	26,957	34,054	67,139	88,263	160,571	377,626	19,859	25,783	46,015	70,186	136,454	17,480	19,465	39,768	54,609	100,291	242,046
1977	26,826	34,704	66,230	87,005	161,257	379,796	18,948	26,822	45,455	68,442	136,975	17,221	21,405	39,429	53,497	99,066	244,081
1978	27,582	35,689	68,153	89,409	165,925	385,207	19,474	27,573	46,896	70,280	141,561	17,650	22,012	40,624	55,064	102,218	249,653
1979	29,244	38,012	73,410	96,545	179,506	420,381	20,477	29,162	50,275	75,805	152,742	18,601	23,168	43,682	58,947	110,531	273,394
1980	29,915	39,018	75,946	100,491	189,415	438,050	20,811	29,787	51,400	78,261	161,789	18,927	23,521	44,778	60,314	115,975	290,242
1981	30,044	38,611	73,927	96,778	179,789	411,953	21,476	29,782	51,077	76,026	153,993	19,691	23,910	44,478	59,510	111,497	274,990
1982	29,794	38,178	73,004	95,371	174,909	403,882	21,411	29,472	50,638	75,486	149,468	19,638	23,783	44,139	59,071	108,880	262,921
1983	29,621	37,944	72,095	93,496	168,390	372,923	21,297	29,406	50,695	74,773	145,664	19,559	23,715	44,144	59,174	107,141	249,743
1984	30,369	39,237	75,361	98,225	180,091	407,132	21,502	30,206	52,497	77,758	154,864	19,675	24,023	45,789	61,159	113,016	270,307
1985	31,317	40,869	79,482	104,115	192,929	443,672	21,765	31,216	54,848	81,912	165,069	19,815	24,474	47,800	63,913	120,326	287,902
1986	32,454	42,912	85,012	112,174	210,849	502,933	21,997	32,387	57,849	87,506	178,395	19,953	25,008	50,324	67,642	129,397	315,323
1987	34,445	45,781	91,306	120,859	227,926	538,122	23,109	34,399	61,753	94,092	193,460	20,885	26,280	53,813	72,643	139,619	342,912
1988	36,347	48,463	95,553	125,220	230,243	510,598	24,231	36,690	65,886	98,964	199,093	21,827	27,767	57,389	76,975	145,488	340,608
1989	38,025	50,897	100,953	133,046	247,624	559,899	25,152	38,383	68,860	104,402	212,927	22,602	28,834	60,063	80,528	154,902	370,833
1990	39,040	52,128	102,951	135,732	253,462	587,785	25,952	39,422	70,170	106,299	216,316	23,348	29,669	61,367	82,141	157,330	378,719
1991	39,712	53,418	105,421	138,428	258,554	612,002	26,007	40,417	72,413	108,397	219,282	23,177	30,184	63,315	84,383	159,208	387,369
1992	40,456	54,282	105,997	138,940	258,296	611,198	26,631	41,353	73,053	109,101	219,085	23,661	31,038	64,074	85,055	159,681	386,043
1993	39,123	52,418	102,612	134,912	254,683	619,638	25,829	39,869	70,311	104,969	214,133	23,039	29,995	61,693	81,738	154,732	384,285
1994	39,090	52,499	102,659	135,340	256,458	627,640	25,681	39,959	69,978	105,061	215,215	22,822	29,899	61,589	81,437	155,247	386,441
1995	38,558	51,920	102,540	136,137	261,499	659,561	25,195	39,265	68,942	104,797	217,270	22,292	29,425	60,461	80,559	155,884	396,395
1996																	
1997																	
1998	42,281	57,597	115,478	154,859	309,739	856,100	26,965	43,126	76,097	116,139	249,032	23,698	31,748	66,824	88,977	174,618	476,707
1999	43,997	59,861	119,556	160,427	322,244	891,101	28,133	44,938	78,685	119,973	259,038	24,834	33,176	69,117	91,965	180,583	496,828
2000	45,020	61,666	124,243	167,162	340,284	959,032	28,375	46,021	81,323	123,882	271,535	24,956	33,680	71,495	94,924	187,571	527,422
2001	46,328	63,679	130,256	176,839	371,742	1,109,433	28,976	47,035	83,673	128,113	289,776	25,512	34,129	73,530	97,773	195,217	582,608
2002	46,627	64,035	130,934	178,353	378,207	1,139,208	29,219	47,310	83,516	128,389	293,651	25,704	34,518	73,328	97,702	197,094	593,671
2003	47,180	64,904	133,780	183,197	393,208	1,201,830	29,456	47,686	84,362	130,695	303,361	25,928	34,809	73,974	99,033	202,415	618,677
2004	47,210	64,763	132,417	180,444	384,693	1,192,654	29,658	47,849	84,390	129,382	294,920	26,072	34,950	73,543	97,837	195,655	606,584

