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Top Incomes and Earnings in Portugal 1936-2004

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Abstract

This paper analyzes income and earnings concentration in Portugal from a long-run perspective using personal income and wage tax statistics. Our results suggest that income concentration was much higher during the 1930s and early 1940s than it is today. Top income shares estimated from reported incomes deteriorated during the Second World War, even if Portugal did not take active participation in the conflict. However, the magnitude of the drop was less important than in other European countries. The level of concentration between 1950 and 1970 remained relatively high compared to countries such as Spain, France, UK or the United States. The decrease in income concentration, started very moderately at the end of the 1960s and which accelerated after the revolution of 1974, began to be reversed during the first half of the 1980s. During the last fifteen years top income shares have increased steadily. The rise in wage concentration contributed to this process in a significant way. The evidence since 1989 suggests that the level of marginal tax rate at the top has not been the primary determinant of the level of top reported incomes. Marginal rates have stayed constant in a context of growing top shares.

JEL classification: D3, H2, N3, O1

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1. Introduction

This paper analyzes the evolution of income and wage concentration in Portugal between 1936 and 2004 using tax statistics and administrative records on individual earnings. This research is strictly linked to the studies recently gathered in Atkinson and Piketty, 2007, where series for shares of income accruing to upper income groups have been constructed for the United States, Ireland, the United Kingdom, Canada, New Zealand, Australia, Finland, France, Germany, the Netherlands, Sweden and Switzerland. Research has also been done on the experiences of Argentina, Spain, India, Japan, Sweden, Finland, Norway, China and Indonesia.¹ The case of Portugal is interesting on several grounds.

First, Portugal has undergone important changes in the political arena since the beginning of the XXth century. After the decline and final collapse of the constitutional monarchy, the First Republic was established in 1910. The parliamentary regime was turbulent and unstable, with eight presidents, thirty-eight prime ministers and a brief monarchy restoration over a seventeen-year period.² Participation in the First World War on the Entente side, large government deficits, rapid monetary expansion and high inflation dominated the scenario. The First Republic was ended in 1926 by a military coup, which installed an authoritarian republic followed by seven years of institutional change. There was no apocalyptic civil war as in Spain and the ultimate leader of the new regime was not a general, but a university professor, António Salazar. The Second Republic evolved to a right-wing dictatorship under the form of a single party

¹ Aarberge and Atkinson, 2008, Atkinson, 2005, Atkinson and Leigh, 2007a,b, Banerjee and Piketty, 2005, Dell, 2007, Dell et al., 2007, Kopczuk and Saez, 2004, Leigh and van der Eng, 2007, Moriguchi and Saez, 2007, Nolan, 2007, Piketty, 2001, 2003, Piketty and Qian, 2006, Piketty and Saez, 2003, Piketty et al, 2006, Saez and Veall, 2005, Salverda and Atkinson, 2007, Riihelä et al, 2005, Roine and Waldenström, 2006.

² For an account of the history of Portugal until the late 1960s, see Payne, 1972. See also Robinson, 1979 and Gallaher, 1983.

corporate regime.³ Due to the absence of the clear polarization of the Spanish society, the authoritarian system developed in a framework of institutional continuity. In 1928 Salazar was appointed ministry of finance, and in 1933 he became prime minister, remaining in power until 1968. From the early 1930s to the end of the 1950s, Portugal followed a policy of relative isolationism under a corporatist socio-economic system (extensive state regulation and private ownership of means of production). In the late 1950s, the regime shifted towards a moderately outward looking policy, which inaugurated a period of rapid growth until the beginning of the 1970s. Unlike Spain, Portugal was accepted into the Marshall plan in 1947 and the NATO in 1949. In 1974 a left-wing military coup put an end to the dictatorship. The revolutionary government granted independence to the Portuguese colonies in Africa and Asia, set out on a course of land expropriation and sweeping nationalization (banks, basic industries, utilities, insurance companies, newspapers) and followed a policy of freezing prices and rising wages.⁴ The process has been described as a successful challenge to capitalist property.⁵ In 1975 the country held its first free multi-party elections since 1926. By the beginning of the 1980s most of the reforms of the revolutionary period started to be reversed, one of the motivating factors being Portugal joining the European Communities, which happened in 1986. The country adopted the Euro in 2002. The study of top incomes in Portugal provides

³ “[...] one of the greatest fallacies of the nineteenth century was that the English parliamentarism and English democracy were adaptable to every European country [...]”, Salazar, 1939.

⁴ Between 1974 and 1975 more than 1,300 industrial companies were nationalized; for a detailed account of nationalizations in the industrial sector see Martins and Chaves Rosa, 1979. In less than six months 1.2 million hectares were expropriated in the southern and central provinces south of the Tagus river, that is, 13% of the country’s surface and 25% of total farm land. The occupation of large estates had begun even before a governmental decision gave it legal status through Decree-Law 203C/1975 and Decree-Law 207/1975 (see Barreto, 1983, 1987 and 1988). Two thousand houses were seized in the two weeks following the fall of the dictatorship, and only in February 1975 2,500 apartments were occupied in Lisbon alone (see Downs, 1983). A decollectivization process started modestly by the end of the 1970s and culminated with the reformed agrarian law enacted in 1988 (Law 109/1988 of 9/26/1988) and with the final setting of monetary compensations for original proprietors (Law 199/1988 of 5/31/1988). By the mid 1990s only one tenth of the expropriated estates was still in possession of collective farms.

⁵ See Bermeo, 1997.

new insights on the relationships between the political regimes and the evolution of income concentration.

Second, from the economic point of view, Portugal underwent dramatic changes over the last hundred years. During the first half of the XXth. century, the country was an agricultural-based economy in which wine accounted for one third of total agrarian output.⁶ In 1950s, GDP per capita was 15% lower than that of Spain, 60% lower than that of France and 70% lower than in the United Kingdom.⁷ Between the 1950s and the beginning of the 1970s the government shifted towards mild liberalization policies and imposed a strategy aimed at economic development and structural change; economic growth resumed at a quicker pace. However, the growth rates of per capita income should be read with caution in the light of important emigration flows between 1950 and the early 1980s.⁸ In the 1970s growth came to a halt, affected by the revolution of 1974, the nationalization spree and the less favorable international conditions. Since the mid 1980s, the privatization of major financial and industrial conglomerates and the fiscal and monetary policies followed to join the European Union started a period of considerable modernization and growth. Today, Portugal's GDP per capita is about 30-35% lower than the GDP per capita of the largest western European economies such as France, Germany or the United Kingdom, and about 20% lower than the GDP per capita in Spain.⁹ As in the case of Spain, it is important to analyze income concentration during the growth and stagnation years in order to re-assess the link between economic development and income distribution.

Third, Portugal (as well as Spain) provides new evidence on the relationship between economic integration and income concentration. As

⁶ Lains, 2003a,b argue that, despite its backwardness, the Portuguese economy had a good performance during the first half of the XXth century if compared to the previous fifty years. The economy expanded slowly under favorable external conditions before 1913, and expanded more rapidly when international economic conditions were less favorable after the First World War. Nevertheless, improvements were poor by Western European standards. See also Lains, 2003c.

⁷ Comparative data from Maddison, 2001, 2003.

⁸ The debate around the dynamic or stagnating features of the *Estado Novo* economic policy can be seen in Baklanoff, 1992, Hudson, 1989, ILO 1979 and Wheeler, 1990.

⁹ For an account of the economic evolution of Portugal during the XXth. century, see also Lains, 1995, Lopes 1994, 1996, Nunes et al., 1989 and Valério, 2001.

mentioned above, the country joined the European Union in 1986, after seven years of gradual reforms for the dismantling of barriers to trade, capital and labor mobility.

Finally, there are no studies on the evolution of inequality in Portugal from a long-run historical perspective. Therefore, this study can be seen as the first serious attempt at compiling systematic time series of income concentration using primarily individual tax statistics, which have been completely ignored by previous studies.¹⁰

A number of researchers have analyzed the evolution of income, earnings and expenditure inequality during the *last thirty years* in Portugal based on two types of sources: survey data and administrative records on wages and salaries. In the following paragraphs we summarize the main findings, which point to a reduction of income inequality and a sharp increase in earnings concentration since the beginning of the 1980s.

Using micro-data from the 1980/1981 and 1990/1991 households' surveys, Rodrigues, 1993, 1994, 1996 and Gouveia and Tavares, 1995 detect an unambiguous decline in income inequality during the 1980s.¹¹ In particular, Rodrigues 1994 finds that wages and capital income would have raised inequality, but their effects were nonetheless offset by the evolution of self-employees' income and pensions. On the contrary, Gouveia and Tavares, 1995 argue that the reduction in inequality during the 1980s could have been the result of the trade-earnings argument acting in reverse in Portugal: increased trade with Europe could have reinforced the country's specialization in low-skilled activities and therefore increased wages of unskilled workers. Nevertheless, the returns to education augmented substantially during the years after joining the European

¹⁰ The first two households' budget surveys were conducted in 1967/1968 and 1973/1974. As it is usually the case, the primary purpose of the surveys was to collect expenditure information required as input to the construction of the consumer price index. As a result, the 1967/1968 survey did not contain income information. The 1973/1974 survey did inquire about incomes. Descriptive results from these two first surveys can be found in Castinheira and Ribeiro, 1977, Rodrigues, 1988 and Silva, 1971, 1982. However, the micro-data for these first two surveys have not survived. Since the 1980/1981 survey, information has been collected on household income, household composition and other socioeconomic characteristics.

¹¹ This conclusion relies on the comparison of both surveys, implying that it is not possible to rigorously establish the evolution of income inequality in the intermediate years.

Union, as shown in Hartog, Pereira and Viera, 2001, providing no clear evidence of a decline in the skill premium.¹²

Research has also been done on the basis of the European Community Household Panel (ECHP). Rodrigues, 1999 compares the 1994/1995 households' survey with the 1995 ECHP. Budría, 2007 analyzes in detail the ECHP between 1994 and 2001 and documents a reduction in earnings and income inequality as well as a rise in the concentration of capital income during that period.

Several researchers have focused on earnings inequality. Based on the employees' administrative records that we also use as a data source in this paper, Cardoso, 1998a analyzes the period 1983-1992 and finds that rising inequality characterized the evolution of labor returns over the whole period, the upper part of the earnings distribution playing a major role in shaping both the level and the trend of inequality. One feature stands out: a stretched top, where dispersion increased remarkably. The same tendency has been described in OECD, 1993 and Ministério do Emprego, 1992, which reports a 10 percent rise in the Gini index for earnings from 1982 to 1989.¹³ Machado and Mata, 2001 and Hartog, Pereira and Viera, 2001 suggest that a substantial part of this increase must be attributed to the returns to education, especially since joining the European Union.¹⁴

As we have already emphasized in Alvaredo and Saez, 2007, our series measure only top income (or wage) concentration and hence are silent about changes in the lower and middle part of the distribution. Therefore, our series can very well follow different patterns when compared to global inequality measures such as Gini coefficients or macro-based estimates. Additionally, it is worth

¹² Batista, 2002 finds that the skill premium in Portugal has indeed fallen since the mid 1990s.

¹³ Other studies on income and earnings inequality in Portugal over the last decades include Albuquerque and Gouveia, 1994, Budría, 2008, Budría and Nunes, 2005, Budría and Pereira, 2007, 2008, Cantó et al, 2002, Cardoso, 1994, 1998b, 1999, 2006, Carneiro, 2007, Castanheira and Carvalho, 1997, Costa, 1994, Ferreira, 1992, Gouveia and Rodrigues, 2002, Hartog et al., 1999, Jimeno et al., 2000, Martins and Pereira, 2004, Rodrigues, 1996, 2005, 2008, Rodrigues et al., 2000, Santos, 1983, Teekens, 1990, Vieira, 1999, Viera, Couto and Tiago, 2006. Cardoso and Cunha, 2005 estimate aggregate wealth owned by Portuguese households between 1980 and 2004; however the authors do not deal with the distribution of wealth. Bover et al., 1998 study the Portuguese and the Spanish labor markets from a comparative perspective.

¹⁴ Murray and Steedman, 1998 analyze the evolution of workers' skills in France, Germany, the Netherlands, Portugal, Sweden and the United Kingdom from a comparative perspective and show that the greatest change in the qualification of the young has taken place in Portugal.

remembering that the rich are usually missing from surveys either for sampling reasons or because they refuse to cooperate with the time-consuming task of completing or answering to a long form. This explains the fact that the dynamics of top income shares estimated from tax statistics may not resemble those deriving from survey data. In particular, high-income earners in our study are much richer than those described in Budría, 2007, whose results are based on the ECHP.¹⁵

Our results show that income concentration was much higher during the 1930s and 1940s than it is today. Top income shares stayed relatively stable between the end of the Second World War and the end of the 1960s, followed by a large drop that began to be reversed at the beginning of the 1980s. Over the last fifteen years top income shares have increased significantly, and the rise in wage concentration contributed to the process in an important way.

The paper is organized as follows. Section 5.2 describes our data sources and outlines our estimation methods. In section 5.3 we present and analyze the evolution of top income between 1936 and 2003. Section 5.4 focuses on earnings concentration. Finally, section 5.5 offers a brief conclusion. The details on our data and methods together with the complete set of results are presented in the appendix.

2. Data and Methodological Issues

We study top income shares and wage concentration based on personal income tax statistics, information from schedular taxes on wages and salaries, and micro-data from administrative records on earnings.

2.1. Income

¹⁵ According to the results presented in Budría, 2007, an income of (in 2000 Euros) 62,760 was required in 2001 to belong to the top 1%, which had an average income of 75,879. Our estimations of top fractiles income levels show that the same group had an average income of 121,948, while an income of 62,760 only qualified as top 5-1%; see Table C. Budría's unit of analysis is the household; ours is the tax unit defined in section 5.2.1.

Our estimates of top income shares are based on personal income tax return statistics compiled by the Portuguese bureau of statistics and the tax agency from 1936 to 1982 and between 1989 and 2003. Before 1976, because of high exemption levels, only a small fraction of individuals had to file a tax return; consequently we must restrict our analysis to the top 0.1% of the income distribution. From 1976 on, we can analyze the top 10%. Complete details on the methodology and data sources are provided in the appendix.

Our top groups are defined relative to the total number of tax units had everyone been required to file a tax return. The unit to which the tax data relate is the married couple, or single adult, or single minor with income in his or her own right. Our reference total for tax units takes this fact into account. Consequently the total number of tax units is defined as the number of all adult males and females (aged 20 and over) less the number of married females. For example, in 2003, there are 8,201,000 adults in the Portuguese population, 5,581,000 tax units and 3,979,000 tax files. The top 1% represents the top 55,810 tax filers. The information is available for census years; intermediate years have been linearly interpolated.

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, interest, other investment income and other smaller income items. Only a fraction of realized capital gains is included in the tax base since 1989, and it is easy to satisfy the conditions for capital gains to go untaxed. In particular, gains from public debt bonds are exempted, as well as gains from stocks if kept for more than one year. Capital gains from real estate are also untaxed if the proceeds are used to purchase real estate property again. No information is available about the distribution of reported capital gains. They are presumably very small. Our income definition is before personal income taxes and personal payroll taxes but after employers' payroll taxes and corporate income taxes. A detailed description of the evolution of the income tax in Portugal between 1936 and 2003 concerning exemption

thresholds, family allowances, tax deductions and marginal tax rates is provided in Table J and Table K in the appendix.

Our main data consists of tables displaying the number of tax returns and the amounts reported (gross income, taxable income, tax paid) for a large number of income brackets. As the top tail of the income distribution is very well approximated by Pareto distributions, we use simple parametric interpolation methods to estimate the thresholds and average income levels for each fractile. The same method has been applied in Alvaredo and Saez, 2007 and in most of the studies gathered in Atkinson and Piketty, 2007. Details of the estimation technique and the adjustments made to the raw series are provided in the appendix, respectively. We then estimate shares of income by dividing the income amounts accruing to each fractile by our series of personal income, defined ideally as total personal income reported on income tax returns had everybody been required to file a tax return.¹⁶ The total income denominator, described in the appendix, is mainly based on National Accounts statistics; the fact that only a small fraction of tax units file a tax return (especially until 1988) implies that the income denominator cannot be approximated by using income tax statistics only.¹⁷

Table 1 gives thresholds and average incomes for a selection of fractiles in Portugal in 2003. The average income is estimated primarily from National Accounts and hence is independent of tax statistics and hence not biased downwards because of tax evasion or avoidance.

2.2. Wages

The estimates of top wage income shares are based on two types of sources: tax statistics, on the one side (the schedular tax on wages (until 1982) and

¹⁶ This methodology is based on the classical study of Kuznets, 1953 as well as on the studies presented in Atkinson and Piketty, 2007.

¹⁷ The methodology using tax returns to compute the level of top incomes, and using national accounts to compute the total income denominator is standard in historical studies of income inequality. However, it differs from Feenberg and Poterba, 1993, who use total income reported on tax returns as their denominator and the total adult population as the number of tax units.

the withholdings at the source on wage income for the modern income tax since 1989) and micro-data on administrative records on the other (*Quadros de Pessoal*, 1985-2004).

The tabulations from the schedular tax have essentially the same structure as the one described above for the income tax. They have been compiled by the Portuguese bureau of statistics between 1936 and 1982 and display the number of tax returns (individually based) and the tax collection for a large number of brackets. However, several changes in the tax code, modifications in the coverage of the tax and the way the statistics are presented imply that we can only provide homogeneous estimates for 1964-1982. On the other side, the tabulations based on withholdings on wages for the income tax cover the period 1989-2000. We also assume a Pareto distribution to estimate top shares. In this case, the top groups are defined relative to the total number of workers while the shares of top wages are defined relative to the total wage bill from national accounts, net of employer social security contributions.

We provide estimates of shares of top wages based on micro-data from administrative records (*Quadros de Pessoal*), which are available between 1985 and 2004 (1990 and 2001 missing). Every year, employers are required by law to provide information about the firm and their employees. Civil service and domestic work are excluded. State-owned companies are included. Agriculture workers are included, although in practice the level of coverage is very low. Top groups are defined in terms of the total number of workers present in the records and the top shares are defined relative to the aggregate wages and salaries in the database. More details are provided in the appendix. Table H describes the size of the database for several groups of workers. More details about data sources and structure are provided in the appendix.

