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Top Incomes and Earnings in Portugal, 1936–2005

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11.1 INTRODUCTION

This chapter analyses the evolution of income and wage concentration in Portugal between 1936 and 2005 using tax statistics and administrative records on individual earnings. Together with the chapters on Italy and Spain, this completes the study of top income shares in three southern European countries for which tax data are available. The case of Portugal is interesting and worth studying on several grounds.

First, Portugal has undergone important changes in the political arena since the beginning of the twentieth 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.¹ 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, who believed that neither English parliamentarism nor English democracy were adaptable to every European country.² The Second Republic evolved to a right-wing dictatorship under the form of a single party corporative regime. In the absence of the clear polarization of Spanish society, the authoritarian system developed in a framework of institutional continuity. In 1928 Salazar was appointed minister of

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¹ For an account of the history of Portugal until the late 1960s, see Payne (1972). See also Robinson (1979) and Gallaher (1983).

² Salazar (1939).

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. Like Spain, Portugal remained neutral during the Second World War, but unlike Spain, it was accepted into the Marshall plan in 1947 and NATO in 1949. In 1974 a left-wing military coup (known as the Carnation Revolution) 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 raising wages. The process has been described as a successful challenge to capitalist property.³ 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 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 twentieth century, the country was an agricultural-based economy in which wine accounted for one-third of total agrarian output.⁴ In 1950, Portugal GDP per capita was 15 per cent lower than in Spain, 60 per cent lower than in France, and 70 per cent lower than in the United Kingdom.⁵ 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 in those years should be read with caution in the light of massive emigration flows between 1950 and the early 1980s.⁶ In the 1970s growth came to a halt, affected by the revolution of 1974, the nationalization spree, and the less favourable 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 have started a period of considerable modernization and growth. Today, Portugal's GDP per capita is about 30–5 per cent lower than

³ Bermeo (1997).

⁴ Lains (2003a, 2003b) argues that, despite its backwardness, the Portuguese economy had a good performance during the first half of the twentieth century if compared to the previous fifty years. The economy expanded slowly under favourable external conditions before 1913, and expanded more rapidly when international economic conditions were less favourable after the First World War. Nevertheless, improvements were poor by Western European standards. See also Lains (2003c).

⁵ Comparative data from Maddison (2001, 2003).

⁶ 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).

the GDP per capita of the largest Western European economies such as France, Germany, or the United Kingdom, and about 20 per cent lower than the GDP per capita of Spain.⁷ As in the case of Spain, it is important to analyse income concentration during the growth and stagnation years in order to reassess 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 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 labour 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.⁸

A number of researchers have analysed 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 I summarize the main findings.⁹

Using micro-data from the 1980/1 and 1990/1 households' surveys, Rodrigues (1993, 1994, 1996) and Gouveia and Tavares (1995) detect an unambiguous decline in income inequality during the 1980s.¹⁰ In particular, Rodrigues (1994) finds that wages and capital income inequality rose, 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 might 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 Union, as shown in Machado and Mata (2001) and Hartog, Pereira, and Vieira (2001).¹¹

⁷ For an account of the economic evolution of Portugal during the twentieth century, see Lains (1995), Lopes (1994, 1996), Nunes, Mata, and Valério (1989), and Valério (2001).

⁸ During the completion of this chapter there came to my attention the work by Guilera (2008), which uses tax statistics to study income concentration in Portugal.

⁹ The first two households' budget surveys were conducted in 1967/8 and 1973/4. As is usually the case, their primary purpose was to collect information on expenditures, required as input to the construction of the consumer price index. As a result, the 1967/8 survey did not contain income information. The 1973/4 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). However, the micro data have not survived. Since the 1980/1 survey, information has been collected on household income, household composition, and other socio economic characteristics.

¹⁰ 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.

¹¹ Murray and Steedman (1998) analyse the evolution of workers' skills in France, Germany, the Netherlands, Portugal, Sweden, and the United Kingdom and show that the greatest change in the qualification of the young has taken place in Portugal. Batista (2002) finds, however, that the skill premium in Portugal has fallen since the mid 1990s.

Based on the employees' administrative records that I also use as a data source in this chapter, Cardoso (1998a) analyses the years 1983–92 and finds that rising inequality characterized the evolution of labour 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 trend has been described in OECD (1992) and Ministério do Emprego (1992), which reports a 10 per cent rise in the Gini index for earnings from 1982 to 1989.¹²

Research has also been done on the basis of the European Community Household Panel (ECHP). Rodrigues (1999) compares the 1994/5 households' survey with the 1995 ECHP. Budría (2007) analyses 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.