Notes: P99 denotes the income threshold required to belong to the top 1% of tax units; P99–100 is the average income of the top 1%; P99–99.5 denotes the average income in the bottom half of the top percentile. The income definition excludes interest income as well as most capital gains (see Appendix 12A for details).

Source: Computations based on tax statistics.

Table 12A.4 Income composition in top income groups, Italy, 1976–2004

	Top 10%					Top 5%					Top 1%					Top 0.5%					Top 0.1%					Top 0.01%				
	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital
1976	5.6	64.6	6.0	13.9	10.0	6.0	58.2	8.2	15.1	12.5	6.5	43.6	15.2	16.1	18.6	6.4	37.3	18.2	16.6	21.5	6.4	21.1	19.9	20.7	31.9	5.3	7.8	18.5	25.3	43.2
1977	3.8	71.0	5.1	10.3	9.7	4.5	62.5	7.4	12.7	13.0	5.4	42.4	14.5	16.1	21.7	5.3	35.8	17.0	16.6	25.3	5.0	20.4	18.6	19.5	36.6	3.7	7.6	17.5	22.0	49.1
1978	3.6	70.2	5.2	10.0	11.0	4.3	61.3	7.5	12.2	14.8	5.1	40.7	14.2	15.4	24.6	5.1	34.0	16.2	15.9	28.8	5.0	16.8	18.5	18.4	41.3	3.8	5.2	17.9	20.5	52.5
1979	3.8	66.6	5.6	10.9	13.1	4.5	56.7	8.0	13.3	17.6	5.1	35.2	15.0	16.1	28.6	5.1	27.9	17.4	16.4	33.3	4.8	13.2	18.3	17.9	45.9	3.6	3.8	15.9	19.2	57.5
1980	3.4	64.3	6.2	11.2	14.9	4.0	53.2	8.8	13.9	20.2	4.5	30.6	15.8	16.9	32.2	4.5	23.2	18.0	17.3	37.1	4.1	10.4	19.1	17.9	48.6	3.0	3.5	18.6	18.2	56.7
1981	3.2	68.1	6.6	9.0	13.2	3.8	57.3	9.6	11.3	18.0	4.4	37.2	17.0	13.4	28.0	4.4	30.4	19.3	13.6	32.3	4.1	15.3	23.5	13.9	43.1	3.1	5.5	25.5	13.0	53.0
1982	3.7	67.8	7.9	8.3	12.3	4.4	57.2	11.6	10.2	16.7	5.0	36.7	21.2	11.8	25.3	5.1	29.6	24.5	11.9	28.9	4.7	16.0	26.8	12.4	40.2	3.6	8.2	25.2	11.9	51.1
1983	3.7	69.3	8.4	7.6	11.1	4.4	59.3	12.2	9.3	14.8	5.1	40.5	21.8	10.7	22.0	5.1	34.0	24.9	10.9	25.2	4.9	20.2	27.6	11.7	35.7	3.6	9.1	27.8	11.8	47.7
1984	3.8	67.3	8.8	8.0	12.1	4.5	56.9	12.7	9.7	16.1	5.2	39.0	21.6	10.8	23.6	5.2	32.8	23.8	11.0	27.2	4.9	19.0	26.7	11.2	38.2	3.5	9.7	25.2	10.3	51.3
1985	3.7	65.0	9.6	9.2	12.5	4.3	54.8	13.7	10.9	16.4	4.8	38.6	21.9	10.8	24.0	4.8	33.1	23.3	10.8	28.0	4.4	19.0	26.6	10.3	39.6	3.0	11.4	24.6	7.8	53.2
1986	3.9	63.6	10.4	8.8	13.4	4.5	53.7	14.5	10.0	17.3	4.8	38.0	22.1	10.0	25.1	4.8	32.3	23.7	10.0	29.3	4.3	18.2	27.7	9.3	40.5	2.9	9.9	27.5	7.7	52.1
1987	3.7	63.5	11.1	8.1	13.6	4.2	53.4	15.4	9.3	17.6	4.5	37.7	23.4	8.9	25.5	4.5	31.9	25.2	8.8	29.6	4.0	18.2	29.0	7.8	40.9	2.7	10.5	27.5	6.1	53.3