3. Top Income Shares

Figure 1 displays the average personal income per adult and the average income per tax unit along with the consumer price index for the period 1936 to 2003. As Portugal stayed neutral during the Second World War, the impact of the

conflict in terms of per capita GDP was relatively small; after the end of the war and up to 1950 growth was positive but low. The gap to the European core began to be partially abridged, though part of the recovery was due more to the negative effects of the war in the rest of the countries rather than to the improvements in Portugal. Rapid growth started in the 1950s and lasted until the beginning of the 1970s.¹⁸ The slowing down of economic growth that followed is generally attributed to the aftermath of the revolution that ended the dictatorship in 1974 and to the oil shock. The country experienced a severe economic crisis in the first half of the 1980s but growth resumed again after Portugal's accession to the European Union in 1986, starting a period in which GDP per capita grew faster than the EU average; however, since 1999 the economy started to slow down and in early 2002 entered a recession.

Figure 2 displays the top 0.01% and the top 0.1% income shares between 1936 and 2003. The break between 1982 and 1988 reflects the unavailability of tax data during the five years before the change from the old to the new income tax. A number of important conclusions become apparent from this figure. First, the highest income concentration occurred in the 1930s and early 1940s. The top 0.1% share was above 4.5% (twice as high as in the recent period) and the top 0.01% share was around 2% (three times as high as in recent years). This strongly suggests that income concentration in Portugal in the 1930s was substantially higher than it is today. This pattern, also found in the case of Spain and in many of the studies gathered in Atkinson and Piketty, 2007 should not be unexpected as Portugal displayed a low average income and a high concentration of wealth.¹⁹

Second, the old income tax statistics display a large decrease in top shares in the first half of the 1940s. Indeed, the top 0.1% share went down from 5.2% in 1940 to 3.1% in 1946. This coincides with the Second World War and with a sharp increase in the statutory top marginal rates, which moved from 8.5% in

¹⁸ For an analysis of the period and a decomposition of growth by sector of activity, see Lains, 2003a.

¹⁹ Harsgor, 1976 argues that under the old regime, Portugal's private sector was dominated by 40 great families. The industrial dynasties were allied by marriage with the large traditional landowning families of the nobility. The top ten families owned all the important commercial banks.

1945 to 30% in 1946. However, the income-weighted marginal rates augmented only from 5% to around 9%. If the drop in the top 0.1% income share was solely due to an increase in the tax evasion/avoidance following the increase in the (income-weighted) marginal tax rate, then the elasticity of high incomes with respect to one minus the marginal tax rate would have been exaggeratedly high.

Third, top income shares recovered partially after the end of the war, this improvement being concentrated in the top 0.1-0.01%. The share of the top 0.1% in 1950 was above the levels of 1945. However, such a recovery was almost non-existent for the top 0.01%: after 1946 top 0.01% shares never attained the values displayed before. Tax statistics providing the composition of reported top incomes show that taxpayers in 1946 (representing the top 0.3%) obtained about 37% of their income from returns on real estate and farm income, 7% from returns on financial assets, 26% from non-farm business income and about 30% from employment income (see Table I in the appendix). This suggests that a significant portion of the very rich in Portugal were actually passive landowners deriving income from rents and farm business. Such facts are not astonishing in the light of the agricultural-based nature of the Portuguese economy by the middle of the twentieth century, and stand in contrast with Spain, where top income earners at that time were much more likely to be owners of financial assets and non-farm businesses, as discussed Alvaredo and Saez, 2007.

Fourth, income concentration remained around 1.0-1.1% for the top 0.01% and around 3.5% for the top 0.1% from 1946 to 1960, suggesting that the high income growth started at the beginning of the 1950s did not produce important changes until the beginning of the following decade. Top 0.01% shares in 1962-1973 were again stable but lower than the levels observed in 1946-1961.²⁰ We conclude that the mild liberalization policies adopted by the government during the third quarter of the XXth century, and which are usually associated to

²⁰ In 1965 a survey of 306 heads (chief executives, presidents) of manufacturing and service enterprises in Portugal's six most industrialized districts (Aveiro, Braga, Lisbon, Oporto, Santarem and Setúbal) was conducted. The survey included questions pertaining to the socioeconomic origins, career patterns, self-image and opinions of the industrial elite. With the rapid advance of the industry and the growth of cities, new channels of upward mobility seemed to have opened. Makler's (1969) study reveals that the typical businessman was drawn from middle-class background. See also Makler, 1974, 1976.

the increase in growth rates, did not impact on the concentration of income to a great extent. By 1963 the composition of top incomes had not changed in a significant way compared to 1946 either. This reflects the slow changes in the economic structure of the country. The published statistics show that the participation of capital income lost some ground in favor of employment and business income (see Table I).²¹

Finally, a drastic jump downwards in top shares happened since 1974, although it seems from the evolution of the top 0.1% that the decreasing trend started by the end of the 1960s. This coincides with the final period of the dictatorship and should be attributed to the loss of the African colonies and to the leftward movement of the revolutionary government after 1974, when a process of nationalizations broke up the concentration of economic power in the hands of the financial-industrial groups. As discussed in previous sections, banks and insurance companies were nationalized, basic industries became the property of the state and officials began to call for a major program of large-scale land expropriation. Individuals who had compromised with the old regime were ejected from their posts in universities and government agencies. As described in Bermeo, 1987, faced with the real possibility of expropriation or loss of employment, large groups of the Portuguese upper classes simply left the country. Consequently, the transition from dictatorship to democracy was associated with a significant drop in top shares.

Top incomes in the last three decades

The number of tax files augmented considerably since the mid 1970s; therefore we can analyze the top 10% of the distribution between 1976 and 2003.

Figure 3 displays top income shares for three groups within the top decile: the bottom half of the top decile (top 10-5%), the next 4% (top 5-1%) and the top percentile. Three elements are worth noticing. Firstly, the decrease in income

²¹ It should be noted that the changes in the composition of income are affected by the group considered: as composition statistics are only available in aggregate, they describe the top 0.3% of tax units in 1946 and the top 1.2% of tax units in 1963.

concentration, started very moderately at the beginning of the 1970s and which accelerated in 1974, reversed at the beginning of the 1980s. Second, although we cannot rigorously establish what happened between 1983 and 1988, the level of income concentration measured with the new income tax statistics in 1989 was higher than in 1982. Indeed, top shares in the early 1990s are similar to the levels of 1976-1977. This contrasts with the results, obtained from survey data, which point to a relative stable income distribution during the 1980s. Finally, the increase in top shares is higher the higher the fractile considered.

Figure 4 investigates the concentration pattern further by splitting the top 1% into three groups: the top 1-0.5%, the top 0.5-0.1% and the top 0.1%. Again, the higher the fractile, the higher the increase in the share from 1989 to 2003: the top 1-0.5% increases 25% from 2.5% to 3.2% while the top 0.1% increases 50% from 1.5% to 2.3%. This pattern was also found in the case of Spain. We have already shown in Alvaredo and Saez, 2007 that the increase in income concentration that took place in Spain since 1981 has been a phenomenon concentrated within the top 1% of the distribution and in particular within the top 0.1%; the top 10-5% share declined. However, in Portugal, all groups within the top decile display important increases.

The break in the series between 1982 and 1989 hide the effects of important changes in the tax structure. Between those years, the top statutory marginal rates came down from 70% (80% for single individuals) to 40%. In 1988 the schedular tax on wages (with a marginal rate of 22% on the highest salaries) was removed. Figure 5 displays such a drop. The income weighted marginal rate for the top 0.1% group dropped from around 62% in 1979 to 40% in 1989. The experience since 1989, when constant top marginal rates coexist with an increasing trend in top shares, suggest that the level of marginal tax rates at the top is not the primary determinant of the level of top reported incomes.

International Comparison

How does Portugal stand in relationship with other countries? Figure 6 and Figure 7 display the top 0.1% and top 0.01% income shares, respectively, in Portugal in comparison with a number of countries: Spain (Alvaredo and Saez, 2007), France (Piketty 2001 and Landais, 2007), the United States (Piketty and Saez, 2003), Switzerland (Dell, Piketty and Saez, 2007) and the United Kingdom (Atkinson, 2005). In the late 1930s, Portugal starts with a level of income concentration that is higher than Spain and similar to France and the United States. Nevertheless, income concentration in France and the United States falls more sharply than in Portugal during the Second World War. As a consequence, the level of concentration in Portugal between 1950 and 1975 remains high relative to the other the countries plot in the figures. Quite interestingly, between 1945 and the beginning of the 1960s the level of concentration in Portugal is comparable to that of Switzerland. Between 1960 and the first half of the 1970s, top income shares in Switzerland are higher, but the distance to Portugal narrows if we take into account the emigration flows analyzed in the next section. The large drop in top shares in the mid 1970s is noticeable not only in terms of the evolution of concentration in Portugal, but also from a comparative perspective. Nevertheless, it is clear from these figures that not all the drop should be attributed to the political turmoil or the economic policies of the revolutionary period: top shares in the UK and Switzerland also experienced important reductions in 1970-1975, even when the change in Portugal was definitely more radical. Finally, as in the case of Spain, the increase in income concentration in the last years is small compared to the upsurge observed in the United States and other Anglo-Saxon countries; Portugal's experience is closer to those of continental Europe countries.

Emigration Flows and Sensitivity of the Results

Emigration has been one the main features of the Portuguese socio-economic situation in Portugal during the XXth. century. It has provided a safety valve for open and disguised unemployment. According to official estimates, 1.8 million individuals left the country between 1950 and 1975, which is a significant

number for a population that grew only from 8.5 million to 9.3 million between those dates.²² We would like to assess the effects of such large-scale migrations on our top shares estimates. For instance, one of the results presented in the previous section -that the top 0.01% share has been fairly stable between 1946 and 1961 and also stable between 1962 and 1970 at a slightly lower level- could be driven by the dynamics of migrations flows. Other things equal, adding up all emigrants each year to our population control provides an *upper bound* for top shares.²³ Such a change increases our estimates in 1970 by 19% for the top 0.01% and by 21% for the top 0.1% (meaning that the share of the top 0.01% became 0.94% in place of 0.79%). The results are presented in Figure 8, where we plot the top 0.01% income share between 1946 and 1978 together with the counterfactual estimates.

4. Wage Concentration

Unfortunately, tax statistics do not allow for a dynamic analysis of income composition at the top as we did for Spain in Alvaredo and Saez, 2007 because the Portuguese tax tabulations do not provide information on the composition of top incomes. Notwithstanding this shortcoming, we can get more direct evidence on changes in inequality from wage income distribution statistics available on an annual homogeneous basis. It is important to keep in mind that those series capture only wage income concentration and hence are silent about changes in business and capital income concentration.

As we did for overall personal income, Figure 9 displays top wage income shares between 1964 and 2000 for three groups within the top decile: the bottom half of the top decile (top 10-5%), the next 4% (top 5-1%) and the top percentile, while Figure 10 splits the top percentile in three groups: the top 1-0.5%, the top

²² Valério, 2001.

²³ Adding up all emigrants to the population control amounts to assuming that all of them can be considered as tax units, that they are alive throughout the period and that they would have had little income if stayed in Portugal. Therefore we need to go further down in the distribution to locate the top x%. Statistics show that migrants were mostly young males, as described in Conim, 1976. Assuming the same growth rate of tax units since 1950 for Portugal as in Spain or France gives very similar results.

0.5-0.1% and the top 0.1%. The information suggests that wage income concentration (top 1% and above) fell significantly during the last years of the authoritarian regime and the transition. Unlike the case of total income, the sharp decrease in top wages between 1970 and 1976 is clearly a phenomenon concentrated in the top 1% and especially in the top fractiles within the top 1%. Interestingly, despite important movements over the period, the level of concentration within the 1% by the end of the 1990s is comparable to the level of 1970 and slightly lower than the levels in 1964-1969. This suggests that the increase in overall income concentration over the last years has also been in Portugal extremely influenced by the evolution of top wages.

Figure 11 and Figure 12 describes the same shares but their results come from the micro-data on administrative records over 1985-2004. Two periods seem to be clearly identifiable: (i) until 1993-1994 the increase in earnings concentration is mostly condensed in the top 5-0.1%; the top 0.1% is stable or even decline between 1985 and 1986; (ii) since 1994-1995, the increase in concentration is mainly happening in the top 0.1%, which augments considerably from 1.4% in 1994 to 2.4 in 2004, that is, around 70%.²⁴

These conclusions do not depend on the subset of workers included in the administrative records. Figure 13 compares the top 1-0.5%, the top 0.5-0.1% and the top 0.1% wage income shares from *Quadros de Pessoal* (already presented in Figure 12) with the series computed from income tax statistics (in which all workers filing a return are included, without distinction of sector of activity). Both set of series follow the same pattern, and the income tax statistics display even larger increases. Figure 14 compares shares within shares according to both sources.

Together with the estimates in Table F, the presented evidence suggest that the patterns are not only coincident with the findings of Cardoso, 1998 for the period 1983-1992 but also that they have been reinforced between 1992 and 2004: a relatively compressed bottom and a stretched top can be highlighted as the main characteristics of the Portuguese earnings distribution. The high degree of

²⁴ No significant differences are recorded for female and male workers at the top.

inequality prevailing in the country's labor market is essentially due to the fact that high wages are very high relative to the rest of the distribution, and the gap has kept growing. Figure 15 plots the P90 and P10 fractile wage levels as a percentage of the median wage from 1985 to 2004 as another way of looking at the widening gap.

5 Conclusion

This paper has attempted to analyze income and earnings concentration in Portugal from a long-run perspective using the best available statistical evidence. Our results suggest that income concentration was much higher during the 1930s and early 1940s (at levels comparable to other countries such as France, Spain or the United States) than it is today. Top income shares estimated from reported incomes deteriorated during the Second World War, even if Portugal did not take active participation in the conflict. However, the magnitude of the drop was less important than in other European countries. The level of concentration between 1950 and 1970 remained relatively high compared to countries such as Spain, France, UK or the United States. The decrease in income concentration, started very moderately by the end of the 1960s and which accelerated after the revolution of 1974, began to be reversed at the beginning of the 1980s. During the last fifteen years the shares above the top 10% have augmented steadily. The increase has been higher, the higher the fractile considered

The evidence since 1989 suggests that the level of marginal tax rate at the top has not been the primary determinant of the level of top reported incomes. Marginal rates have stayed constant in a context of growing top shares.

The dynamics of top incomes have been partially driven by the behavior of top wages. Between 1985 and 1994 the increase in earnings concentration has been mostly condensed in the top 5-0.1%. Since then, the increase in concentration is happening mainly in the top 0.1%

APPENDIX

A. The Taxes on Income, Wages and Salaries in Portugal

A.1. The ‘old’ income tax

In Portugal, income taxation was enforced for the first time in 1641 as a 10% flat rate on rents, capital incomes and business incomes (*décima militar*); in its origins it was a source to finance the restoration wars. During the XIX century, the system evolved towards the traditional scheme of independent schedular taxes: *Contribuição Predial*, *Contribuição Industrial*, *Décima de Juros*. With modifications, the schedule taxes survived until 1988.

Table J and Table K summarize the main features of the evolution of the personal income tax in Portugal between 1922 and 2003. The first *personal* income tax (*Imposto Pessoal do Rendimento*) was enforced in 1922 (Law 1368/1922). It was defined as a tax levied on top incomes in addition to the traditional schedule taxes (at the time: *Contribuição Industrial* on wages, business income and self-employment income, *Contribuição Predial* on rents, *Imposto sobre a Aplicação de Capitais* on capital income); no provisions were made regarding capital gains. It was a truly independent personal overall income tax. However, several difficulties on its applicability, a high noncompliance rate and the turbulent macroeconomic environment of the First Republic forced its rapid substitution.

In 1928, the government replaced the *Imposto Pessoal do Rendimento* with a new income tax, the *Imposto Complementar* (Law 15290/1928 and Decree 16731/1929) affecting the taxable income defined for the schedule taxes (at the time: *Contribuição Industrial* for business income, *Imposto Profissional* for wages and self-employment income, *Contribuição Predial* for rents, *Imposto sobre a Aplicação de Capitais* for capital income). The *Imposto Complementar*, with two major reforms in 1946 and 1963, remained in existence until 1988.

Between 1950 and 1963 those individuals accumulating two or more civil servant positions, jobs in the private sector or independent professions were subject also to a supplementary tax (*Adicionamento*, Decree-Law 37771 of 2/28/1950). However, this tax affected a very small number of individuals: in 1951, for instance, only 537 individuals paid the *Adicionamento*, out of 25,362 who filed for the *Imposto Complementar*.

A.2. The ‘modern’ income tax

The modern personal income tax (*Imposto sobre o Rendimento das Pessoas Singulares IRS*) was established in 1989 (Decree-Law 442A/1988), when the *Imposto Complementar* and all the schedule taxes were abolished. Taxable income covers (i) wages and salaries (*Categoria A*), (ii) self-employment income (*Categoria B*), (iii) business income (*Categoria C*), (iv) farm income (*Categoria D*), (v) capital income (*Categoria E*), (vi) urban and rural real estate rents (*Categoria F*), (vii) capital gains

(*Categoria G*), (viii) pensions (*Categoria H*) and (ix) other smaller income items (*Categoria I*). Concerning the *Categoria G*, capital gains from public debt bonds are untaxed, as well as gains from stocks if kept for more than one year. Capital gains from real estate are also untaxed if the proceeds are used to purchase new real estate.

Between 1989 and 2003 the top marginal tax rate was stable at 40%, while the bottom rate declined from 16% in 1989-1990, to 15% in 1991-1998, 14% in 1999-2000 and finally 12% in 2001-2003. Contrary to the worldwide trend of reducing the number of brackets of the statutory tax scale, Portugal moved first from a 5-bracket to a 4-bracket scale between 1990 and 1991, but then went back to 5 brackets in 1999 and to a 6-bracket scale in 2002. Taxation is based on the family unit. To take the taxpayer's family status into account, the use of an income-splitting system to ascertain taxable income is applied. In particular, income of married couples is divided by two in order to determine the marginal tax rate to be applied according to the statutory tax scales shown in TABLE J.

For a comprehensive description of the modern income tax in Portugal, see Direcção-Geral dos Impostos, 1998a, 1998b, 2005.

A.3. Schedule Tax on Wages

In 1929 the government created the *Imposto Profissional*, a schedular tax on wages and salaries (including agriculture) and self-employed liberal professionals; civil servants were excluded (Decree 16731 of 4/14/1929 and Decree 19,359 of 2/19/1931).²⁵ Initially there was a progressive tax scale with marginal tax rates from 2% to 8% affecting wage income, while self-employees were taxed with lump sums (variable across professions). Several reforms modified the scope of the tax, the exemption thresholds and the tax scales (Decree 19359 of 2/16/1931, Law 1952 of 3/10/1937, Decree-Law 33735 of 6/26/1944, Decree-Law 34353 of 12/30/1944). A detailed description of the *Imposto Profissional* during the first half of the XXth. century can be found in Mouteira Guerreiro, 1947. After the fiscal reform of 1962-1964 (Decree-Laws 44305 of 4/27/1962, 45400 of 11/30/1963, 45676 of 4/24/1964, 45977 of 10/19/1964), statutory top marginal tax rates were successively increased to 15% in 1964-1972, 20% in 1973-1975 and 22% in 1976-1988. The number of tax brackets also rose considerably. The tax was abolished in 1988 with the introduction of the modern income tax in 1989.