The series presented in this chapter measure only top income (and wage) concentration and hence are silent about changes in the lower and middle parts of the distribution. Therefore, they can very well follow different patterns when compared to global inequality measures such as Gini coefficients or macro-based estimates. Additionally, it is worth 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 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 this study are much richer than those described in Budría (2007), whose results are based on the ECHP.¹³

My 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 steadily, and the rise in wage concentration contributed to the process to a great extent.

The chapter is organized as follows. Section 11.2 describes the data sources and outlines the estimation methods. Section 11.3 presents and analyses the evolution

¹² Other studies on income and earnings inequality in Portugal over the last three decades include Albuquerque and Gouveia (1994), Budría and Nunes (2005), Budría and Pereira (2007, 2008), Cantó, Cardoso, and Jimeno (2002), Cardoso (1994, 1998b, 1999, 2006), Carneiro (2008), Castanheira and Carvalho (1997), Costa (1994), Ferreira (1992), Gouveia and Rodrigues (2002), Hartog, Pereira, and Vieira (1999), Jimeno et al. (2000), Martins and Pereira (2004), Rodrigues (2008), Rodrigues and Albuquerque (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, García Perea, and Portugal (1998) study the Portuguese and the Spanish labour markets from a comparative perspective.

¹³ According to the results presented in Budría (2007), an income of at least 73,330 (in 2005 euros) was required in 2001 to belong to the top 1%, which had an average income of 88,660. My estimations of top fractile income levels show that the top 1% had an average income of 142,500, while an income of 73,330 only qualified as top 5 1%; see Table 11D.2. Budría's unit of analysis is the household; mine is the tax unit defined as the married couple or single adult.

of top incomes between 1936 and 2005. Section 11.4 focuses on earnings concentration. Finally, section 11.5 offers a brief conclusion. The details on data sources and methods together with the complete set of results are presented in the appendices to this chapter.

11.2 DATA AND METHODOLOGICAL ISSUES

I study top income shares and wage concentration based on three data sources: statistics from the personal income tax, information from schedule taxes on wages and salaries, and micro-data from administrative records on earnings.

Income

The estimates of top income shares are based on personal income tax return statistics compiled by the Bureau of Statistics and the tax agency of Portugal from 1936 to 1982 and between 1989 and 2005. Before 1976, because of high exemption levels, only a small fraction of individuals had to file a tax return; consequently I must restrict the analysis to the top 0.1 per cent of the income distribution. From 1976 onwards, I can analyse the top 10 per cent.

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 above a given threshold. The 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.¹⁴ For example, in 2005, there are 8,387,000 adults in the Portuguese population, 5,759,000 tax units, and 4,294,000 tax files. The top 1 per cent represents the top 57,590 tax filers.

I 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, other investment income, rents, and other smaller income items. Interest income (taxed at the source) is not included. Capital gains were almost completely untaxed before 1989; only a fraction of them is included in the tax base since 1989, and it is easy to satisfy the conditions for capital gains to go untaxed (and not reported). In particular, gains from public debt bonds are exempted, as well as gains from stocks if kept for more than twelve months. Capital gains from real estate are also untaxed when they come from the main residence or when their proceeds are used to purchase real estate property again. No information is available about the distribution of

¹⁴ I am implicitly assuming that the number of single people aged less than 20 years old with enough income to file a tax return is negligible.

Table 11.1 Thresholds and average incomes in top income groups in Portugal in 2005

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	5,758,946	14,611 €
Top 10%	29,504 €	Top 10 5%	287,947	35,776 €
Top 5%	43,885 €	Top 5 1%	230,358	59,323 €
Top 1%	87,054 €	Top 1 0.5%	28,795	97,812 €
Top 0.5%	113,979 €	Top 0.5 0.1%	23,036	144,044 €
Top 0.1%	206,538 €	Top 0.1 0.01%	5,183	289,503 €
Top 0.01%	557,582 €	Top 0.01%	576	1,012,397 €

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.

Amounts are expressed in 2005 euros.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example, an annual income of at least 29,504 euros is required to belong to the top 10% tax units, etc.

reported capital gains. They are presumably very small. The income definition is before personal income taxes and personal payroll taxes but after employers' payroll taxes and corporate income taxes.¹⁵

The main data consist 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, I use simple parametric interpolation methods to estimate the thresholds and average income levels for each fractile. Details of the estimation technique and the adjustments made to the raw series are provided in the appendices. I then estimate shares of income by dividing the income amounts accruing to each fractile by the 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 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 11.1 gives thresholds and average incomes for a selection of fractiles in Portugal in 2005.