1988	3.5	63.3	12.7	8.0	12.5	4.0	53.5	17.5	9.1	15.9	4.3	37.6	27.4	9.0	21.7	4.3	31.8	30.0	9.2	24.7	4.1	19.9	35.8	8.7	31.5	2.6	14.0	39.2	6.7	37.5
1989	3.7	61.1	13.3	8.8	13.1	4.2	50.6	18.4	10.1	16.7	4.6	35.2	28.1	9.7	22.4	4.6	29.6	31.0	9.5	25.2	4.5	18.5	37.8	8.0	31.3	2.8	12.6	41.7	5.1	37.8
1990	3.7	63.1	13.7	7.6	12.0	4.1	53.1	18.9	8.6	15.2	4.3	37.6	29.1	8.3	20.9	4.2	31.8	32.1	8.2	23.7	3.7	19.7	39.0	7.2	30.5	2.2	12.3	43.8	4.4	37.2
1991	3.8	62.9	14.3	7.5	11.5	4.1	54.2	19.4	8.1	14.1	4.2	39.0	30.4	7.6	18.9	4.2	33.1	33.3	7.7	21.8	3.6	21.0	39.3	7.0	29.0	2.0	13.1	43.8	4.0	37.1
1992	6.0	60.8	14.1	7.7	11.4	6.5	53.3	18.8	7.9	13.5	6.9	40.2	28.3	6.9	17.7	6.9	34.6	31.4	6.8	20.3	6.3	22.5	38.2	5.7	27.4	4.2	15.7	41.7	3.7	34.7
1993	5.1	63.6	14.2	6.9	10.3	5.7	55.8	19.1	7.1	12.2	6.3	41.9	29.5	6.2	16.0	6.4	36.3	32.8	6.1	18.4	5.9	24.4	40.1	4.9	24.7	3.7	20.7	42.0	3.1	30.6
1994	5.2	63.5	14.2	6.7	10.5	5.9	55.4	19.2	7.0	12.5	6.5	41.2	29.5	6.1	16.8	6.6	35.5	32.7	5.9	19.3	6.0	23.3	40.1	4.7	25.9	3.9	17.8	43.3	3.3	31.7
1995	5.2	62.9	15.2	6.1	10.6	5.8	54.3	20.5	6.4	13.0	6.4	38.6	31.5	5.5	18.0	6.4	32.7	35.0	5.2	20.8	5.6	21.0	42.1	3.7	27.7	3.5	14.8	44.7	2.3	34.7
1996																														
1997																														
1998	5.1	60.8	15.0	6.7	12.4	5.6	52.1	20.0	7.3	15.1	5.8	36.0	30.1	7.2	20.9	5.7	29.9	33.5	7.1	23.8	4.5	20.0	40.1	5.3	30.1	3.1	17.6	41.1	3.7	34.5
1999	5.5	60.3	15.2	6.7	12.3	5.9	51.7	20.0	7.3	15.0	5.9	35.6	30.0	7.6	20.9	5.7	29.5	33.5	7.6	23.7	4.3	20.3	40.1	5.7	29.7	3.0	18.8	41.1	4.0	33.1
2000	5.4	60.4	15.4	6.6	12.2	5.7	52.6	20.0	7.1	14.7	5.5	37.7	29.5	7.3	20.1	5.2	31.5	33.1	7.4	22.9	3.8	23.0	39.6	5.8	27.9	2.8	22.4	40.8	4.2	29.8
2001	5.4	60.8	15.5	6.2	12.1	5.6	52.9	20.1	6.7	14.7	5.3	38.1	29.8	6.7	20.1	4.9	31.8	33.4	6.9	23.1	3.5	22.9	39.5	5.3	28.8	3.5	22.1	40.3	5.3	28.8
2002	5.4	62.0	15.8	5.7	11.2	5.6	54.3	20.6	6.0	13.5	5.3	39.3	30.7	5.8	19.0	4.9	32.9	34.6	5.8	21.9	3.4	23.6	40.7	4.6	27.7	3.4	22.8	41.6	4.6	27.7
2003	5.4	61.4	15.6	5.7	11.9	5.6	53.5	20.3	6.0	14.6	5.2	38.0	29.7	5.8	21.3	4.8	31.5	33.2	5.7	24.9	3.4	22.0	38.0	4.4	32.1	3.4	21.3	38.8	4.4	32.1
2004	5.5	62.0	15.8	5.9	10.8	5.7	54.3	20.6	6.3	13.1	5.4	39.2	30.6	6.5	18.3	5.0	32.9	34.6	6.5	20.9	3.7	23.8	41.1	5.7	25.8	3.7	23.0	41.9	5.7	25.8