B. References on Data Sources for Portugal

B.1. Income Tax Statistics

Available statistical information about the *Imposto Pessoal do Rendimento* appears in República Portuguesa, Ministério das Finanças, Direcção Geral de Estatística, Ia. Repartição, Estatística das Contribuições e Impostos, Liquidação e Cobrança nas gerências de 1922-1923 a 1924-1925 and República Portuguesa, Ministério das

²⁵ Before 1929, a fraction of wage earners was already taxed under the *Contribuição Industrial*.

Finanças, Direcção Geral de Estatística, Ia. Repartição, Liquidação e Cobrança na Gerência de 1925-1926. However, these publications only display total tax collections with no data about the distribution of income or tax paid by brackets; consequently this information, if interesting from the historical point of view, has not been used for our estimations of top income shares.

Statistical information has been published regularly since 1936 with increasing degree of detail.

1936-1945: The published tables show the distribution of the number of taxpayers by ranges of tax collection together with the totals for gross income and tax paid. Instituto Nacional de Estatística, Anuário Estatístico das Contribuições e Impostos 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945.

1946-1963: The published tabulations display the number of taxpayers and the gross assessed income organized by ranges of total before tax income, the number of taxpayers and the taxable income by ranges of taxable income, and, finally, the number of taxpayers and tax paid by ranges of tax paid. Instituto Nacional de Estatística, Anuário Estatístico das Contribuições e Impostos, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963.

1963-1982: The published statistics are organized by range of taxable income (gross income net of deductions), and they provide the distribution of the number of taxpayers and the taxable income by brackets. The data also provide information on total deductions. Instituto Nacional de Estatística, Anuário Estatístico das Contribuições e Impostos, 1964, 1965, 1966 and Portugal, Instituto Nacional de Estatística, Estatísticas das Contribuições e Impostos, Continente e Ilhas Adjacentes, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982.

1983-1988: Unfortunately, during the transition period from the *Imposto Complementar* to the new *Imposto sobre o Rendimento das Pessoas Singulares*, no usable tabulations by income or tax brackets are available. Only aggregated information about total assessed income, total taxable income and total tax collection appears in Instituto Nacional de Estatística, Estatísticas das Contribuições e Impostos, Continente e Ilhas Adjacentes, 1983-1988. Consequently our series have a gap in those years.

1989-2003: Finally, the fiscal reform of 1988 and the increasing managerial capabilities of the tax agency implied an improvement in the amount and quality of available information on individuals' income. Since then, the published statistics, by brackets of gross income, display taxable income, gross income, tax paid and a thorough detail of deductions. No information is provided about the composition of income. Individual are classified in two groups: those having income from wages and pension only, on the one side, and those having income also from other sources. Portugal, Instituto Nacional de Estatística, Estatísticas das Receitas Fiscais, 1989-1992, 1993-1995, 1996, 1997, 1998, 1999, 2000.

Tabulations for 2001, 2002 and 2003 were provided by the tax agency of Portugal, based on internal reports.

B.2. Statistics on Wages and Salaries

The information on earnings is obtained from the tabulations of the schedular tax on wages and salaries, the *Imposto Profissional* (1936-1982), the income tax (1989-2000) and the micro-data from *Quadros de Pessoal* (1985-1989 (1990 missing), 1991-2000 (2001 missing) and 2002-2004).

The tabulations from the *Imposto Profissional* are organized by intervals of tax collections, and they display the number of taxed workers and the total tax paid by brackets. The published information covers 1936-1982; however we can only offer homogeneous estimates for the period 1964-1982. We used the tax code to recover the brackets of earnings from the brackets of tax paid, and the earnings by brackets from the tax collections by brackets.

Instituto Nacional de Estatística, Anuário Estatístico das Contribuições e Impostos, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945; Instituto Nacional de Estatística, Anuário Estatístico das Contribuições e Impostos, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963 Instituto Nacional de Estatística, Anuário Estatístico das Contribuições e Impostos, 1964, 1965, 1966. Portugal, Instituto Nacional de Estatística, Estatísticas das Contribuições e Impostos, Continente e Ilhas Adjacentes, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983-1988.

For the period 1989-2000, the information on earnings comes from the tabulations of the income tax. The published statistics, based on withholdings at source and organized by ranges of gross earnings, display the number of workers and the gross wages. The information corresponds to the individual and not to the family as in the income tax statistics. Portugal, Instituto Nacional de Estatística, Estatísticas das Receitas Fiscais, 1989-1992, 1993-1995, 1996, 1997, 1998, 1999, 2000.

B.3. Administrative Records on Wages: Quadros de Pessoal

Every year, employers are required by law to provide information about the firm (location, economic activity, employment, sales, legal setting) and their employees (individual basic wages, overtime, bonuses, gender, level of education, skills, duration of work (full-time/part-time), date of latest promotion, tenure). The information corresponds to March for years 1985-1993, and October for years 1994-2004. Civil service and domestic work are excluded. State-owned companies are included. Agriculture workers are included, although in practice the level of coverage is very low. For manufacturing, a thorough evaluation of the coverage of *Quadros de Pessoal* can be made, since a census of manufacturing is available. As argued in Cardoso, 1998, comparison of the two sets reveals that the *Quadros de Pessoal* covers more workers than the census itself, despite the fact that the census includes very small productive units that are not a part of the population covered by the *Quadros de Pessoal* (mainly firms with no wage earners). The Direcção-Geral

de Estudos, Estatística e Planeamento (DGEEP) publishes regularly a report with the main results, *Estatísticas em Síntese* (available on line). The data were first collected in 1982 but micro-data starts in 1985. All results based on *Quadros de Pessoal* were computed from the micro-data for 1985-1989 (1990 missing), 1991-2000 (2001 missing) and 2002-2004. Table H describes the size of the database and classifies individuals according the following categories: employers, family employees without salaries, employees, cooperative workers and unknown/not classified individuals.

C. Income and Earnings Denominators

C.1. Total Income Denominator

The National Accounts income series between 1953 and 1995 was obtained from Banco de Portugal, Séries Longas para a Economia Portuguesa. Pós II Guerra Mundial. Vol I and Vol II. For the years following 1996, the information comes from Instituto Nacional de Estatística (2003) Contas Nacionais Base 1995 and Instituto Nacional de Estatística (2006) Contas Nacionais Anuais Definitivas Base 2000. For 1936-1952 the previously described series were extended backwards using the information from Batista, Martins, Pinheiro and Reis, 1997.

For the period 1989-2003, total income is defined as wages and salaries from National Accounts net of effective social security contributions, plus 50% of social transfers, plus 66% of unincorporated business income plus all non-business, non labor income reported on tax returns. This methodology generates an income denominator that fluctuates around 60% of Portuguese GDP, which is slightly lower than the ratio found for Spain (see Alvaredo and Saez, 2007) and similar to that used for France (see Piketty, 2001). For the period 1936-1983, we use as denominator 60% of the Portuguese GDP from the sources listed above.

The total denominator series expressed in 2000 Euros is reported in Table A, Column 5. The average income per adult is reported in Column 6 while the average income per tax unit is displayed in Column 7. Column 8 shows the CPI index (base 100 in year 2000).

C.2. Total Wage Denominator

Total wages are defined as wages and salaries from national accounts net of effective social contributions paid by employers. As in the income denominator case, the information between 1953 and 1995 has been taken from Banco de Portugal, Séries Longas para a Economia Portuguesa. Pós II Guerra Mundial. Vol I and Vol II (series Remunerações do Trabalho no Território, Ordenados e Salários and Contribuições Sociais Efectivas dos Empregadores). For the years following 1996, the information comes from Portugal, Instituto Nacional de Estatística (2003) Contas Nacionais Anuais Definitivas Base 1995 and Portugal, Instituto Nacional de Estatística (2005) Contas Nacionais Anuais Definitivas Base

2000. For 1936-1952 we assume that the growth rate of total wages equals the nominal GDP growth rate.

C.3. Prices

The price index is based on the following sources: (a) for the period 1936-1945: Instituto Nacional de Estatística, Anuário Estatístico, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, Indices de Preços de Retalho, base 1914=100; (b) for the period 1946-1951, Instituto Nacional de Estatística (1985) Portugal 50 anos 1935-1985; (c) for the years following 1951, Consumer Price Index from Instituto Nacional de Estatística, Anuário Estatístico, 1952-1975 and Instituto Nacional de Estatística, Divisão de Estatísticas da Distribuição e Serviços, Indicadores da Actividade Económica: Indices de Precios do Consumidor, several years.

C.4. Total Number of Individuals and Tax Units

As we mentioned before, joint filing for married couples has always been mandatory in Portugal. Thus, the unit to which the income tax data relate is the married couple, or single adult, or single minor with income in his or her own right. Our reference total for tax units takes this fact into account. Consequently the total number of tax units is defined as the total number of adult males and females (aged 20 years old and over) less the number of married females. Information is obtained from the national census: Recenseamento Geral da População e da Habitação, 1930, 1940, 1950, 1960, 1970, 1981, 1991, 2001. Intermediate years have been linearly interpolated. The information is also available in Instituto Nacional de Estatística, Anuário Estatístico de Portugal, several years, and Instituto Nacional de Estatística (1985), Portugal 50 anos, 1935-1985 and Valério, 2001.

C.5. Total Number of Employees

The number of employees comes from (a) Banco de Portugal, Séries Longas para a Economia Portuguesa. Pós II Guerra Mundial. Vol I and Vol II (1953-1995), (b) Portugal, Instituto Nacional de Estatística (2003) Contas Nacionais Anuais Definitivas Base 1995 and Portugal, Instituto Nacional de Estatística (2005) Contas Nacionais Anuais Definitivas Base 2000 (1996-2004); (c) the national census of 1930, 1940 and 1950. Missing years have been linearly interpolated.

The number of civil servants was obtained from (a) the national census of 1930, 1940 and 1950 (1936-1952); (b) Banco de Portugal, Séries Longas para a Economia Portuguesa. Pós II Guerra Mundial Vol I and Vol II (1953-1967) and (c) International Labor Organization Database (2000-2002).

C.6. Data on Emigration Flows

The number of emigrants from Portugal was obtained from Valério (2001) *Estatísticas Históricas Portuguesas*, Lisboa: Instituto Nacional de Estatística, which builds on the following sources:

Baganha, M. (1990). *Portuguese Emigration to the United States 1820-1930*, New York: Garland Publishing Inc.

Baganha, M. (1991). Uma Imagem Desfocada – A Emigração Portuguesa e as Fontes sobre a Emigração, *Análise Social*, 26(112-113).

Baganha, M. (1993). Principais Características e Tendências da Emigração Portuguesa, in APS, *Estructuras Sociais e Desenvolvimento*, Lisboa: Fragmentos.

Baganha, M. (1994). As Correntes Emigratórias Portuguesas no Século XX e o seu Impacto na Economia Nacional, *Análise Social*, 29(128).

Pereira, M. (1993). Liberdade e Contenção na Emigração Portuguesa 1850-1930, in M. Silva, *Emigração/Imigração*, Lisboa: Fragmentos.

D. Estimating Top Shares

D.1. Basic Pareto Interpolation

The general interpolation technique is based on the well known empirical regularity that the top tail of the income distribution is very closely approximated by a Pareto distribution. A Pareto distribution has a cumulative distribution function of the form $F(y)=1-(k/y)^a$ where k and a are constants, and a is the Pareto parameter of the distribution. Such a distribution has the key property that the average income above a given threshold y is always exactly proportional to y . The coefficient of proportionality is equal to $b=a/(a-1)$.

The first step consists then in estimating the income thresholds corresponding to each of the percentiles P_{90} , P_{95} , P_{99} , ..., $P_{99.99}$, that define our top income groups. For each percentile p , we look first for the published income bracket $[s,t]$ containing the percentile p . We estimate then the parameters a and k of the Pareto distribution by solving the two equations: $k=s p^{(1/a)}$ and $k=t q^{(1/a)}$ where p is the fraction of tax returns above s and q the fraction of tax returns above t .²⁶ Note that the Pareto parameters k and a may vary from bracket to bracket. Once the density distribution on $[s,t]$ is estimated, it is straightforward to estimate the income threshold, say y_p , corresponding to percentile p .

For the top bracket this method cannot be applied and we therefore assume that the top bracket is Pareto distributed with parameters a and k equal to those of the bracket just below the top estimated by the method described previously.

The second step consists of estimating the amounts of income reported above income threshold y_p . We estimate the amount reported between income y_p and t (the upper bound of the published bracket $[s,t]$ containing y_p) using the

²⁶ This is the standard method of Pareto interpolation used by Kuznets (1953) and Feenberg and Poterba (1993).

estimated Pareto density with parameters a and k . We then add to that amount the amounts in all the published brackets above t .

Once the total amount above y_p is obtained, we obtain directly the mean income above percentile p by dividing the amount by the number of individuals above percentile p . Finally, the share of income accruing to individuals above percentile p is obtained by dividing the total amount above y_p by our income denominator series. Average incomes and income shares for intermediate fractiles (P90-95, P95-99, etc.) are obtained by subtraction.

Results are presented in Table B (top income shares between 1936 and 2003), Table C (top fractiles income levels between 1989 and 2003), Table E.1 (top wage income shares between 1964 and 2000) and Table E.2 (fractiles of earnings between 1964 and 2000).

D.2. Adjustments to Raw Pareto Interpolations

1936-1945: The statistics are organized by ranges of tax paid. We estimate the ranges of income and the total income in those ranges by applying the statutory tax scale and the taxable thresholds given in Table J and in Table K. Total assessed income is reported in aggregate in the statistics. Consequently we can check that our estimation of assessed income by brackets is accurate.

1964-1982: The statistics are organized by range of taxable income and they provide information on taxable income. Total income equals taxable income plus family deductions (which were introduced in 1964) plus other deductions. The evolution of family deductions is described in Table K. We add back those deductions to our income estimates in order to estimate shares based on income before those deductions. As family deductions are reported only in aggregate, we impute the family deductions to each bracket by assuming that on average each tax filer is entitled to the same amount of deductions. The information on non-family based deduction is also reported in aggregate. We imputed these deductions proportionally to the reported taxable income according to the general rules of the tax code.

D.3 Estimating Top Shares from Administrative Records on Earnings

We also computed shares of top wages using micro-data from *Quadros de Pessoal* between 1985 and 2004 (1990 and 2001 missing). The number of individual observations ranges from 1,898,675 in 1985 to 2,912,304 in 2004. However, not all of them refer to workers. Individuals are classified as employers, family employees with no salary, employees and cooperative workers. In our estimations we only consider individuals with non zero wages in the last two groups. Shares of top wages are presented in Table F, where we also provide estimations for the left part of the distribution. Original amounts corresponds to the monthly level. Table G show income levels of selected fractiles, where we annualize the amounts by up-scaling monthly earnings by a factor of 14 (employees generally receive 14 months' pay for 11 months' work; the extra three months' pay is for a Christmas bonus, a vacation subsidy and a period of annual leave).

D.4. Estimating Marginal Tax Rates

Average marginal tax rates (income weighted) used in Figure 5 have been computed as follows. We consider each of the income thresholds P99, P999, etc. estimated from the interpolation methods described in this Appendix. We subtract from the raw income the average level of deductions and average level of 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 deductions and allowances in that bracket). This gives the net taxable income. Tax liability is obtained by applying the tax schedules in Table J (from which the marginal tax rate for any taxable income can be obtained) to the taxable income.

We estimate the income-weighted marginal tax rate for the top 0.1% as:

$$\frac{[\text{Share } P99.9-99.99 \times \text{MTR } 99.95 + \text{Share } 99.99-100 \times (\text{MTR } 99.99 + \text{MTR } 99.999)/2]}{[\text{Share } P99.9-99.99 + \text{Share } P99.99-100]}$$

where Share P99.9-99.99 denotes the income share of group P99.9-99.99 and MTR 99.95 denotes the income-weighted marginal tax rate at percentile 99.995.

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TABLE 1.
Thresholds and Average Incomes in Top Income Groups in 2003

Percentile threshold (1)	Income threshold (2)	Income Groups (3)	Number of Tax Units (4)	Average income in each group (5)
		Full number of Tax Units	5,581,000	14,267 €
Top 10%	27,610 €	Top 10-5%	279,050	33,448 €
Top 5%	41,216 €	Top 5-1%	223,240	55,522 €
Top 1%	82,236 €	Top 1-0.5%	27,905	91,123 €
Top .5%	105,183 €	Top 0.5-0.1%	22,324	130,907 €
Top .1%	183,696 €	Top 0.1-0.01%	5,023	251,407 €
Top .01%	493,454 €	Top 0.01%	558	741,410 €

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 all social contributions (employer and employee).

Amounts are expressed in 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 27,610 Euros is required to belong to the top 10% tax units, etc.

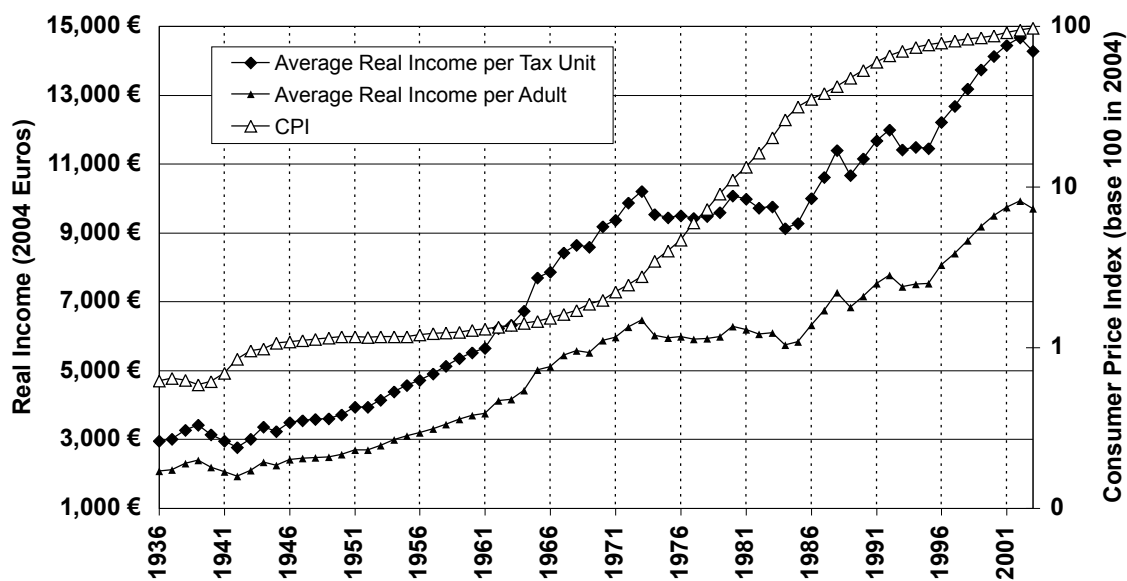


FIGURE 1.