¹⁵ A description of the evolution of the income tax in Portugal between 1936 and 2005 concerning exemption thresholds, family allowances, main tax deductions, and marginal rates is provided in Appendix Tables 11A.1 and 11A.2.

¹⁶ This methodology follows the same steps as a number of chapters in this volume, and is based on the classical study of Kuznets (1953) as well as on several studies presented in Atkinson and Piketty (2007).

¹⁷ The methodology of 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.

Wages

The estimates of top wage shares are based on two types of sources: (i) tax statistics (the schedule tax on wages until 1982 and the withholding tax at the source on wage income for the modern income tax since 1989) and (ii) micro-data from administrative records (*quadros de pessoal*, 1985–2004).

The tabulations from the schedule 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 taxed workers and the tax collection for a number of brackets. However, several changes in the tax code, modifications in the coverage of the tax, and the way statistics are presented imply that I can only provide homogeneous estimates for 1964–82. The tabulations based on withholding from wages for the income tax cover the period 1989–2000. I also assume a Pareto distribution to estimate top wage 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.

I also provide estimates of shares of top wages based on micro-data from administrative records, which are available between 1985 and 2004 (1990 and 2001 are missing). Every year, employers are required by law to provide information about the firm and their employees. Civil service and domestic workers are excluded. State-owned companies are included. Agricultural 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.

11.3 TOP INCOME SHARES

Figure 11.1 displays the average personal income per adult and per tax unit along with the consumer price index for the period 1936 to 2005. 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 with 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. The slowing down of economic growth that followed is generally attributed to the oil shock and to the aftermath of the revolution that ended the dictatorship in 1974. 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;

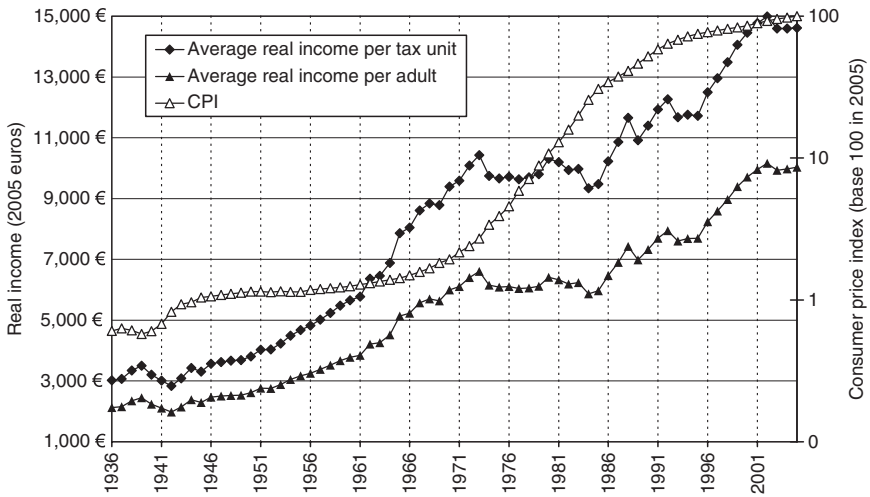


Figure 11.1 Average real income and consumer price index in Portugal, 1936–2005

Notes: Figure reports the average real income per adult (aged 20 and above) and per tax unit, expressed in real 2005 euros. CPI index is equal to 100 in 2005.

Source: Table 11C.1.

however, since 1999 the economy has slowed down and in early 2002 entered a recession.

Figure 11.2 displays the top 0.01 per cent and the top 0.1 per cent income shares between 1936 and 2005. The break between 1982 and 1989 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. First, the highest income concentration occurred in the 1930s and early 1940s. The top 0.1 per cent share was above 4.5 per cent in 1936, 1941, and 1942 (almost twice as high as in the recent period). 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) and in this book, should not be unexpected, as Portugal displayed a low average income and a high concentration of wealth.

Second, the old income tax statistics displayed a large decrease in top shares in the first half of the 1940s. This coincided with the Second World War and with a sharp increase in the statutory marginal tax rates: the top rate moved from 8.5 per cent in 1945 to 30 per cent in 1946. However, the income-weighted marginal rates augmented only from 5 per cent to around 9 per cent. If such a drop in the top 0.1 per cent income share were solely due to an increase in the tax evasion/avoidance following the increase in the marginal rate, then the elasticity of high incomes with respect to one minus the marginal tax rate would have been exaggeratedly high.