Notes: Fractiles defined by size of total income. For each fractile, the first five columns (summing to 100%) give the percentage of wage income (wages and salaries, pensions, other employment income), self employment income, entrepreneurial income (farm income and small business income), capital income (dividends) and rents. The income definition excludes interest income as well as most capital gains.
Details on methodology are presented in Appendix 12A.

Source: Computations based on tax return statistics.

Table 12A.4 (continued) Income composition in top income groups, Italy 1976 2004

	Top 10–5%					Top 5–1%					Top 1–0.5%					Top 0.5–0.1%					Top 0.1–0.01%					Top 0.01%				
	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital	Rents	Wage	Self-Empl.	Business	Capital
1976	4.7	77.6	1.4	11.4	4.9	5.7	67.8	3.7	14.4	8.5	6.6	55.7	9.5	15.1	13.0	6.4	46.6	17.2	14.3	15.5	6.7	25.2	20.3	19.4	28.5	5.3	7.8	18.5	25.3	43.2
1977	2.7	86.7	1.1	6.0	3.5	3.9	74.9	3.0	10.5	7.7	5.5	55.1	9.6	15.0	14.9	5.5	44.9	16.1	14.9	18.6	5.4	24.3	18.9	18.7	32.7	3.7	7.6	17.5	22.0	49.1
1978	2.4	86.7	1.0	5.9	4.0	3.8	74.0	3.3	10.3	8.7	5.2	53.4	10.4	14.5	16.6	5.2	44.1	14.9	14.5	21.3	5.3	20.3	18.6	17.8	38.0	3.8	5.2	17.9	20.5	52.5
1979	2.7	85.2	1.0	6.4	4.7	4.0	70.2	3.6	11.5	10.7	5.2	49.2	10.4	15.5	19.6	5.3	36.6	16.9	15.4	25.8	5.1	16.0	19.0	17.5	42.4	3.6	3.8	15.9	19.2	57.5
1980	2.3	85.2	1.2	6.2	5.1	3.6	67.5	4.4	12.0	12.5	4.6	45.1	11.6	16.1	22.7	4.7	31.0	17.3	16.9	30.2	4.4	12.5	19.2	17.8	46.1	3.0	3.5	18.6	18.2	56.7