Average Real Income and Consumer Price Index in Portugal, 1936-2003

Source: Table A.

Figure reports the average real income per adult (aged 20 and above) and per tax unit, expressed in real 2004 Euros.

CPI index is equal to 100 in 2004.

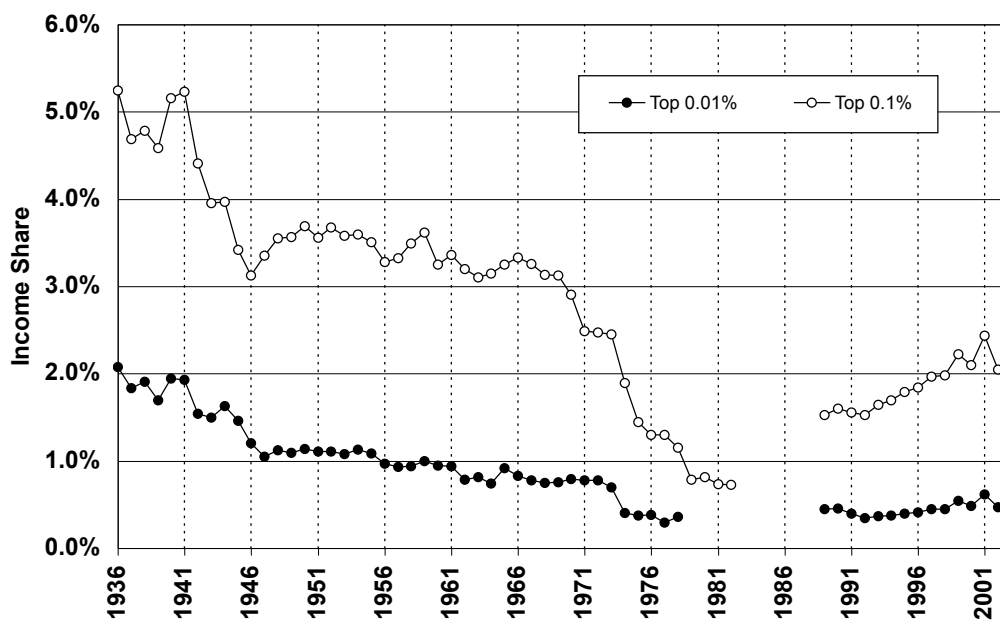


FIGURE 2

The Top 0.01% and 0.1% Income Shares in Portugal, 1936-2003

Source: Table B, column Top 0.01% and column Top 0.1%.

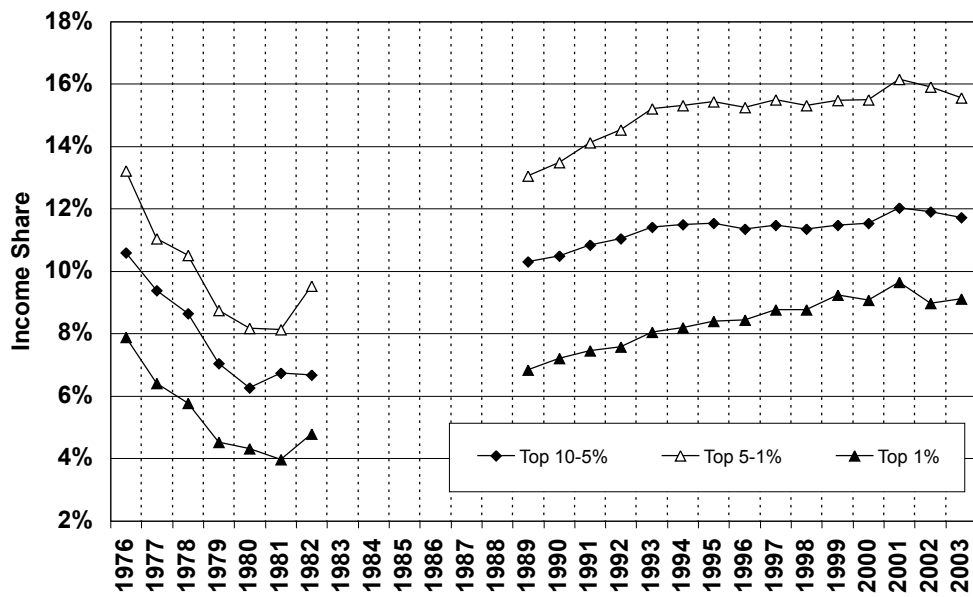


FIGURE 3

The Top 10-5%, Top 5-1%, and Top 1% Income Share in Portugal, 1976-2003

Source: Table B, columns top 10-5%, top 5-1%, and top 1%.

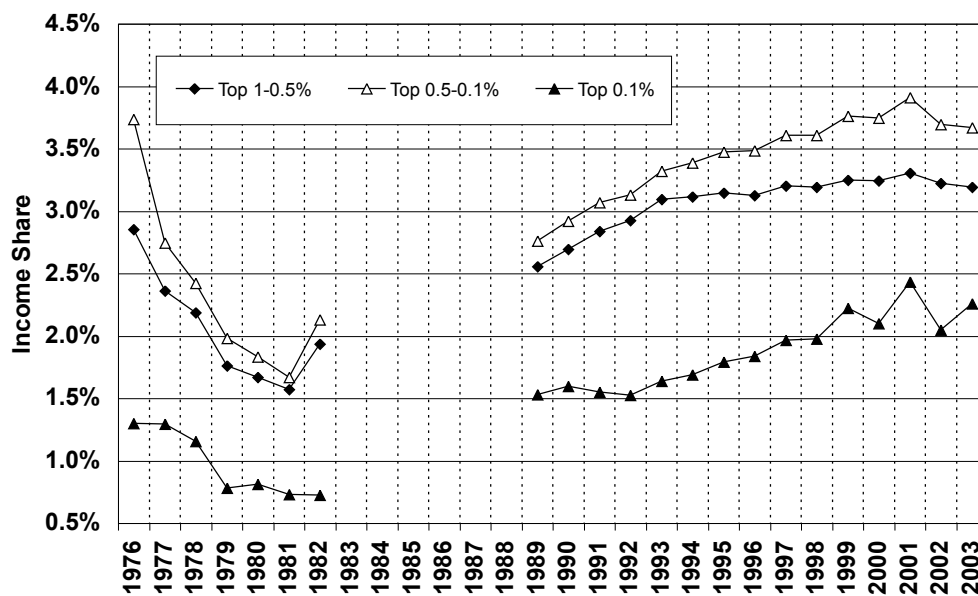


FIGURE 4

The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Income Share in Portugal, 1976-2003

Source: Table B, columns top 1-0.5%, top 0.5-0.1%, and top 0.1%.

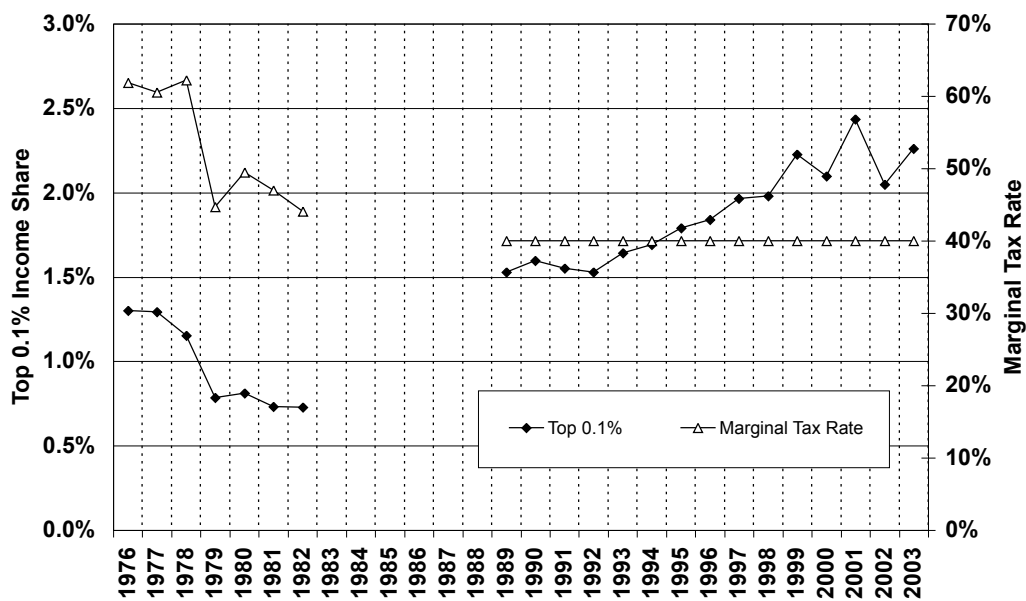


FIGURE 5

The top 0.1% Income Share in Portugal and Marginal Tax Rate, 1976-2003.

Source: Top 0.1% income share from Table B (column top 0.1%).
Marginal tax rate: Own computations. Details in Appendix.

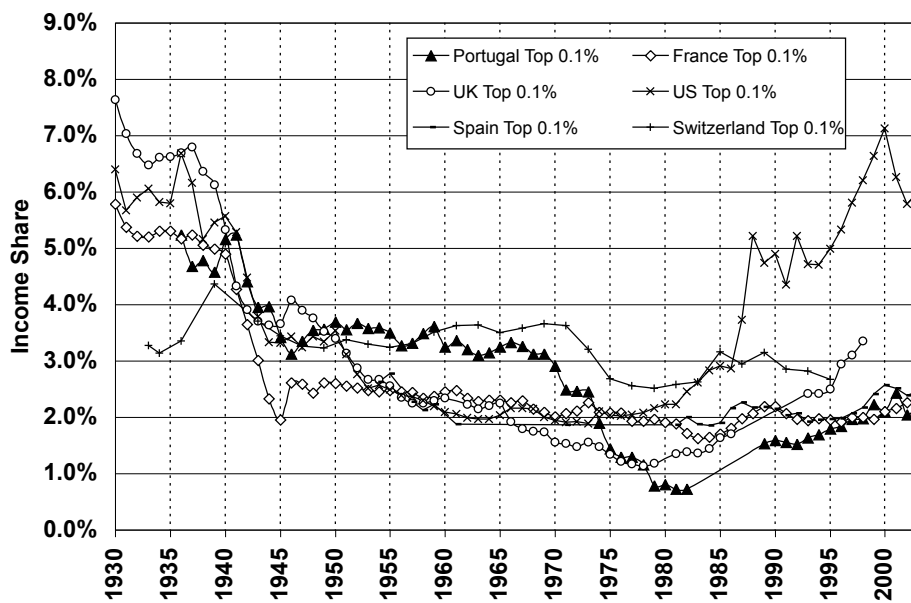


FIGURE 6

Top 0.1% share in Portugal, UK, Italy, France, Switzerland, United States and Spain

Sources: US: Piketty and Saez (2003); France: Piketty (2001) and Landais (2007);
Spain: Alvaredo and Saez (2007); UK: Atkinson (2005);
Switzerland: Dell, Piketty and Saez (2007); Portugal: Table B.

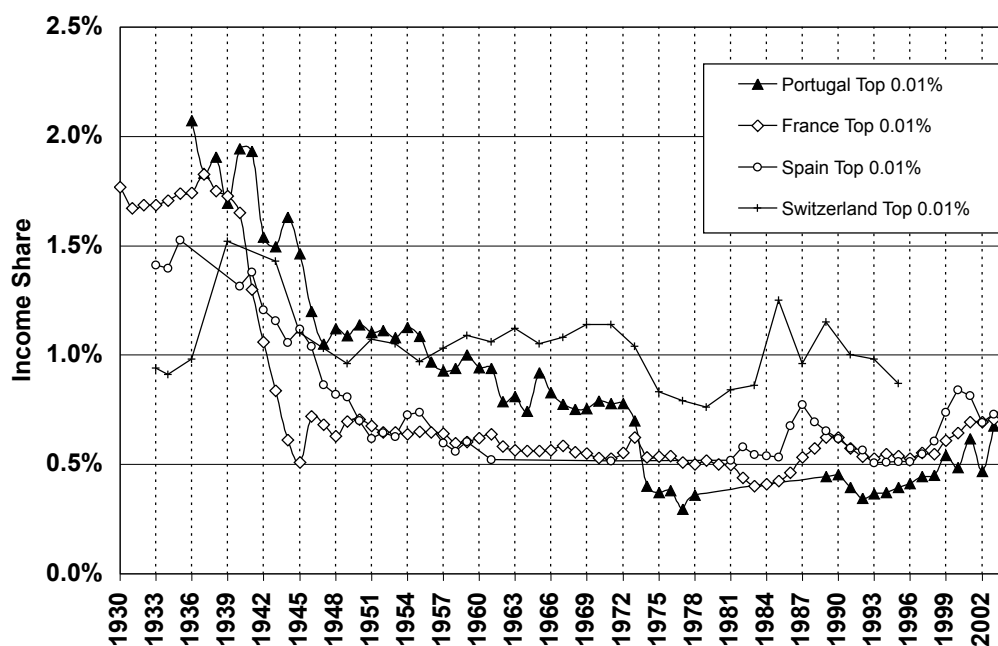


FIGURE 7

Top 0.01% share in Portugal, Italy, France, Switzerland and Spain

Sources: France: Piketty (2001) and Landais (2007);
 Spain: Alvaredo and Saez (2007);
 Switzerland: Dell, Piketty and Saez (2007); Portugal: Table B.

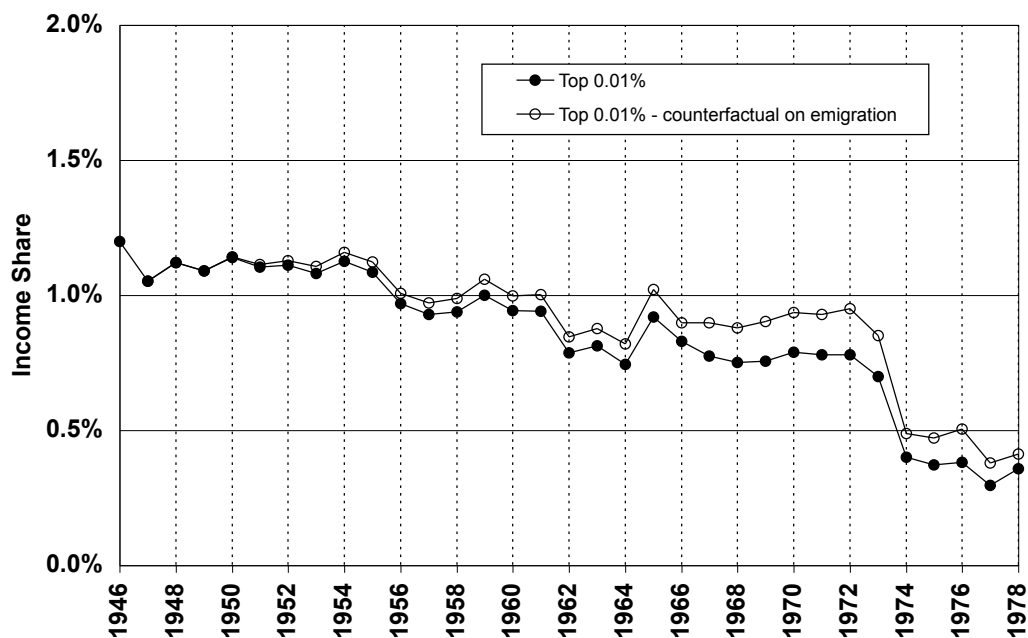


FIGURE 8

The Top 0.01% Income Share in Portugal and counterfactual effects of emigration

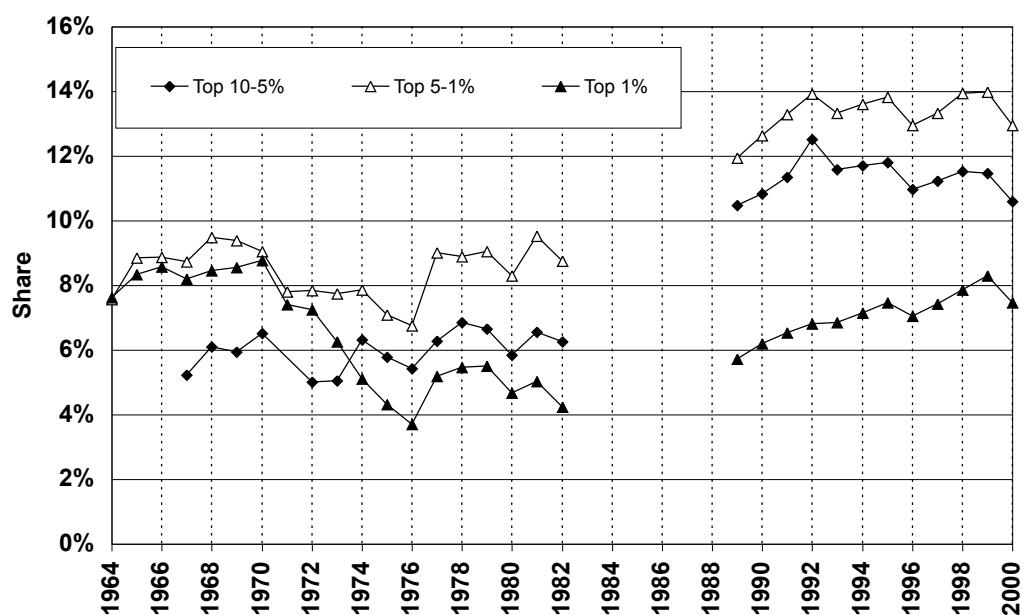


FIGURE 9
Top Wage Income Shares in Portugal, 1964-2000

Source: Table E.1, columns Top 10-5%, Top 5-1%, Top 1%.