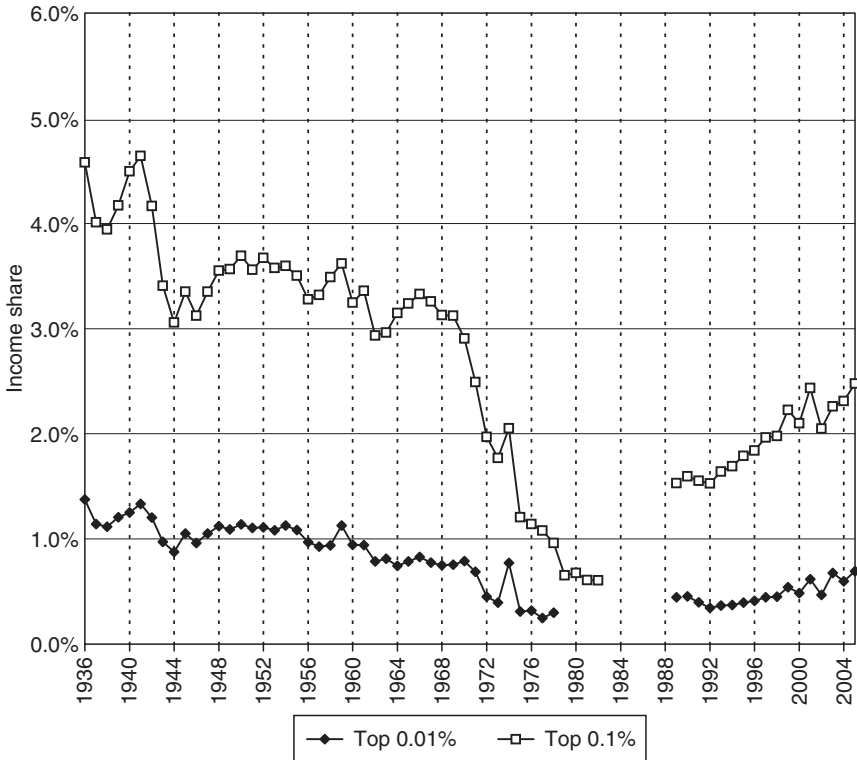


Figure 11.2 The top 0.01% and 0.1% income shares in Portugal, 1936–2005

Source: Table 11D.1, column Top 0.01% and column Top 0.1%.

Third, top income shares recovered partially after the end of the war, this improvement being concentrated in the top 0.1–0.01 per cent. However, such a recovery was small and almost non-existent for the top 0.01 per cent: after 1946 top 0.01 per cent shares hardly attained the values displayed before. Tax statistics providing the composition of reported top incomes show that taxpayers in 1946 (representing the top 0.3 per cent) obtained about 37 per cent of their income from returns on real estate and farm income, 7 per cent from returns on financial assets, 26 per cent from non-farm business income, and about 30 per cent from employment income.¹⁸ This suggests that a significant portion of the very rich 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; however, they stand in contrast with Spain, where top income earners at that time were much more

¹⁸ See Table 11D.3 in Appendix 11D.

likely to be owners of financial assets and non-farm businesses, as shown in Chapter 10 and in Alvaredo and Saez (2009).¹⁹

Fourth, income concentration remained around 1.0–1.1 per cent for the top 0.01 per cent and around 3.5 per cent for the top 0.1 per cent from 1946 to 1960, suggesting that the high income growth started at the beginning of the 1950s did not produce important changes on income concentration until the beginning of the following decade. Top 0.01 per cent shares in 1962–71 were again stable but slightly lower than the levels observed in 1946–61. It can be concluded that the mild liberalization policies adopted by the government during the third quarter of the twentieth century, and which are usually associated with the increase in growth rates, did not impact on the concentration of income to a great extent.²⁰ By 1963 the composition of top incomes had not changed in a significant way compared to 1946 either.²¹ 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 favour of employment and business income.²²

Finally, a drastic jump downwards in top shares happened after 1970, and specially after 1974. This coincided with the final period of the dictatorship and could 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. Banks and insurance companies were nationalized, basic industries became the property of the state, and officials began to call for a

¹⁹ Harsgor (1976) argues that under the old regime, Portugal's private sector was dominated by forty 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.

²⁰ The results in Guilera (2008) show a large rise in top shares in 1964 and 1965, years of the first income assessments under the rules of the 1963 tax reform. The adjustments to the raw data explain the discrepancy between his estimates and mine. Published tabulations provide information on gross incomes until 1963 and on taxable incomes between 1964 and 1982. Gross income equals taxable income plus allowances (mainly fixed amounts for family circumstances, and a fraction of wages up to a cap), which are only reported in the aggregate. For 1964 I assumed that each tax filer was entitled to the same allowance. Guilera allocated only a fraction of allowances equally among tax units, and imputed the remaining proportionally to taxable income, generating a jump. Both adjustments are debatable; however, the seeming increase in top shares in Guilera's estimates is due more to changes in the tax regulations and to the treatment of the data than to true economic forces.