1981	2.0	87.5	1.2	4.9	4.4	3.4	69.7	5.0	10.1	11.8	4.4	50.0	12.6	12.9	20.0	4.6	39.3	16.8	13.4	25.9	4.4	18.3	22.9	14.2	40.2	3.1	5.5	25.5	13.0	53.0
1982	2.4	86.8	1.5	4.8	4.5	4.0	69.8	5.6	9.2	11.3	5.0	50.1	14.9	11.6	18.4	5.2	37.5	23.2	11.7	22.3	5.1	18.3	27.3	12.5	36.9	3.6	8.2	25.2	11.9	51.1
1983	2.4	87.2	1.6	4.5	4.4	4.0	70.9	6.3	8.5	10.4	5.0	52.5	16.0	10.3	16.2	5.2	41.8	23.4	10.4	19.3	5.3	23.3	27.5	11.7	32.2	3.6	9.1	27.8	11.8	47.7
1984	2.5	86.2	1.7	4.7	4.8	4.2	68.2	7.3	9.1	11.4	5.1	50.5	17.3	10.3	16.8	5.4	40.7	22.2	10.9	20.9	5.3	21.8	27.1	11.4	34.4	3.5	9.7	25.2	10.3	51.3
1985	2.5	84.3	2.0	6.2	5.1	4.0	65.2	8.5	10.9	11.5	4.8	48.9	19.1	10.8	16.4	5.0	41.4	21.4	11.1	21.2	4.8	21.3	27.2	11.1	35.6	3.0	11.4	24.6	7.8	53.2
1986	2.7	82.7	2.5	6.3	5.8	4.2	64.1	9.5	10.1	12.2	4.9	49.1	18.9	9.9	17.2	5.1	40.8	21.3	10.4	22.5	4.8	20.7	27.8	9.8	36.9	2.9	9.9	27.5	7.7	52.1
1987	2.6	83.3	2.6	5.8	5.7	4.0	63.9	10.1	9.6	12.4	4.6	49.2	19.9	9.0	17.4	4.8	40.1	22.9	9.4	22.8	4.4	20.6	29.5	8.4	37.1	2.7	10.5	27.5	6.1	53.3
1988	2.5	82.9	3.0	5.9	5.8	3.8	63.9	11.1	9.1	12.1	4.2	48.5	22.6	8.7	16.0	4.5	38.8	26.6	9.4	20.7	4.5	21.6	34.9	9.3	29.8	2.6	14.0	39.2	6.7	37.5
1989	2.7	82.2	3.1	6.2	5.9	4.0	60.8	12.0	10.4	12.9	4.4	46.1	22.4	10.2	17.0	4.8	36.2	27.0	10.4	21.7	4.9	20.3	36.6	8.8	29.3	2.8	12.6	41.7	5.1	37.8
1990	2.8	83.1	3.2	5.4	5.4	4.1	63.3	12.3	8.8	11.6	4.4	48.7	23.2	8.3	15.4	4.5	39.1	28.0	8.9	19.6	4.2	21.9	37.5	8.0	28.5	2.2	12.3	43.8	4.4	37.2
1991	3.2	80.8	3.9	6.2	6.1	4.1	64.2	12.3	8.4	11.0	4.2	50.2	24.7	7.4	13.4	4.5	40.2	29.8	8.1	17.4	4.1	23.5	38.0	7.9	26.5	2.0	13.1	43.8	4.0	37.1