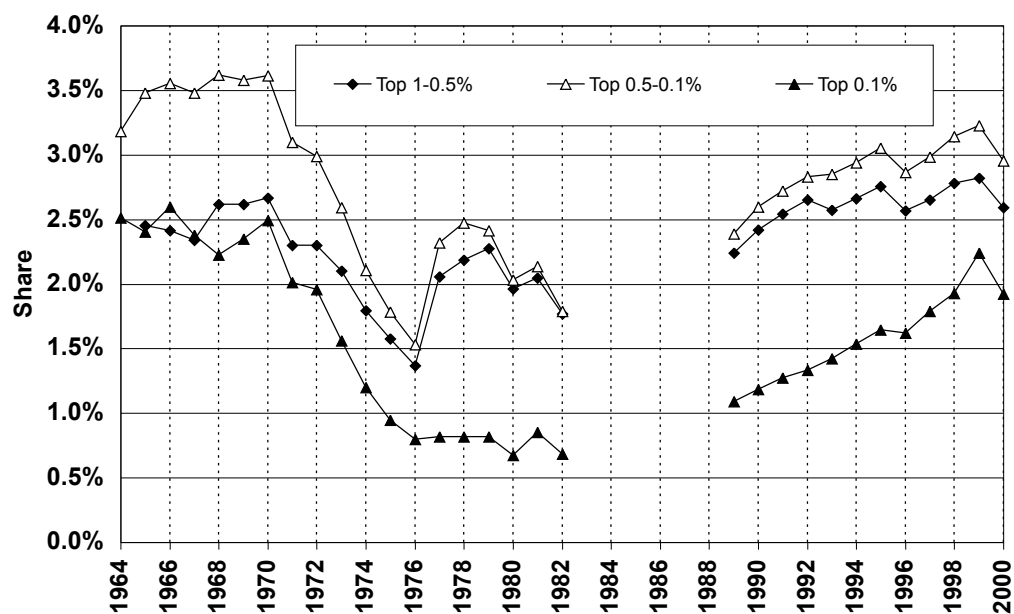


FIGURE 10
Top Wage Income Shares in Portugal, 1964-2000

Source: Table E.1, columns Top 1-0.5%, Top 0.5-0.1%, Top 0.1%.

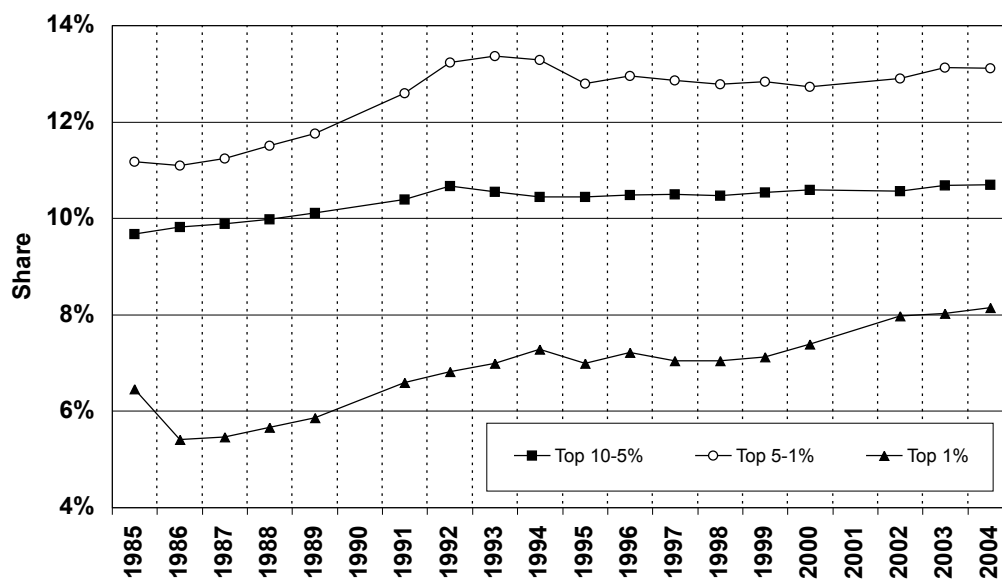


FIGURE 11

The Top 10-5%, Top 5-1%, and Top 1% Earnings Shares in Portugal, 1985-2004
from Administrative Records (Quadros de Pessoal)

Source: Table F, columns top 10-5%, top 5-1%, and top 1%.

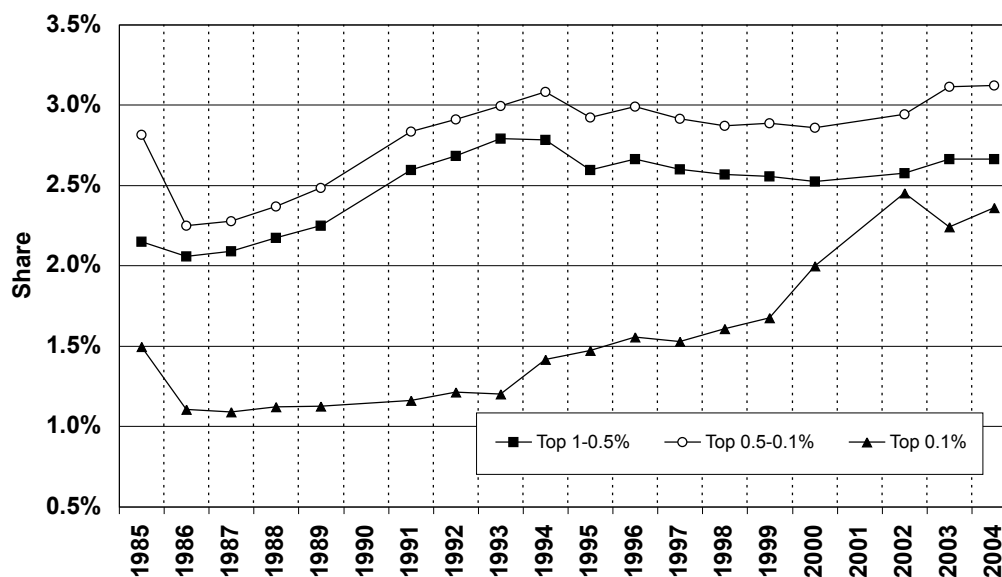


FIGURE 12

The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Earnings Shares in Portugal, 1985-2004
from Administrative Records (Quadros de Pessoal)

Source: Table F, columns Top 1-0.5%, Top 0.5-0.1%, and Top 0.1%.

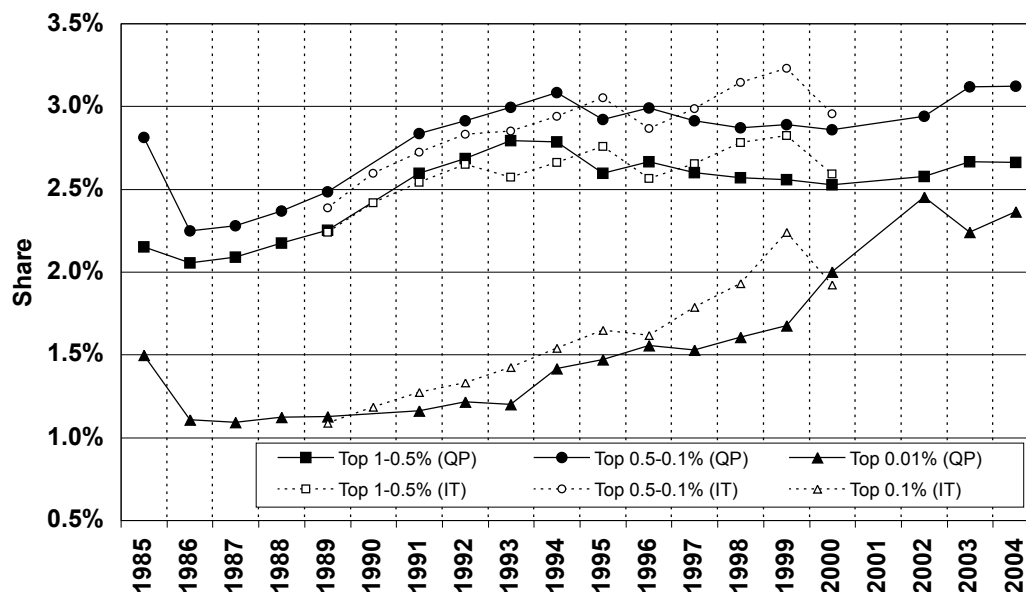


FIGURE 13

The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Earnings Shares in Portugal, 1985-2004
Comparison between Administrative Records (Quadros de Pessoal) and Income Tax Statistics

Source: Table E.1 and Table F, columns top 1-0.5%, top 0.5-0.1%, and top 0.1%.

Notes: QP denotes results based on Quadros de Pessoal; IT denotes results based on income tax statistics

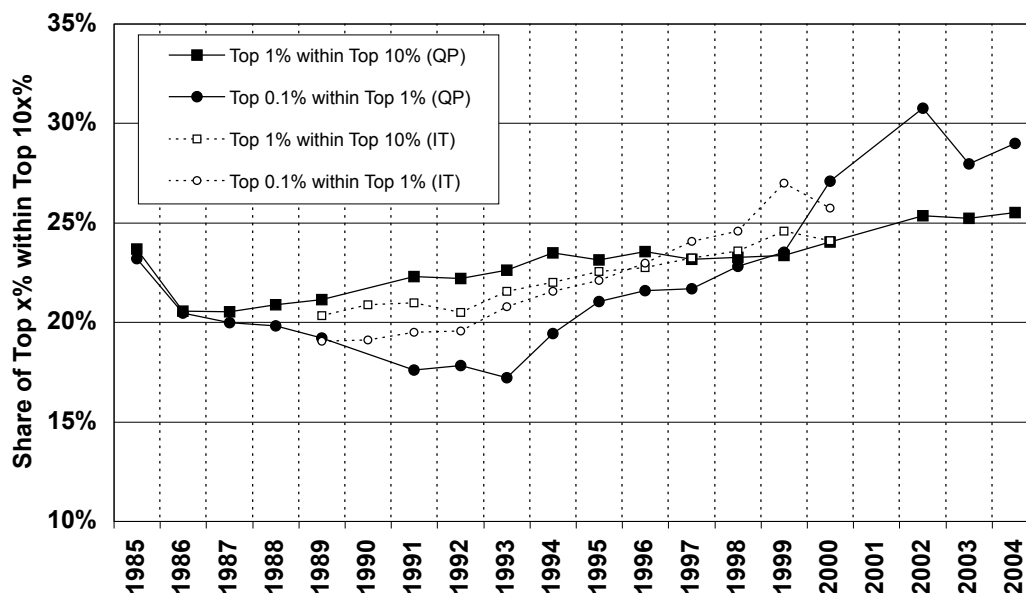


FIGURE 14

Shares within Shares
Comparison between Administrative Records (Quadros de Pessoal) and Income Tax Statistics

Source: Table E and Table F.

Notes: QP denotes results based on Quadros de Pessoal; IT denotes results based on income tax statistics

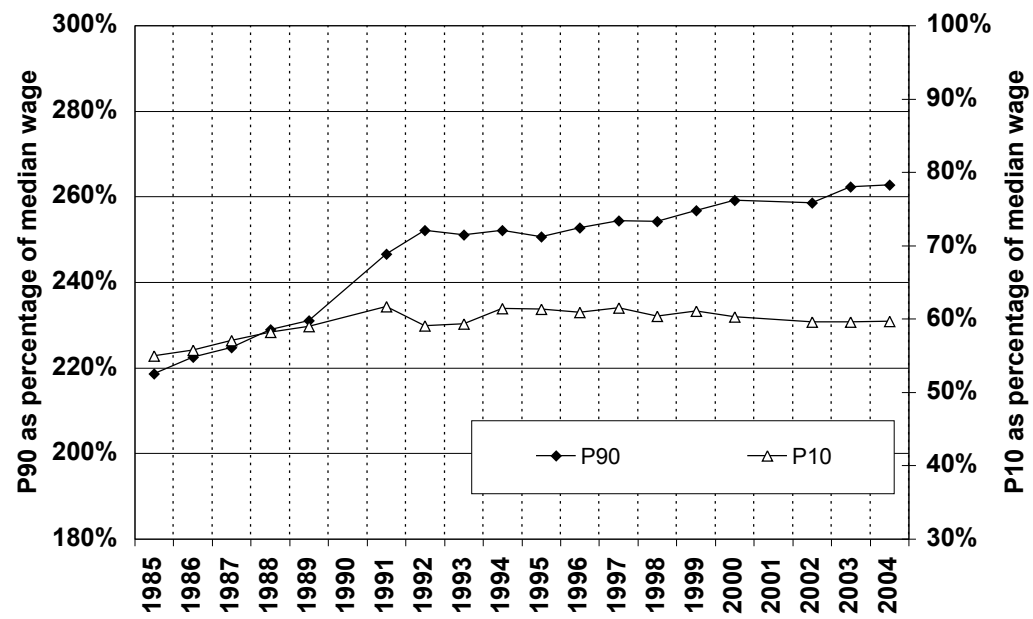


FIGURE 15

P10 and P90 income levels as percentage of median income in Portugal

Source: Table G.

TABLE A. Reference Totals for Population, Income and Inflation, 1936-2003

	Tax Units				Total Income			Inflation	Taxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Adults	Tax Units	Number of tax returns	(3)/(2)	Total income (millions)	Average income per adult	Average income per tax unit	CPI (2000 base)	Top Marginal Tax Rate
	('000s)	('000s)	('000s)	(%)	(2000 Euros)	(2000 Euros)	(2000 Euros)		(%)
1936	4,298	3,025	43	1.44	7,834	1,823	2,590	0.71	8.5
1937	4,357	3,062	45	1.47	8,048	1,847	2,629	0.74	8.5
1938	4,418	3,099	48	1.53	8,869	2,008	2,862	0.71	8.5
1939	4,479	3,136	50	1.60	9,396	2,098	2,996	0.67	8.5
1940	4,541	3,174	54	1.72	8,701	1,916	2,741	0.70	8.5
1941	4,604	3,213	58	1.81	8,292	1,801	2,581	0.79	8.5
1942	4,668	3,252	62	1.91	7,891	1,691	2,427	0.97	8.5
1943	4,732	3,291	67	2.05	8,686	1,835	2,639	1.09	8.5
1944	4,798	3,331	74	2.21	9,784	2,039	2,937	1.12	8.5
1945	4,865	3,372	97	2.88	9,538	1,961	2,829	1.22	8.5
1946	4,932	3,412	11	0.34	10,420	2,113	3,054	1.24	30
1947	5,000	3,454	14	0.42	10,710	2,142	3,101	1.26	30
1948	5,070	3,496	16	0.45	10,963	2,163	3,136	1.29	30
1949	5,140	3,538	18	0.52	11,158	2,171	3,154	1.31	30
1950	5,211	3,581	22	0.62	11,666	2,239	3,258	1.34	30
1951	5,254	3,600	25	0.70	12,407	2,362	3,446	1.34	30
1952	5,296	3,619	25	0.68	12,497	2,360	3,453	1.33	30
1953	5,339	3,638	27	0.75	13,165	2,466	3,618	1.34	30
1954	5,383	3,658	28	0.76	14,058	2,612	3,843	1.33	30
1955	5,426	3,677	29	0.79	14,720	2,713	4,003	1.33	30
1956	5,470	3,697	35	0.94	15,249	2,788	4,125	1.37	30
1957	5,515	3,716	38	1.01	15,959	2,894	4,294	1.39	30
1958	5,560	3,736	40	1.08	16,751	3,013	4,484	1.41	30
1959	5,605	3,756	35	0.93	17,597	3,140	4,686	1.43	30
1960	5,650	3,776	34	0.90	18,264	3,232	4,837	1.46	30
1961	5,633	3,747	34	0.92	18,525	3,289	4,944	1.50	30
1962	5,616	3,718	37	0.99	20,258	3,607	5,448	1.54	30
1963	5,599	3,690	44	1.19	20,392	3,642	5,526	1.58	45
1964	5,582	3,662	29	0.80	21,567	3,864	5,889	1.62	45
1965	5,565	3,634	44	1.22	24,446	4,393	6,726	1.66	45
1966	5,548	3,607	45	1.25	24,837	4,477	6,886	1.74	45
1967	5,531	3,579	53	1.48	26,368	4,767	7,367	1.84	45
1968	5,514	3,552	58	1.63	26,884	4,676	7,568	1.95	45
1969	5,497	3,525	64	1.81	26,506	4,822	7,519	2.13	55
1970	5,480	3,498	75	2.13	28,117	5,130	8,037	2.26	55
1971	5,565	3,543	87	2.47	29,067	5,223	8,204	2.53	55
1972	5,650	3,588	106	2.97	30,968	5,481	8,631	2.80	55
1973	5,737	3,634	125	3.45	32,428	5,652	8,924	3.16	80
1974	5,825	3,680	149	4.04	30,686	5,268	8,338	3.96	80
1975	5,915	3,727	128	3.43	30,825	5,211	8,270	4.56	80
1976	6,006	3,775	684	18.13	31,401	5,228	8,319	5.36	80
1977	6,098	3,823	559	14.62	31,530	5,170	8,248	6.86	80
1978	6,192	3,872	548	14.15	32,123	5,188	8,297	8.32	80
1979	6,287	3,921	702	17.90	32,887	5,231	8,388	10.34	80
1980	6,384	3,971	837	21.07	35,040	5,489	8,824	12.61	70(married) 80 (single)
1981	6,482	4,022	1,112	27.65	35,095	5,414	8,727	15.13	70(married) 80 (single)
1982	6,548	4,078	1,333	32.68	34,677	5,296	8,503	18.51	70(married) 80 (single)
1983	6,614	4,135	1,389	33.58	35,297	5,337	8,535	23.24	70(married) 80 (single)
1984	6,681	4,194	1,385	33.03	33,521	5,017	7,993	30.04	70
1985	6,749	4,252	1,189	27.95	34,483	5,109	8,109	35.85	50(married) 60 (single)
1986	6,817	4,312	1,259	29.20	37,739	5,536	8,752	40.04	50(married) 60 (single)
1987	6,886	4,373	1,436	32.84	40,645	5,902	9,295	43.80	50(married) 60 (single)
1988	6,956	4,434	542	12.22	44,237	6,359	9,976	48.04	50(married) 60 (single)
1989	7,027	4,497	2,104	46.79	42,013	5,979	9,343	54.12	40
1990	7,098	4,560	2,606	57.15	44,495	6,269	9,758	60.95	40
1991	7,170	4,624	2,642	57.14	47,219	6,586	10,212	68.33	40
1992	7,251	4,697	2,781	59.21	49,309	6,801	10,498	74.78	40
1993	7,332	4,771	2,734	57.31	47,677	6,502	9,993	79.87	40
1994	7,415	4,847	2,897	59.78	48,750	6,575	10,059	84.13	40
1995	7,498	4,923	2,882	58.54	49,370	6,584	10,028	87.63	40
1996	7,583	5,001	3,046	60.90	53,469	7,051	10,692	90.31	40
1997	7,668	5,080	3,215	63.29	56,349	7,348	11,092	92.44	40
1998	7,754	5,160	3,312	64.18	59,542	7,678	11,538	95.03	40
1999	7,842	5,242	3,425	65.35	63,042	8,039	12,027	97.22	40
2000	7,930	5,325	3,662	68.78	65,862	8,305	12,369	100.00	40
2001	8,019	5,409	3,869	71.53	68,351	8,523	12,637	104.35	40
2002	8,110	5,494	3,969	72.24	70,502	8,693	12,832	108.10	40
2003	8,201	5,581	3,979	71.29	69,688	8,497	12,486	111.63	40