1992	5.0	76.2	4.5	7.2	7.2	6.3	61.7	12.6	8.6	10.8	6.8	50.7	22.6	7.3	12.6	7.3	41.9	27.3	7.4	16.2	6.9	24.6	37.1	6.3	25.1	4.2	15.7	41.7	3.7	34.7
1993	3.7	79.5	4.2	6.3	6.3	5.4	64.7	12.4	7.7	9.8	6.2	52.8	23.1	6.6	11.4	6.8	43.5	28.4	6.7	14.6	6.6	25.6	39.5	5.5	22.8	3.7	20.7	42.0	3.1	30.6
1994	3.7	80.0	4.1	6.0	6.2	5.4	64.6	12.6	7.6	9.8	6.3	52.2	23.2	6.5	11.8	7.0	42.9	28.1	6.7	15.3	6.7	25.1	39.1	5.1	24.0	3.9	17.8	43.3	3.3	31.7
1995	3.8	80.6	4.3	5.5	5.8	5.4	64.6	13.3	7.0	9.7	6.4	50.3	24.6	6.3	12.5	6.9	40.0	30.5	6.1	16.5	6.2	23.1	41.2	4.2	25.3	3.5	14.8	44.7	2.3	34.7
1996																														
1997																														
1998	4.0	79.5	4.5	5.5	6.5	5.5	62.9	13.2	7.3	11.2	6.2	48.4	23.1	7.5	14.9	6.5	36.6	29.1	8.3	19.6	5.1	20.9	39.7	5.9	28.5	3.1	17.6	41.1	3.7	34.5
1999	4.7	78.4	4.9	5.4	6.6	5.9	62.5	13.4	7.2	11.1	6.4	47.9	22.9	7.7	15.1	6.6	35.7	29.1	8.8	19.8	4.8	20.9	39.6	6.4	28.4	3.0	18.8	41.1	4.0	33.1
2000	4.9	77.3	5.4	5.5	6.8	5.8	62.6	13.6	6.9	11.1	6.0	50.5	22.0	7.2	14.4	6.2	37.3	28.6	8.5	19.4	4.1	23.2	39.1	6.4	27.2	2.8	22.4	40.8	4.2	29.8
2001	4.8	78.3	5.4	5.2	6.3	5.9	62.9	13.6	6.7	10.9	5.9	51.4	22.3	6.5	13.9	6.0	38.0	29.1	8.0	18.9	3.5	23.2	39.2	5.3	28.8	3.5	22.1	40.3	5.3	28.8
2002	4.8	78.8	5.5	5.0	6.0	5.9	64.3	13.9	6.1	9.8	6.0	52.5	22.8	5.9	12.8	6.0	39.5	30.3	6.7	17.5	3.4	23.9	40.4	4.6	27.7	3.4	22.8	41.6	4.6	27.7
2003	4.8	78.9	5.5	5.0	5.9	5.9	64.1	13.9	6.1	10.0	6.1	51.8	22.6	6.1	13.5	5.8	38.6	29.6	6.6	19.4	3.4	22.3	37.7	4.4	32.1	3.4	21.3	38.8	4.4	32.1
2004	5.0	78.7	5.5	5.0	5.8	5.9	64.4	14.0	6.2	9.5	6.2	52.1	22.6	6.3	12.8	6.0	39.4	30.2	7.2	17.3	3.7	24.1	40.7	5.7	25.8	3.7	23.0	41.9	5.7	25.8

Notes Fractiles defined by size of total income For each fractile, the first five columns (summing to 100%) give the percentage of wage income (wages and salaries, pensions, other employment income), self employment income, entrepreneurial income (farm income and small business income), capital income (dividends) and rents The income definition excludes interest income as well as most capital gains Details on methodology are presented in Appendix 12A

Source: Computations based on tax return statistics.

Table 12A.5 Effect of 10% under reporting in self employment income on top income shares, Italy, 1976 2004

	Top 10%		Top 1%		Top 0.1%		Top 0.01%	
	Original incomes as reported	Original incomes + 10% of reported self-employment income	Original incomes as reported	Original incomes + 10% of reported self-employment income	Original incomes as reported	Original incomes + 10% of reported self-employment income	Original incomes as reported	Original incomes + 10% of reported self-employment income
1976	28.50	28.65	7.10	7.20	1.70	1.73	0.40	0.41
1977	27.53	27.68	6.80	6.89	1.66	1.68	0.39	0.39
1978	27.15	27.28	6.71	6.80	1.63	1.66	0.38	0.39
1979	27.21	27.36	6.83	6.92	1.67	1.70	0.39	0.40
1980	27.17	27.33	6.90	7.00	1.72	1.74	0.40	0.40
1981	26.31	26.48	6.47	6.58	1.57	1.61	0.36	0.37
1982	26.14	26.34	6.40	6.53	1.53	1.58	0.35	0.36
1983	26.04	26.25	6.34	6.47	1.48	1.52	0.33	0.33
1984	26.34	26.57	6.54	6.66	1.56	1.59	0.35	0.36
1985	26.83	27.08	6.81	6.95	1.65	1.70	0.38	0.39
1986	27.20	27.48	7.13	7.27	1.77	1.81	0.42	0.43
1987	28.12	28.42	7.45	7.58	1.86	1.91	0.44	0.45
1988	28.91	29.26	7.60	7.78	1.83	1.90	0.41	0.42
1989	29.34	29.73	7.79	8.00	1.91	1.98	0.43	0.45
1990	29.50	29.89	7.78	7.96	1.92	1.97	0.44	0.46
1991	29.53	29.94	7.84	8.05	1.92	1.99	0.46	0.48
1992	29.81	30.22	7.81	8.02	1.90	1.97	0.45	0.47
1993	30.19	30.61	7.92	8.15	1.97	2.04	0.48	0.50
1994	30.41	30.83	7.99	8.17	2.00	2.06	0.49	0.51
1995	30.57	31.03	8.13	8.34	2.07	2.15	0.52	0.55
1996								
1997								
1998	32.01	32.47	8.74	9.00	2.35	2.43	0.65	0.69
1999	32.44	32.92	8.82	9.04	2.38	2.47	0.66	0.70
2000	32.94	33.44	9.09	9.34	2.49	2.58	0.70	0.75
2001	33.00	33.28	9.28	9.42	2.65	2.70	0.79	0.83
2002	33.03	33.32	9.28	9.43	2.68	2.74	0.81	0.85
2003	33.02	33.31	9.36	9.52	2.75	2.81	0.84	0.88
2004	32.90	33.21	9.23	9.38	2.68	2.75	0.83	0.88

Notes: Fractiles defined by size of total income. For each fractile, the first column ('original incomes as reported') reproduces the top income share estimates from Table 12A.2. The second column ('original incomes + 10% of reported self-employment income') assumes that under-reporting in self-employment income is 10%, this amount being added to the raw statistics.

Source: Computations based on tax return statistics.

APPENDIX 12B: ESTIMATING MARGINAL TAX RATES

Average marginal tax rates (income weighted) used in Figure 12.12 have been computed as follows. We consider each of the income thresholds P99, P99.9, etc. estimated from the interpolation methods described above. We subtracted from the raw income the average level of income allowances (for example, for the income threshold P99, we identify the bracket in the tax tabulations to which this level of income belongs and subtract the average income allowance in that bracket). This gives the net taxable income. Tax liability is obtained from taxable income from the tax schedules in Table 12B.1 from which the marginal tax rate for any taxable income can be obtained.

We estimate the income weighted marginal tax rate for the top 0.01 per cent as:

$$[\text{Share P99.99} - 99.999 \times \text{MTR } 99.995 + \text{Share } 99.999 - 100 \times (\text{MTR } 99.999 + \text{MTR } 99.9999)/2]/[\text{Share P99.99} - 99.999 + \text{Share P99.999} - 100]$$

where Share P99.99 99.999 denotes the income share of group P99.99 99.999 and MTR 99.995 denotes the marginal tax rate at percentile 99.995.