Table B. Top Income Shares in Portugal, 1936-2003

	Top 10%	Top 5%	Top 1%	Top .5%	Top .1%	Top .01%	Top 10-5%	Top 5-1%	Top 1-.5%	Top .5-.1%	Top .1-.01%	Top .01%
	(3)	(4)	(5)	(6)	(7)	(8)	(11)	(12)	(13)	(14)	(15)	(16)
1936					5.24	2.07					3.17	2.07
1937					4.68	1.83					2.85	1.83
1938					4.78	1.91					2.87	1.91
1939					4.59	1.69					2.89	1.69
1940					5.16	1.94					3.22	1.94
1941					5.23	1.93					3.30	1.93
1942					4.41	1.54					2.87	1.54
1943					3.95	1.50					2.46	1.50
1944					3.97	1.63					2.34	1.63
1945					3.42	1.46					1.96	1.46
1946					3.12	1.20					1.92	1.20
1947					3.35	1.05					2.30	1.05
1948					3.55	1.12					2.43	1.12
1949					3.57	1.09					2.48	1.09
1950					3.69	1.14					2.55	1.14
1951					3.56	1.10					2.46	1.10
1952					3.67	1.11					2.56	1.11
1953					3.58	1.08					2.50	1.08
1954					3.60	1.13					2.47	1.13
1955					3.50	1.09					2.42	1.09
1956					3.28	0.97					2.31	0.97
1957					3.32	0.93					2.39	0.93
1958					3.49	0.94					2.55	0.94
1959					3.62	1.00					2.62	1.00
1960					3.25	0.94					2.30	0.94
1961					3.36	0.94					2.42	0.94
1962					3.20	0.79					2.41	0.79
1963					3.10	0.81					2.29	0.81
1964					3.15	0.74					2.41	0.74
1965					3.25	0.92					2.33	0.92
1966					3.33	0.83					2.50	0.83
1967					3.26	0.78					2.48	0.78
1968					3.13	0.75					2.38	0.75
1969					3.12	0.76					2.37	0.76
1970					2.91	0.79					2.12	0.79
1971					2.49	0.78					1.71	0.78
1972					2.47	0.78					1.69	0.78
1973					2.45	0.70					1.75	0.70
1974					1.89	0.40					1.49	0.40
1975					1.45	0.37					1.08	0.37
1976	31.71	21.12	7.89	5.04	1.30	0.38	10.59	13.23	2.86	3.74	0.92	0.38
1977	26.84	17.46	6.40	4.04	1.30	0.30	9.38	11.06	2.36	2.74	1.00	0.30
1978	24.93	16.27	5.77	3.58	1.15	0.36	8.66	10.51	2.19	2.42	0.80	0.36
1979	20.32	13.28	4.52	2.76	0.78		7.05	8.76	1.76	1.98		
1980	18.77	12.49	4.32	2.65	0.81		6.28	8.18	1.67	1.83		
1981	18.84	12.10	3.97	2.40	0.73		6.74	8.13	1.57	1.67		
1982	20.99	14.32	4.79	2.86	0.73		6.67	9.52	1.94	2.13		
1983												
1984												
1985												
1986												
1987												
1988												
1989	30.20	19.89	6.84	4.29	1.53	0.45	10.31	13.05	2.55	2.76	1.08	0.45
1990	31.19	20.70	7.21	4.52	1.60	0.45	10.49	13.49	2.70	2.92	1.14	0.45
1991	32.43	21.59	7.46	4.62	1.55	0.40	10.85	14.13	2.84	3.07	1.16	0.40
1992	33.15	22.11	7.58	4.66	1.53	0.35	11.04	14.53	2.93	3.13	1.18	0.35
1993	34.68	23.26	8.06	4.96	1.64	0.37	11.42	15.20	3.10	3.32	1.27	0.37
1994	35.02	23.51	8.19	5.08	1.69	0.37	11.50	15.32	3.12	3.39	1.32	0.37
1995	35.38	23.84	8.41	5.26	1.79	0.39	11.54	15.43	3.14	3.47	1.40	0.39
1996	35.07	23.71	8.45	5.33	1.84	0.41	11.36	15.26	3.12	3.49	1.43	0.41
1997	35.76	24.27	8.78	5.57	1.97	0.45	11.49	15.50	3.20	3.61	1.52	0.45
1998	35.45	24.09	8.78	5.59	1.98	0.45	11.35	15.32	3.19	3.61	1.53	0.45
1999	36.18	24.71	9.23	5.98	2.23	0.54	11.48	15.48	3.25	3.76	1.68	0.54
2000	36.13	24.58	9.09	5.85	2.10	0.49	11.55	15.49	3.24	3.75	1.61	0.49
2001	37.84	25.80	9.65	6.35	2.43	0.62	12.04	16.15	3.30	3.91	1.82	0.62
2002	36.77	24.87	8.97	5.74	2.05	0.47	11.90	15.90	3.23	3.70	1.58	0.47
2003	36.41	24.69	9.13	5.93	2.26	0.68	11.72	15.57	3.19	3.67	1.59	0.68

Table C. Top fractiles income levels in Portugal, 1989-2003
(fractiles defined by total income; incomes expressed in Euros 2000)

	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)
1989	28,218	37,166	63,931	80,131	142,850	416,621	19,269	30,475	47,732	64,451	112,431	16,206	23,300	43,313	53,638	86,380	195,622
1990	30,437	40,394	70,392	88,147	155,751	443,203	20,480	32,895	52,636	71,246	123,812	17,204	24,888	47,545	59,282	95,381	226,107
1991	33,118	44,088	76,150	94,361	158,523	403,929	22,149	36,072	57,939	78,321	131,256	18,485	27,140	52,374	65,334	102,902	231,966
1992	34,805	46,429	79,615	97,769	160,303	362,032	23,182	38,133	61,460	82,136	137,889	19,284	28,504	55,358	68,806	108,269	231,623
1993	34,655	46,482	80,491	99,126	163,983	366,548	22,828	37,979	61,857	82,911	141,475	18,868	28,239	55,573	68,969	109,703	237,693
1994	35,219	47,297	82,418	102,119	170,167	374,093	23,140	38,517	62,718	85,107	147,509	19,133	28,579	56,332	70,250	113,034	246,021
1995	35,481	47,815	84,310	105,563	179,501	395,073	23,147	38,691	63,058	87,078	155,548	19,156	28,551	56,944	71,360	118,002	259,717
1996	37,497	50,700	90,333	113,867	196,702	440,219	24,294	40,792	66,798	93,159	169,645	20,051	30,142	59,957	76,129	127,884	286,204
1997	39,662	53,845	97,358	123,651	217,950	495,015	25,480	42,967	71,065	100,077	187,165	20,986	31,645	63,356	81,308	140,303	318,660
1998	40,902	55,603	101,274	128,943	228,283	519,038	26,200	44,185	73,605	104,108	195,977	21,545	32,567	65,338	83,994	146,849	333,884
1999	43,514	59,429	111,044	143,936	267,531	650,723	27,600	46,526	78,152	113,037	224,954	22,680	34,309	69,265	89,374	164,258	399,530
2000	44,683	60,801	112,388	144,583	259,671	600,211	28,565	47,904	80,192	115,811	221,833	23,556	35,479	71,477	92,075	165,181	381,805
2001	47,810	65,197	121,948	160,373	307,588	780,939	30,424	51,009	83,522	123,570	254,993	25,004	37,459	74,743	95,522	183,123	464,933
2002	47,189	63,834	115,092	147,416	263,001	602,071	30,545	51,019	82,768	118,520	225,327	25,088	37,493	74,302	94,392	168,402	385,512
2003	45,468	61,662	113,940	148,129	282,366	843,385	29,273	48,593	79,751	114,569	220,031	24,164	36,072	71,973	92,056	160,770	431,870

Source: Computations based on tax statistics.

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.

TABLE D. Reference Totals for Workers, Portugal, 1936-2004

	(1) Employees (⁰⁰⁰ s)	(2) Employees Wage Tax Files (⁰⁰⁰ s)	(3) (2)/(1) (%)	(4) Employees Quadros Pessoal (⁰⁰⁰ s)	(5) Employees Income Tax Files (⁰⁰⁰)	(6) (5)/(1) (%)	(7) Average Wage per worker (2000 Euros)	(8) CPI (2000 base)
1936	2,254	39	1.75				2,435	0.71
1937	2,284	40	1.74				2,472	0.74
1938	2,314	50	2.17				2,692	0.71
1939	2,346	48	2.06				2,818	0.67
1940	2,370	55	2.33				2,585	0.70
1941	2,383	58	2.43				2,451	0.79
1942	2,398	65	2.70				2,320	0.97
1943	2,412	66	2.74				2,541	1.09
1944	2,448	81	3.32				2,823	1.12
1945	2,475	95	3.84				2,725	1.22
1946	2,500	87	3.50				2,950	1.24
1947	2,523	83	3.29				3,007	1.26
1948	2,537	82	3.25				3,063	1.29
1949	2,554	90	3.52				3,099	1.31
1950	2,600	98	3.78				3,187	1.34
1951	2,678	98	3.67				3,290	1.34
1952	2,696	91	3.36				3,294	1.33
1953	2,713	92	3.40				3,450	1.34
1954	2,697	96	3.57				3,767	1.33
1955	2,724	98	3.59				3,868	1.33
1956	2,771	98	3.53				3,882	1.37
1957	2,804	104	3.70				3,898	1.39
1958	2,835	109	3.86				3,827	1.41
1959	2,852	117	4.10				4,077	1.43
1960	2,874	127	4.40				4,235	1.46
1961	2,864	139	4.86				4,491	1.50
1962	2,865	159	5.55				4,624	1.54
1963	2,879						4,877	1.58
1964	2,915	181	6.19				5,123	1.62
1965	2,990	244	8.17				5,462	1.66
1966	3,064	291	9.50				5,602	1.74
1967	3,081	350	11.36				6,037	1.84
1968	3,096	423	13.68				6,147	1.95
1969	3,146	433	13.75				6,148	2.13
1970	3,186	459	14.42				6,547	2.26
1971	3,229	297	9.20				6,527	2.53
1972	3,291	359	10.91				6,711	2.80
1973	3,337	483	14.48				6,878	3.16
1974	3,327	575	17.28				7,191	3.96
1975	3,254	643	19.75				8,209	4.56
1976	3,173	856	26.97				8,213	5.36
1977	3,217	1,154	35.86				7,225	6.86
1978	3,319	1,134	34.18				6,701	8.32
1979	3,400	1,306	38.43				6,154	10.34
1980	3,487	1,460	41.88				6,158	12.61
1981	3,489	1,695	48.60				6,226	15.13
1982	3,500	1,843	52.66				6,073	18.51
1983	3,429						5,715	23.24
1984	3,478						4,796	30.04
1985	3,469			1,647			4,768	35.85
1986	3,446			1,658			5,043	40.04
1987	3,531			1,691			5,290	43.80
1988	3,620			1,738			5,583	48.04
1989	3,751			1,895	2,289	61.03	7,282	54.12
1990	3,790				2,816	74.29	7,628	60.95
1991	3,825			1,937	2,863	74.84	8,036	68.33
1992	3,844			1,963	2,993	77.87	8,382	74.78
1993	3,770			1,926	3,017	80.05	8,330	79.87
1994	3,734			1,926	3,045	81.53	8,342	84.13
1995	3,830			1,944	3,099	80.91	8,273	87.63
1996	3,964			1,941	3,222	81.28	9,139	90.31
1997	4,047			2,085	3,397	83.96	9,381	92.44
1998	4,359			2,135	3,569	81.86	9,136	95.03
1999	4,419			2,249	3,700	83.72	9,584	97.22
2000	4,519			2,338	3,871	85.66	10,732	100.00
2001	4,601						10,691	104.35
2002	4,624			2,456			10,784	108.10
2003	4,606			2,521			10,401	111.63
2004	4,611			2,595			10,266	114.26

Source: See Appendix to Chapter 5.

Table E.1. Top Earnings Shares in Portugal, 1964-2000, from Wage Tax information

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1964		15.20	7.63	5.69	2.51	0.69		7.57	1.94	3.18	1.83	0.69
1965		17.19	8.34	5.88	2.40	0.62		8.85	2.46	3.48	1.78	0.62
1966		17.43	8.57	6.15	2.60	0.72		8.87	2.41	3.55	1.88	0.72
1967	22.15	16.93	8.20	5.86	2.38	0.63	5.22	8.74	2.34	3.48	1.75	0.63
1968	24.06	17.95	8.46	5.85	2.23	0.55	6.11	9.49	2.62	3.62	1.67	0.55
1969	23.87	17.94	8.55	5.93	2.35	0.62	5.93	9.39	2.62	3.58	1.73	0.62
1970	24.36	17.83	8.78	6.11	2.50	0.69	6.52	9.06	2.67	3.61	1.80	0.69
1971		15.22	7.41	5.11	2.01	0.53		7.81	2.30	3.10	1.48	0.53
1972	20.11	15.09	7.25	4.95	1.96	0.52	5.02	7.84	2.30	2.99	1.44	0.52
1973	19.05	14.00	6.25	4.15	1.56	0.38	5.06	7.74	2.10	2.59	1.18	0.38
1974	19.28	12.96	5.10	3.31	1.20	0.28	6.32	7.86	1.80	2.11	0.92	0.28
1975	17.18	11.40	4.31	2.73	0.95	0.21	5.78	7.10	1.58	1.78	0.74	0.21
1976	15.88	10.46	3.70	2.33	0.80	0.17	5.42	6.76	1.37	1.53	0.63	0.17
1977	20.49	14.21	5.20	3.14	0.82		6.27	9.02	2.06	2.32		
1978	21.21	14.36	5.47	3.29	0.82		6.85	8.89	2.18	2.47		
1979	21.21	14.56	5.50	3.23	0.82		6.64	9.06	2.28	2.41		
1980	18.80	12.96	4.67	2.71	0.67		5.83	8.30	1.96	2.03		
1981	21.12	14.56	5.04	2.99	0.85		6.56	9.52	2.05	2.14		
1982	19.26	13.00	4.24	2.47	0.68		6.26	8.76	1.77	1.79		
1983												
1984												
1985												
1986												
1987												
1988												
1989	28.15	17.66	5.72	3.48	1.09	0.23	10.48	11.95	2.24	2.39	0.86	0.23
1990	29.67	18.83	6.20	3.78	1.18	0.24	10.84	12.63	2.42	2.60	0.94	0.24
1991	31.16	19.82	6.54	4.00	1.28	0.28	11.34	13.28	2.54	2.72	1.00	0.28
1992	33.27	20.74	6.81	4.16	1.33	0.28	12.52	13.93	2.65	2.83	1.05	0.28
1993	31.76	20.17	6.85	4.27	1.42	0.31	11.59	13.32	2.57	2.85	1.12	0.31
1994	32.44	20.74	7.14	4.48	1.54	0.36	11.70	13.60	2.66	2.94	1.18	0.36
1995	33.07	21.27	7.46	4.70	1.65	0.38	11.80	13.82	2.76	3.05	1.27	0.38
1996	30.98	20.01	7.05	4.48	1.62	0.41	10.97	12.96	2.57	2.87	1.21	0.41
1997	31.97	20.75	7.43	4.77	1.79	0.46	11.22	13.32	2.65	2.99	1.33	0.46
1998	33.32	21.79	7.86	5.07	1.93	0.52	11.53	13.93	2.78	3.14	1.42	0.52
1999	33.74	22.28	8.29	5.47	2.24	0.66	11.46	13.99	2.82	3.23	1.58	0.66
2000	31.00	20.41	7.47	4.88	1.92	0.53	10.59	12.94	2.59	2.96	1.40	0.53

Notes: Wage information taken from tabulations of the Imposto Profissional 1964-1982, and from tabulations of the Imposto sobre Rendimiento das Pessoas Singulares 1989-2000.

The results for 1964-1982 excludes Public Administration employees.

Table E.2. Fractiles of Earnings in Portugal from tax statistics, 1989-2000
(amounts in 2000 Euros)

	P90 (2)	P95 (3)	P99 (4)	P99.5 (5)	P99.9 (6)	P99.99 (7)	P90-100 (8)	P95-100 (9)	P99-100 (10)	P99.5-100 (11)	P99.9-100 (12)	P99.99-100 (13)	P90-95 (14)	P95-99 (15)	P99-99.5 (16)	P99.5-99.9 (17)	P99.9-99.99 (18)
1989	13,315	17,576	29,826	36,396	56,614	107,418	20,492	25,721	41,628	50,628	79,286	163,734	15,264	21,744	32,627	43,464	69,903
1990	14,450	19,010	33,546	41,556	64,242	117,779	22,632	28,732	47,285	57,650	90,342	184,983	16,532	24,094	36,921	49,477	79,826
1991	15,852	21,273	37,003	45,606	70,841	143,344	25,041	31,857	52,538	64,236	102,436	222,806	18,226	26,687	40,840	54,686	89,061
1992	16,755	22,446	39,059	48,525	77,504	158,186	27,880	34,767	57,104	69,783	111,640	238,053	20,992	29,183	44,426	59,318	97,594
1993	17,120	22,610	39,936	49,778	80,505	169,754	26,448	33,595	57,025	71,173	118,483	255,444	19,301	27,737	42,877	59,346	103,265
1994	17,013	22,457	40,099	50,429	82,651	188,890	27,060	34,602	59,573	74,709	128,398	298,105	19,518	28,360	44,436	61,287	109,541
1995	17,238	22,974	41,086	51,823	86,504	200,529	27,364	35,200	61,703	77,773	136,257	315,864	19,527	28,574	45,634	63,152	116,301
1996	17,593	23,586	42,435	53,680	90,594	222,869	28,317	36,575	64,440	81,978	148,022	376,849	20,059	29,609	46,903	65,467	122,596
1997	18,197	24,587	44,305	56,394	99,200	254,711	29,985	38,919	69,665	89,546	167,682	434,463	21,050	31,233	49,783	70,012	138,040
1998	18,076	24,748	45,185	57,701	101,651	269,971	30,441	39,819	71,773	92,705	176,319	470,897	21,062	31,830	50,842	71,801	143,589
1999	18,851	25,928	48,086	61,562	113,719	336,400	32,408	42,797	79,622	105,020	214,979	635,945	22,018	33,591	54,224	77,530	168,205
2000	19,515	27,045	49,394	63,089	115,996	317,737	33,273	43,809	80,158	104,670	206,261	564,993	22,737	34,722	55,646	79,272	166,402

Source: withholdings at the source, income tax.