Table 12B.1 Income tax rates in Italy, 1974 2004

Income (million lire) from	to	Tax rate (%)	Income (million lire)		Tax rate (%)	Income (million lire)		Tax rate (%)
1974			**1975**			**1976 1982**		
0	2	10	0	2	10	0	3	10
2	3	13	2	3	13	3	4	13
3	4	16	3	4	16	4	5	16
4	5	19	4	5	19	5	6	19
5	6	22	5	6	22	6	7.5	22
6	7	25	6	7	25	7.5	9	25
7	8	27	7	8	27	9	11	27
8	9	29	8	9	29	11	13	29
9	10	31	9	10	31	13	15	31
10	12	37	10	12	32	15	17	32
12	14	38	12	14	33	17	19	33
14	16	44	14	16	34	19	22	34
16	18	45	16	18	35	22	25	35
18	20	46	18	20	36	25	30	36
20	25	48	20	25	38	30	35	38
25	30	50	25	30	40	35	40	40
30	40	52	30	40	42	40	50	42
40	50	54	40	50	44	50	60	44
50	60	56	50	60	46	60	80	46
60	80	58	60	80	48	80	100	48
80	100	60	80	100	50	100	125	50
100	125	62	100	125	52	125	150	52
125	150	64	125	150	54	150	175	54
150	175	66	150	175	56	175	200	56
175	200	68	175	200	58	200	250	58
200	250	70	200	250	60	250	300	60
250	300	72	250	300	62	300	350	62
300	350	74	300	350	64	350	400	64
350	400	76	350	400	66	400	450	66
400	450	78	400	450	68	450	500	68

450	500	80	450	500	70	500	550	70
500		82	500		72	550		72

1983 1985			1986 1988			1989		
0	11	18	0	6	12	0	6	10
11	24	27	6	11	22	6	12	22
24	30	35	11	28	27	12	30	26
30	38	37	28	50	34	30	60	33
38	60	41	50	100	41	60	150	40
60	120	47	100	150	48	150	300	45
120	250	56	150	300	53	300		50
250	500	62	300	600	58			
500		65	600		62			

1990			1991			1992 1997		
0	6.4	10	0	6.8	10	0	7.2	10
6.4	12.7	22	6.8	13.5	22	7.2	14.4	22
12.7	31.8	26	13.5	33.7	26	14.4	30	27
31.8	63.7	33	33.7	67.6	33	30	60	34
63.7	159.1	40	67.6	168.8	40	60	150	41
159.1	318.3	45	168.8	337.7	45	150	300	46
318.3		50	337.7		50	300		51

1998 1999			2000			2001		
0	15	18.5	0	20	18.5	0	20	18
15	30	26.5	20	30	25.5	20	30	24
30	60	33.5	30	60	33.45	30	60	32
60	135	39.5	60	135	39.5	60	135	39
135		45.5	135		45.5	135		45

Income (euros)		Tax rate (%)	Income (euros)		Tax rate (%)
from	to		from	to	
2002			**2003 2004**		
0.00	10,329.14	18	0.00	15,000.00	23
10,329.14	15,493.71	24	15,000.00	29,000.00	29
15,493.71	30,987.68	32	29,000.00	32,600.00	31
30,987.68	69,721.68	39	32,600.00	70,000.00	39
69,721.68		45	70,000.00		45

APPENDIX 12C: RESULTS BASED ON THE SURVEY OF HOUSEHOLDS' INCOME AND WEALTH

Results presented in Figure 12.1 are based on micro data from the Bank of Italy's Survey of Households' Income and Wealth Historical Database between 1977 and 2004. Over the years, the survey questionnaire has undergone several modifications, including changes in the components of households' disposable income (mainly concerning capital income). Dividends and interest were recorded in 1973 5; interest on bank accounts and government bonds was also recorded in 1982 4; since 1986 these items have been calculated by multiplying the household's holdings of each financial asset by the relevant average market return. All income is recorded net of payment of taxes and social security contributions. A summary of the components that formed the household disposable income can be found in Brandolini (2000).

In order to enhance comparison over time, our household income definition from the survey includes wages, social transfers, self employment income, business income, imputed rents for owner occupied houses, and excludes income from financial assets (variable *Y1* in the Historical Archive).

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