Table F. Top Earnings Shares in Portugal from Administrative Records, 1985-2004

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1985	27.32	17.64	6.46	4.31	1.50	0.25	9.68	11.18	2.15	2.81	1.25	0.25
1986	26.32	16.50	5.41	3.35	1.11	0.22	9.82	11.09	2.06	2.25	0.89	0.22
1987	26.58	16.69	5.46	3.37	1.09	0.20	9.88	11.24	2.09	2.28	0.89	0.20
1988	27.15	17.17	5.66	3.49	1.12	0.20	9.98	11.50	2.17	2.37	0.92	0.20
1989	27.72	17.61	5.86	3.61	1.13	0.19	10.11	11.75	2.25	2.48	0.94	0.19
1990												
1991	29.56	19.18	6.59	4.00	1.16	0.19	10.38	12.59	2.59	2.84	0.97	0.19
1992	30.70	20.03	6.81	4.13	1.21	0.23	10.66	13.22	2.68	2.91	0.98	0.23
1993	30.90	20.35	6.99	4.20	1.20	0.22	10.54	13.37	2.79	2.99	0.98	0.22
1994	31.01	20.57	7.28	4.50	1.42	0.35	10.44	13.29	2.78	3.08	1.07	0.35
1995	30.22	19.78	6.99	4.39	1.47	0.30	10.43	12.79	2.60	2.92	1.17	0.30
1996	30.65	20.17	7.21	4.55	1.56	0.31	10.48	12.95	2.66	2.99	1.24	0.31
1997	30.40	19.90	7.04	4.44	1.53	0.31	10.49	12.86	2.60	2.91	1.21	0.31
1998	30.28	19.82	7.04	4.48	1.61	0.37	10.47	12.77	2.57	2.87	1.23	0.37
1999	30.48	19.95	7.12	4.56	1.67	0.44	10.53	12.83	2.56	2.89	1.23	0.44
2000	30.70	20.11	7.38	4.86	2.00	0.77	10.59	12.73	2.52	2.86	1.23	0.77
2001												
2002	31.42	20.87	7.97	5.39	2.45	1.06	10.56	12.90	2.58	2.94	1.39	1.06
2003	31.82	21.14	8.02	5.36	2.24	0.78	10.68	13.12	2.66	3.12	1.46	0.78
2004	31.95	21.26	8.15	5.48	2.36	0.90	10.69	13.12	2.66	3.12	1.46	0.90

Source: Micro-data from Quadros de Pessoal

Table F (continued). Earnings Shares in Portugal from Administrative Records, 1985-2004

	Top 90%	Top 80%	Top 70%	Top 60%	Top 50%	Top 40%	Top 30%	Top 20%	Top 10%	Top 100-90%	Top 90-80%	Top 80-70%	Top 70-60%	Top 60-50%	Top 50-40%	Top 40-30%	Top 30-20%	Top 20-10%	Top 10%
	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1985	97.08	91.94	86.04	79.43	71.98	63.57	53.90	42.21	27.32	2.92	5.14	5.90	6.61	7.45	8.41	9.67	11.69	14.90	27.32
1986	96.98	91.72	85.70	79.03	71.54	63.11	53.39	41.53	26.32	3.02	5.26	6.02	6.67	7.48	8.44	9.72	11.86	15.21	26.32
1987	96.94	91.71	85.73	79.10	71.69	63.33	53.69	41.84	26.58	3.06	5.23	5.98	6.62	7.42	8.36	9.64	11.85	15.26	26.58
1988	96.84	91.70	85.83	79.31	71.98	63.72	54.16	42.41	27.15	3.16	5.14	5.88	6.52	7.33	8.26	9.56	11.75	15.26	27.15
1989	96.80	91.73	85.95	79.54	72.31	64.10	54.55	42.87	27.72	3.20	5.07	5.78	6.41	7.23	8.21	9.55	11.68	15.16	27.72
1990																			
1991	96.80	91.90	86.43	80.30	73.39	65.49	56.19	44.69	29.56	3.20	4.90	5.48	6.13	6.91	7.90	9.30	11.51	15.12	29.56
1992	96.84	92.15	86.85	80.87	74.14	66.38	57.24	45.86	30.70	3.16	4.69	5.30	5.98	6.73	7.76	9.14	11.38	15.16	30.70
1993	96.86	92.27	87.01	81.07	74.33	66.60	57.42	46.03	30.90	3.14	4.59	5.26	5.94	6.74	7.74	9.17	11.39	15.14	30.90
1994	96.84	92.26	86.99	81.06	74.33	66.62	57.53	46.17	31.01	3.16	4.58	5.27	5.93	6.73	7.70	9.10	11.36	15.16	31.01
1995	96.68	92.01	86.64	80.64	73.84	66.08	56.93	45.50	30.22	3.32	4.67	5.37	6.00	6.80	7.76	9.15	11.43	15.28	30.22
1996	96.65	92.03	86.67	80.72	73.97	66.28	57.21	45.88	30.65	3.35	4.63	5.35	5.96	6.74	7.69	9.07	11.33	15.23	30.65
1997	96.74	92.07	86.70	80.70	73.94	66.22	57.11	45.72	30.40	3.26	4.66	5.37	6.00	6.76	7.71	9.11	11.39	15.32	30.40
1998	96.59	91.89	86.53	80.55	73.80	66.10	56.98	45.55	30.28	3.41	4.69	5.36	5.98	6.76	7.70	9.12	11.42	15.27	30.28
1999	96.51	91.81	86.45	80.48	73.73	66.05	56.98	45.68	30.48	3.49	4.69	5.36	5.97	6.74	7.69	9.07	11.29	15.20	30.48
2000	96.67	91.98	86.67	80.73	74.02	66.34	57.27	46.01	30.70	3.33	4.69	5.31	5.94	6.71	7.68	9.07	11.26	15.31	30.70
2001																			
2002	96.86	92.28	87.02	81.14	74.50	66.87	57.84	46.62	31.42	3.14	4.59	5.26	5.88	6.64	7.63	9.03	11.22	15.19	31.42
2003	97.06	92.51	87.28	81.42	74.80	67.20	58.22	47.05	31.82	2.94	4.54	5.24	5.85	6.62	7.60	8.98	11.17	15.23	31.82
2004	97.08	92.55	87.36	81.54	74.94	67.33	58.34	47.17	31.95	2.92	4.53	5.19	5.82	6.60	7.61	8.99	11.17	15.22	31.95

Source: Micro-data from Quadros de Pessoal

Table G. Fractiles of Earnings in Portugal from Administrative Records, 1985-2004

(amounts in 2000 Euros)																		
Median Wage	P90 (2)	P95 (3)	P99 (4)	P99.5 (5)	P99.9 (6)	P99.99 (7)	P90-100 (8)	P95-100 (9)	P99-100 (10)	P99.5-100 (11)	P99.9-100 (12)	P99.99-100 (13)	P90-95 (14)	P95-99 (15)	P99-99.5 (16)	P99.5-99.9 (17)	P99.9-99.99 (18)	
1985	5,270	11,520	14,848	25,840	32,905	77,602	139,947	18,231	23,545	43,135	57,557	99,979	167,929	12,903	18,626	28,682	46,893	92,361
1986	5,525	12,293	15,711	26,176	32,094	53,280	114,861	18,370	23,029	37,755	46,819	77,285	153,504	13,723	19,371	28,725	39,251	68,926
1987	5,782	12,996	16,696	28,045	34,605	56,365	117,564	19,567	24,580	40,176	49,581	80,257	149,999	14,544	20,666	30,749	41,886	72,460
1988	5,815	13,310	17,271	29,550	36,538	59,969	120,770	20,342	25,730	42,448	52,309	84,164	149,631	14,968	21,569	32,617	44,379	77,035
1989	5,807	13,419	17,594	30,687	38,393	62,789	114,280	20,830	26,472	44,034	54,255	84,649	142,107	15,193	22,091	33,830	46,679	78,309
1990																		
1991	6,132	15,120	20,439	38,835	49,075	76,592	125,089	24,760	32,137	55,210	66,928	97,104	157,859	17,385	26,361	43,450	59,371	90,361
1992	6,443	16,248	22,784	43,141	54,048	83,722	135,644	27,351	35,699	60,674	73,520	108,119	208,990	19,005	29,461	47,839	64,876	96,919
1993	6,558	16,463	23,018	45,423	57,596	85,294	134,475	28,119	37,050	63,588	76,372	109,350	204,693	19,180	30,401	50,779	68,095	98,745
1994	6,665	16,803	23,187	46,329	59,130	92,968	160,553	28,873	38,311	67,819	83,800	131,842	324,289	19,515	31,059	52,051	72,074	110,935
1995	6,751	16,923	22,904	43,288	55,312	93,008	197,171	28,119	36,819	65,043	81,768	136,974	278,012	19,413	29,752	48,301	67,944	121,207
1996	6,935	17,528	23,912	45,969	58,765	98,805	221,095	29,531	38,863	69,524	87,649	150,001	303,507	20,119	31,082	51,152	71,773	132,553
1997	6,967	17,721	23,898	45,301	57,259	96,765	222,332	29,400	38,503	68,117	85,923	147,784	303,720	20,290	31,089	50,292	70,434	130,443
1998	7,172	18,233	24,620	46,047	58,362	98,064	253,269	30,233	39,570	70,321	89,382	160,442	374,221	20,958	31,975	51,399	71,833	137,099
1999	7,211	18,515	25,141	46,611	58,641	101,377	249,634	30,828	40,357	72,010	92,295	169,417	448,289	21,340	32,484	51,802	73,126	138,757
2000	7,395	19,162	25,725	46,993	59,357	104,748	273,804	31,851	41,725	76,580	100,951	207,930	797,512	21,963	32,989	52,337	74,105	141,856
2001																		
2002	7,561	19,555	26,653	49,442	62,788	111,316	421,715	33,563	44,571	85,113	115,205	261,910	1,136,177	22,509	34,365	54,912	78,374	164,602
2003	7,507	19,686	26,827	50,605	64,913	120,883	335,532	33,828	44,946	85,268	113,912	238,289	832,132	22,658	34,785	56,505	82,614	172,174
2004	7,506	19,717	26,968	50,682	65,323	120,813	363,122	34,121	45,410	86,999	117,124	252,187	964,532	22,833	35,015	56,876	83,361	173,169

Source: Micro-data from Quadros de Pessoal

Note: Original information corresponds to monthly earnings. Amounts have been annualized by considering 14 monthly pays per year.

Table G (continued). Fractiles of Earnings in Portugal from Administrative Records, 1985-2004
(amounts in 2000 Euros)

Percentiles of Median Wage by Year																										
Median Wage	P10	P20	P30	P40	P50	P60	P70	P80	P90	P10-100	P20-100	P30-100	P40-100	P50-100	P60-100	P70-100	P80-100	P90-100	P10-20	P20-30	P30-40	P40-50	P50-60	P60-70	P70-80	P80-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1985	2,897	3,740	4,139	4,674	5,270	5,955	7,039	8,673	11,520	7,199	7,671	8,204	8,836	9,608	10,607	11,991	14,087	18,231	3,428	3,931	4,407	4,970	5,605	6,447	7,791	9,932
1986	5,525	3,079	3,925	4,378	4,936	5,525	6,279	7,413	9,225	12,293	7,519	8,000	8,543	9,191	9,985	11,010	12,419	14,491	18,370	3,675	4,203	4,660	5,229	5,895	6,787	8,286
1987	5,782	3,297	4,097	4,655	5,153	5,782	6,540	7,803	9,777	12,996	7,931	8,440	9,017	9,707	10,556	11,657	13,177	15,402	19,567	3,850	4,403	4,874	5,456	6,149	7,089	8,722
1988	5,815	3,382	4,099	4,652	5,157	5,815	6,587	7,850	9,907	13,310	8,064	8,590	9,189	9,905	10,789	11,938	13,530	15,890	20,342	3,855	4,407	4,890	5,497	6,194	7,170	8,815
1989	5,807	3,425	4,052	4,549	5,149	5,807	6,574	7,831	9,814	13,419	8,083	8,617	9,227	9,962	10,868	12,042	13,665	16,109	20,830	3,814	4,345	4,821	5,436	6,171	7,176	8,779
1990																										
1991	6,132	3,781	4,323	4,856	5,416	6,132	7,147	8,585	10,833	15,120	9,008	9,621	10,340	11,209	12,294	13,712	15,687	18,712	24,760	4,101	4,586	5,130	5,785	6,614	7,787	9,634
1992	6,443	3,807	4,437	5,015	5,603	6,443	7,470	9,011	11,464	16,248	9,587	10,263	11,054	12,011	13,212	14,788	16,999	20,428	27,351	4,177	4,725	5,330	5,993	6,915	8,147	10,142
1993	6,558	3,891	4,459	5,106	5,733	6,558	7,607	9,181	11,756	16,463	9,797	10,498	11,313	12,298	13,532	15,153	17,423	20,947	28,119	4,176	4,787	5,401	6,132	7,037	8,346	10,363
1994	6,665	4,092	4,581	5,213	5,839	6,665	7,725	9,347	12,063	16,803	10,021	10,739	11,573	12,581	13,843	15,511	17,857	21,496	28,873	4,280	4,926	5,546	6,295	7,200	8,506	10,624
1995	6,751	4,144	4,710	5,267	5,928	6,751	7,787	9,403	12,110	16,923	9,998	10,703	11,518	12,506	13,743	15,373	17,659	21,169	28,119	4,344	4,996	5,585	6,321	7,219	8,515	10,632
1996	6,935	4,222	4,844	5,413	6,101	6,935	7,968	9,659	12,441	17,528	10,351	11,084	11,932	12,963	14,256	15,967	18,375	22,102	29,531	4,442	5,138	5,717	6,472	7,384	8,707	10,878
1997	6,967	4,283	4,910	5,478	6,130	6,967	8,027	9,728	12,586	17,721	10,399	11,133	11,980	13,010	14,303	16,014	18,414	22,111	29,400	4,508	5,197	5,799	6,540	7,459	8,808	11,017
1998	7,172	4,328	5,072	5,648	6,335	7,172	8,302	10,068	12,967	18,233	10,716	11,467	12,341	13,403	14,734	16,497	18,961	22,739	30,233	4,700	5,368	5,985	6,767	7,707	9,131	11,437
1999	7,211	4,403	5,123	5,721	6,419	7,211	8,397	10,085	13,001	18,515	10,850	11,607	12,490	13,565	14,914	16,700	19,208	23,102	30,828	4,755	5,430	6,050	6,831	7,785	9,188	11,439
2000	7,395	4,455	5,237	5,817	6,549	7,395	8,572	10,367	13,317	19,162	11,145	11,930	12,846	13,959	15,358	17,207	19,807	23,867	31,851	4,858	5,509	6,158	6,960	7,959	9,399	11,678
2001																										
2002	7,561	4,507	5,310	5,930	6,653	7,561	8,811	10,618	13,645	19,555	11,496	12,320	13,277	14,444	15,914	17,856	20,593	24,895	33,563	4,887	5,604	6,263	7,078	8,130	9,626	11,964
2003	7,507	4,472	5,255	5,884	6,591	7,507	8,758	10,509	13,547	19,686	11,467	12,295	13,256	14,428	15,905	17,862	20,631	25,009	33,828	4,821	5,554	6,209	7,025	8,061	9,530	11,849
2004	7,506	4,480	5,232	5,854	6,617	7,506	8,786	10,544	13,578	19,717	11,520	12,354	13,326	14,512	16,004	17,974	20,765	25,184	34,121	4,833	5,546	6,217	7,047	8,126	9,601	11,927

Source: Micro-data from Quadros de Pessoal
Note: Original information corresponds to monthly earnings. Amounts have been annualized by considering 14 monthly pays per year.

Table H. Sample Size of Administrative Records on Earnings (Quadros de Pessoa)

	Total	employers		family employees with no salary		employees				cooperative workers				not classified/unknown	
		male	female	male	female	male		female		male		female		male	female
						with wage>0	with wage=0	with wage>0	with wage=0	with wage>0	with wage=0	with wage>0	with wage=0		
1985	1,898,675	82,663	19,027	976	1,356	1,104,845	79,250	528,009	64,493	9,490	2,983	2,580	1,254	513	
1986	1,897,785	83,892	19,817	860	1,290	1,094,060	77,133	550,834	52,262	8,188	3,366	2,327	1,750	840	
1987	1,936,801	85,253	21,141	662	1,097	1,105,821	78,564	573,813	55,463	6,806	2,575	2,438	1,262	807	
1988	1,996,802	93,432	24,136	686	1,047	1,121,151	80,378	606,739	55,665	6,067	2,142	888	616	2,012	
1989	2,169,830	101,460	27,651	724	1,145	1,198,466	83,661	680,583	57,940	6,217	1,615	2,365	4,597	2,759	
1990															
1991	2,233,237	90,878	27,058	637	873	1,195,350	103,478	727,548	71,625	2,620	1,078	1,077	6,676	4,040	
1992	2,268,151	95,443	29,406	621	679	1,198,749	103,558	751,613	74,201	1,826	513	867	6,018	4,391	
1993	2,215,481	103,500	32,352	624	719	1,171,876	88,442	742,880	63,605	1,878	225	673	5,119	3,430	
1994	2,202,609	117,618	38,950	596	961	1,145,881	64,264	770,379	53,823	1,775	263	782	4,353	2,700	
1995	2,232,548	122,864	41,819	426	701	1,152,821	64,979	787,793	56,912	1,937	578	799	373	287	
1996	2,333,713	124,219	42,207	361	544	1,147,364	65,979	790,255	58,996	1,470	357	527	718	472	
1997	2,350,782	131,153	47,232	411	494	1,213,279	43,980	869,752	41,982	1,179	94	635	271	259	
1998	2,430,691	129,395	47,812	468	624	1,235,909	58,428	897,502	58,505	785	105	377	396	311	
1999	2,568,456	137,240	51,352	505	865	1,290,837	63,948	955,045	65,844	1,077	63	553	742	350	
2000	2,688,957	159,716	59,846	605	1,204	1,330,450	63,465	1,004,942	65,905	1,182	64	466	587	462	
2001															
2002	2,820,772	181,613	69,180	615	961	1,409,744	55,294	1,043,322	56,606	1,100	87	433	1,048	743	
2003	2,855,599	165,553	65,505	584	857	1,429,443	49,693	1,086,496	52,420	1,165	81	640	1,817	1,318	
2004	2,912,304	155,817	63,507	811	1,090	1,471,350	45,106	1,119,361	50,829	909	69	425	1,767	1,195	

Source: Micro-data from Quadros de Pessoa.

Table I. Composition of Top Incomes under Old Income Tax 1946-1963

Year	Top income group fractile	Composition			
		Returns on real estate and farm income	Returns on capital	Business income (excluding farm)	Employment income
1946	Top 0.3 %	37.30	7.17	25.61	29.92
1947	Top 0.4 %	34.16	6.92	29.77	29.14
1948	Top 0.5 %	32.25	7.33	31.20	29.22
1949	Top 0.5 %	33.01	7.53	30.84	28.62
1950	Top 0.6 %	34.75	7.04	28.23	29.98
1951	Top 0.7 %	35.02	7.09	28.00	29.90
1952	Top 0.7 %	34.65	7.19	27.26	30.89
1953	Top 0.8 %	35.52	6.77	26.82	30.90
1954	Top 0.8 %	36.75	6.67	26.01	30.57
1955	Top 0.8 %	36.58	6.40	25.88	31.14
1956	Top 0.9 %	37.16	6.10	26.11	30.63
1957	Top 1.0 %	34.32	5.26	26.38	34.05
1958	Top 1.1 %	37.39	4.87	25.07	32.67
1959	Top 0.9 %	38.41	4.86	24.55	32.17
1960	Top 0.9 %	39.32	4.61	22.69	33.39
1961	Top 0.9 %	39.97	4.75	22.28	33.00
1962	Top 1.0 %	39.65	4.45	22.56	33.33
1963	Top 1.2 %	38.47	4.38	22.90	34.25

Source: official income tax statistics. The composition statistics are only available in aggregate.
As a result, the size of the corresponding top group varies across those years.

Table J. Tax Scale. Portugal: 1922-1932

Imposto Pessoal do Rendimento 1922-1926			Imposto Complementar 1927-1932		
Range of Taxable Income (escudos)		Rate (%)	Range of Taxable Income (escudos)		Rate (%)
	5,000	0.50	7,000	15,000	2.00
5,000	10,000	1.00	15,000	30,000	2.50
10,000	15,000	1.50	30,000	45,000	3.00
15,000	20,000	2.00	45,000	60,000	3.50
20,000	25,000	2.50	60,000	75,000	4.00
25,000	30,000	3.25	75,000	90,000	4.50
30,000	35,000	4.00	90,000	105,000	5.00
35,000	40,000	4.75	105,000	120,000	5.50
40,000	45,000	5.50	120,000	135,000	6.00
45,000	50,000	6.25	135,000	150,000	6.50
50,000	55,000	7.00	150,000	165,000	7.00
beyond 55,000 escudos, rate increases			165,000	180,000	7.50
1% per each additional 5,000 escudos			180,000	200,000	8.00
up to a maximum marginal rate of 30%			200,000		8.50

Table J (continued). Tax Scale Imposto Complementar 1933-1941

For income above 200,000 escudos
the tax rate = $8.5 - 705 / (\text{income} / 1,000)$

Table J (continued). Tax Scale Imposto Complementar 1979-1982

1979-1980		1981		1982		Rates married (%)	Rates single (%)
Range of Taxable Income (escudos)		Range of Taxable Income (escudos)		Range of Taxable Income (escudos)			
100,000	100,000		150,000		180,000	4.0	4.8
200,000	200,000		300,000		360,000	6.0	7.2
350,000	350,000	150,000	500,000	180,000	600,000	8.0	9.6
500,000	500,000	300,000	700,000	360,000	840,000	14.0	16.8
650,000	650,000	500,000	900,000	600,000	1,080,000	20.0	24.0
800,000	800,000	700,000	1,100,000	840,000	1,320,000	26.0	31.2
950,000	950,000	900,000	1,300,000	1,080,000	1,560,000	34.0	40.8
1,100,000	1,100,000	1,100,000	1,500,000	1,320,000	1,800,000	42.0	50.4
1,250,000	1,250,000	1,300,000	1,700,000	1,560,000	2,040,000	50.0	60.0
1,400,000	1,400,000	1,500,000	1,900,000	1,800,000	2,280,000	60.0	72.0
		1,700,000		2,040,000		70.0	80.0
		1,900,000		2,280,000			

Table J (continued). Tax Scale Imposto Complementar 1983-1988

1983				1984				1985				1986-1987				1988			
<i>for married couples</i>																			
Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)	
220,000	220,000	4.0		280,000	280,000	4.0		320,000	320,000	350,000		350,000	350,000	375,000	4.0	375,000	375,000	740,000	6.0
440,000	440,000	6.0		550,000	550,000	6.0		630,000	630,000	690,000		690,000	690,000	740,000	6.0	740,000	740,000	1,220,000	8.0
720,000	720,000	8.0		900,000	900,000	8.0		1,040,000	1,040,000	1,140,000		1,140,000	1,140,000	1,220,000	12.0	1,220,000	1,220,000	1,820,000	12.0
1,080,000	1,080,000	14.0		1,350,000	1,350,000	14.0		1,550,000	1,550,000	1,700,000		1,700,000	1,700,000	1,820,000	18.0	1,820,000	1,820,000	2,215,000	18.0
1,300,000	1,300,000	20.0		1,650,000	1,650,000	20.0		1,900,000	1,900,000	2,070,000		2,070,000	2,070,000	2,215,000	24.0	2,215,000	2,215,000	3,160,000	24.0
1,900,000	1,900,000	26.0		2,350,000	2,350,000	26.0		2,700,000	2,700,000	2,950,000		2,950,000	2,950,000	3,160,000	30.0	3,160,000	3,160,000	4,120,000	30.0
2,500,000	2,500,000	34.0		3,100,000	3,100,000	34.0		3,530,000	3,530,000	4,450,000		4,450,000	4,450,000	4,120,000	36.0	4,120,000	4,120,000	5,190,000	36.0
3,100,000	3,100,000	42.0		3,900,000	3,900,000	42.0		4,450,000	4,450,000	5,250,000		5,250,000	5,250,000	5,190,000	42.0	5,190,000	5,190,000	6,120,000	42.0
3,700,000	3,700,000	50.0		4,600,000	4,600,000	50.0		5,250,000	5,250,000	6,050,000		6,050,000	6,050,000	6,120,000	48.0	6,120,000	6,120,000	7,050,000	48.0
4,300,000	4,300,000	60.0		5,300,000	5,300,000	60.0		6,050,000	6,050,000	-		-	-	7,050,000	50.0	7,050,000	7,050,000		50.0
4,300,000	-	70.0		-	-	70.0													
<i>for single individuals</i>																			
Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)		Range of Taxable Income (escudos)		Rates (%)	
180,000	180,000	4.8		230,000	230,000	4.8		270,000	270,000	295,000		295,000	295,000	315,000	4.8	315,000	315,000	610,000	7.2
360,000	360,000	7.2		450,000	450,000	7.2		520,000	520,000	570,000		570,000	570,000	610,000	9.6	610,000	610,000	1,015,000	9.6
600,000	600,000	9.6		750,000	750,000	9.6		870,000	870,000	950,000		950,000	950,000	1,015,000	14.4	1,015,000	1,015,000	1,415,000	14.4
840,000	840,000	14.4		1,050,000	1,050,000	14.4		1,210,000	1,210,000	1,320,000		1,320,000	1,320,000	1,415,000	21.6	1,415,000	1,415,000	1,820,000	21.6
1,080,000	1,080,000	21.6		1,350,000	1,350,000	21.6		1,560,000	1,560,000	1,700,000		1,700,000	1,700,000	1,820,000	28.8	1,820,000	1,820,000	2,610,000	28.8
1,580,000	1,580,000	31.2		1,950,000	1,950,000	31.2		2,240,000	2,240,000	2,440,000		2,440,000	2,440,000	2,610,000	36.0	2,610,000	2,610,000	3,465,000	36.0
2,080,000	2,080,000	40.8		2,600,000	2,600,000	40.8		2,960,000	2,960,000	3,230,000		3,230,000	3,230,000	3,465,000	43.2	3,465,000	3,465,000	4,260,000	43.2
2,580,000	2,580,000	50.4		3,200,000	3,200,000	50.4		3,650,000	3,650,000	4,000,000		4,000,000	4,000,000	4,260,000	50.4	4,260,000	4,260,000	5,135,000	50.4
3,080,000	3,080,000	60.0		3,850,000	3,850,000	60.0		4,400,000	4,400,000	5,000,000		5,000,000	5,000,000	5,135,000	57.6	5,135,000	5,135,000	5,830,000	57.6
3,080,000	3,580,000	72.0		4,450,000	4,450,000	64.8								5,830,000	60.0				60.0
3,580,000	-	80.0		-	-	70.0													

Table J (continued). Tax Scale Imposto sobre a Renda das Pessoas Fisicas 1989-2003

1989			1990					
Range of Taxable Income (escudos)			Range of Taxable Income (escudos)			Rates (%)		
0	450,000		0	540,000		16.0		
450,000	850,000		540,000	1,020,000		20.0		
850,000	1,250,000		1,020,000	1,500,000		27.5		
1,250,000	3,000,000		1,500,000	3,600,000		35.0		
3,000,000			3,600,000			40.0		

1991			1992			1993			1994					
Range of Taxable Income (escudos)			Range of Taxable Income (escudos)			Range of Taxable Income (escudos)			Range of Taxable Income (escudos)			Rates (%)		
0	750,000		0	810,000		0	880,000		0	930,000		15.0		
750,000	1,750,000		810,000	1,890,000		880,000	2,010,000		930,000	2,170,000		25.0		
1,750,000	4,500,000		1,890,000	4,860,000		2,010,000	5,160,000		2,170,000	5,570,000		35.0		
4,500,000			4,860,000			5,160,000			5,570,000			40.0		

1995			1996			1997			1998					
Range of Taxable Income (escudos)			Range of Taxable Income (escudos)			Range of Taxable Income (escudos)			Range of Taxable Income (euros)			Rates (%)		
0	970,000		0	1,010,000		0	1,050,000		0	5,387.02		15.0		
970,000	2,260,000		1,010,000	2,350,000		1,050,000	2,435,000		5,387.02	12,469.95		25.0		
2,260,000	5,790,000		2,350,000	6,000,000		2,435,000	6,150,000		12,469.95	31,324.51		35.0		
5,790,000			6,000,000			6,150,000			31,324.51			40.0		

1999			2000					
Range of Taxable Income (euros)			Range of Taxable Income (euros)			Rates (%)		
0	3,491.59		0	3,641.22		14.0		
3,491.59	5,511.72		3,641.22	5,371.19		15.0		
5,511.72	13,716.64		5,371.19	14,165.86		25.0		
13,716.64	31,948.01		14,165.86	32,825.89		35.0		
31,948.01			32,825.89			40.0		

2001			2002			2003					
Range of Taxable Income (euros)			Range of Taxable Income (euros)			Range of Taxable Income (euros)			Rates (%)		
0	3,990.38		0	4,100.12		0	4,182.12		12.0		
3,990.38	6,035.45		4,100.12	6,201.42		4,182.12	6,325.45		14.0		
6,035.45	14,963.94		6,201.42	15,375.45		6,325.45	15,682.96		24.0		
14,963.94	34,417.05		15,375.45	35,363.52		15,682.96	36,070.79		34.0		
34,417.05	49,879.79		35,363.52	51,251.48		36,070.79	52,276.51		38.0		
49,879.79			51,251.48			52,276.51			40.0		

Table K. Income Tax in Portugal 1922-2003

Tax Denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main Deductions from Gross Income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint Filing
Imposto Pessoal do Rendimento	1922-1926 Lei 1368/1922	3,600	30% on wage income spouse: 1,200 dependent child (up to 4): 600 dependent child (above 4): 1,000 other dependents: 500	none	mandatory
	1927-1928 Decreto 15.290/1928	7,000	none	none	mandatory
	1929-1932 Decreto 16.731/1929	10,000	none	none	mandatory
	1933-1945 Decreto-Lei 22.541/1933	10,500	none	none	mandatory
	1946-1963 Decreto 35.595/1946	50,000	Civil Service income, pensions.	allowances for spouse and dependents	mandatory
	1964-1972 Decreto-Lei 45.399 30/11/1963 Decreto-Lei 49.483/1969	60,000	20% on wage income up to 20,000 spouse: 20,000 dependent <8 yo: 2,500 dependent aged 8-11 yo: 5,000 dependent aged 12-16 yo: 7,500 dependent aged 16-21 yo: 10,000 non-residents: 40,000	none	mandatory
	1973-1978 Decreto-lei 375/1974 Decreto-lei 667/1976	60,000	20% on wage income up to 25,000 spouse: 20,000 dependent <7 yo: 4,000 dependent aged 8-11 yo: 8,000 dependent aged 12-16 yo: 12,000 dependent aged 16-21 yo: 16,000 non-residents: 40,000	none	mandatory
	1979-1980 Decreto-lei 183F/1980	80,000	20% on wage income up to 30,000 spouse: 40,000 dependent <11 yo: 10,000 dependent aged 11-21 yo: 20,000 non-residents: 40,000	none	mandatory
	1981 Decreto-lei 196/1982	80,000	30% on wage income up to 50,000 spouse: 40,000 dependent <11 yo: 10,000 dependent aged 11-18 yo: 20,000 dependent aged 19-24 yo in undergraduate studies: 20,000 non-residents: 40,000	none	mandatory
	1982 Decreto-lei 119/1983	120,000	30% on wage income up to 50,000 spouse: 40,000 dependent <11 yo: 20,000 dependent aged 11-18 yo: 30,000 dependent aged 19-24 yo in undergraduate studies: 30,000 non-residents: 40,000	none	mandatory

Table K. Income Tax in Portugal 1922-2003

Tax Denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main Deductions from Gross Income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint Filing
Imposto sobre a Rendas das Pessoas Físicas	1983 Decreto-lei 192/1984	120,000	30% on wage income up to 50,000 spouse: 120,000 dependent <11 yo: 25,000 dependent aged 11-18 yo: 40,000 dependent aged 19-24 yo in undergraduate studies: 40,000 non-residents: 40,000	none	mandatory
	1984 Decreto-lei 115d/1985	150,000	30% on wage income up to 65,000 spouse: 150,000 dependent <11 yo: 30,000 dependent aged 11-18 yo: 50,000 dependent aged 19-24 yo in undergraduate studies: 50,000 non-residents: 40,000	none	mandatory
	1985 Decreto-lei 112/1986	180,000	30% on wage income up to 105,000 spouse: 180,000 dependent <11 yo: 40,000 dependent aged 11-18 yo: 60,000 dependent aged 19-24 yo in undergraduate studies: 60,000 dependent aged 19-24 yo unemployed: 60,000 non-residents: 40,000	none	mandatory
	1986-1987 Decreto 135/1987	295,000	30% on wage income up to 155,000 spouse: 205,000 dependent <11 yo: 60,000 dependent aged 11-18 yo: 70,000 dependent aged 19-24 yo in undergraduate studies: 70,000 dependent aged 19-24 yo unemployed: 70,000 non-residents: 70,000	none	mandatory
	1988 Decreto-lei 66/1989	1,000,000	30% on wage income up to 155,000 spouse: 200,000 dependent <11 yo: 60,000 dependent aged 11-18 yo: 70,000 dependent aged 19-24 yo in undergraduate studies: 70,000 dependent aged 19-24 yo unemployed: 70,000 non-residents: 70,000	none	mandatory
	1989 Decreto-Lei 442A/1988	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 250,000 mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1000,000	single: 20,000 married: 15,000 x2 dependant: 10,000	mandatory splitting
	1990	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 300,000 mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,250,000	single: 23,000 married: 17,000 x2 dependant: 12,000	mandatory splitting
	1991	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 340,000 mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,400,000	single: 25,500 married: 19,000 x2 dependant: 14,000	mandatory splitting
	1992	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 378,000 mortgage interests to purchase main residence	single: 27,500 married: 20,500 x2	mandatory

Table K. Income Tax in Portugal 1922-2003

Tax Denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main Deductions from Gross Income (escudos until 2001, euros since 2002)	Main Deductions from tax (escudos until 2001, euros since 2002)	Joint Filing
			education expenses, life and other insurances pension up to 1,512,000	dependant: 15,100	splitting
	1993	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 400,000 mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,600,000	single: 29,000 married: 22,000 x2 dependant: 16,000	mandatory splitting
	1994	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 416,000 mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,200,000	single: 31,000 married: 22,800 x2 dependant: 16,500	mandatory splitting
	1995	after-tax wage income cannot be below the national minimum wage	65% on wage income up to 440,000 mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,272,000	single: 32,000 married: 24,000 x2 dependant: 17,500	mandatory splitting
	1996	after-tax wage income cannot be below the national minimum wage	highest of (a) 70% on wage income up 465,000 or (b) 71% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,350,000	single: 33,000 married: 25,000 x2 dependant: 18,500	mandatory splitting
	1997	after-tax wage income cannot be below 120% of the highest national minimum wage	highest of (a) 70% on wage income up 484,000 or (b) 71% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,385,000	single: 34,500 married: 26,300 x2 dependant: 19,000 (1st.), 19,210 (2nd.), 19,430 (3rd.), 19,550 (+4th.)	mandatory splitting
	1998	after-tax wage income cannot be below 120% of the highest national minimum wage	highest of (a) 70% on wage income up 498,000 or (b) 71% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,415,000	single: 35,200 married: 26,800 x2 dependant: 19,400 (1st.), 19,620 (2nd.), 19,840 (3rd.), 19,860 (+4th.)	mandatory splitting
	1999	after-tax wage income cannot be below 120% of the highest national minimum wage	highest of (a) 70% on wage income up to 522,000 or (b) 72% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,445,000	single: 36,000 married: 27,400 x2 dependant: 19,800 (1st.), 20,025 (2nd.), 20,250 (3rd.), 20,375 (+4th.)	mandatory splitting
	2000	after-tax wage income cannot be below 120% of the highest national minimum wage	highest of (a) 70% on wage income up to 535,000 or (b) 72% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,482,000	single: 36,720 married: 27,950 x2 dependant: 20,200 (1st.), 20,430 (2nd.), 21,070 (3rd.), 21,47 (+4th.)	mandatory splitting
	2001	after-tax wage income cannot be below 120% of the highest national minimum wage	highest of (a) 70% on wage income up to 550,000 or (b) 72% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,523,000	single: 40,200 married: 33,500 x2 dependant: 26,800 each	mandatory splitting
	2002	after-tax wage income cannot be below 120% of the highest national minimum wage	72% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances	single: 60% of monthly minimum wage married: 50% of monthly minimum wage x2 dependant: 40% of monthly minimum wage each	mandatory splitting

Table K. Income Tax in Portugal 1922-2003

Tax Denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main Deductions from Gross Income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint Filing
	2003	after-tax wage income cannot be below 120% of the highest national minimum wage	pension up to 7,805.60 72% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 7,961.71	single: 80% of monthly minimum wage married: 50% of monthly minimum wage x2 dependant: 40% of monthly minimum wage each	mandatory splitting