²¹ It should be noted that the changes in the composition of income shown in Table 11D.3 are affected by the group considered: as composition statistics are only available in the aggregate, they describe the top 0.3% of tax units in 1946 and the top 1.2% of tax units in 1963.

²² 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, Santarém, and Setúbal) was conducted. The survey included questions pertaining to the socio economic 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 (1969) reveals that the typical businessman was drawn from a middle class background. See also Makler (1976).

major programme of large-scale land expropriation.²³ 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. Presumably the spike in top shares observed specifically in 1974 was related to a more strict government control over the wealthy (or the fear of it). 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 has augmented considerably since the mid 1970s; therefore I can analyse the top 10 per cent of the distribution between 1976 and 2005. Figure 11.3 displays top income shares for three groups within the top decile: the bottom half of the top decile (top 10–5 per cent), the next 4 per cent (top 5–1 per cent), and the top percentile. Three elements are worth noticing. First, the decrease in income concentration, started at the beginning of the 1970s and accelerated since 1974, reversed in the early 1980s. Second, although I cannot rigorously establish what happened between 1983 and 1988, the level of income concentration measured with the new income tax statistics in 1989 was noticeably higher than in 1982. Indeed, top shares in the early 1990s were similar to the levels of 1976. This contrasts with the results, obtained from survey data, which point to a relative stable income distribution during the 1980s. Finally, since 1989, the increase in top shares has been higher, the higher the fractile considered.

Figure 11.4 investigates the concentration pattern further by splitting the top 1 per cent into three groups: the top 1–0.5 per cent, the top 0.5–0.1 per cent, and the top 0.1 per cent. Again, the higher the fractile, the higher the increase in the share from 1989 to 2005: the top 1–0.5 per cent increased 30 per cent from 2.5 per cent to 3.3 per cent while the top 0.1 per cent increased over 65 per cent from 1.5 per cent to 2.5 per cent. This pattern has also been found in the cases of Spain (Chapter 10) and Italy (Chapter 12). Alvaredo and Saez (2009) have shown that the increase in income concentration that took place in Spain since 1981 has

²³ 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 agricultural 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 26/9/1988) and with the final setting of monetary compensations for original proprietors (Law 199/1988 of 31/5/1988). By the mid 1990s only one tenth of the expropriated estates was still in possession of collective farms.

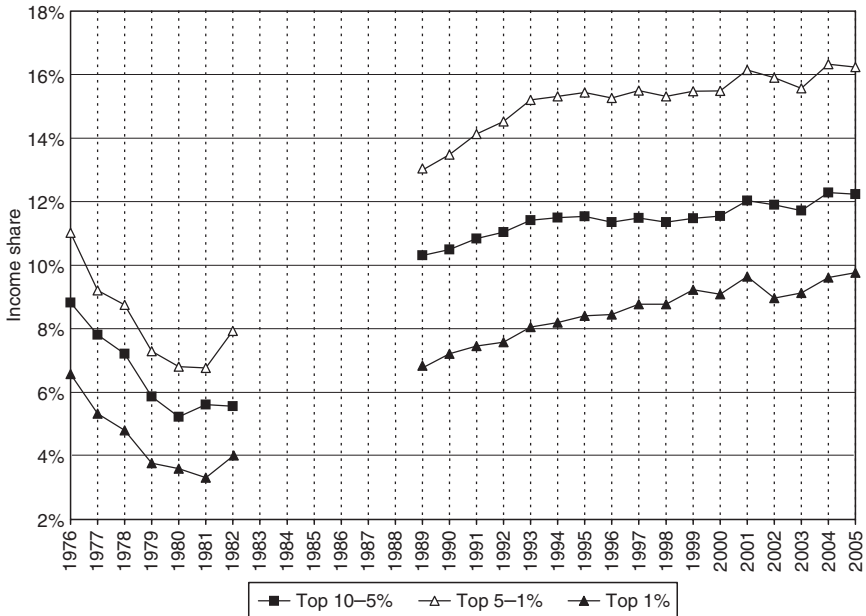


Figure 11.3 The top 10 5%, top 5 1%, and top 1% income shares in Portugal, 1976 2005
 Source: Table 11D.1, columns Top 10–5%, Top 5–1%, and Top 1%.

been a phenomenon concentrated within the top 1 per cent of the distribution and in particular within the top 0.1 per cent; the top 10–5 per cent share declined. In Portugal all groups within the top decile displayed important increases.

The break in the series between 1982 and 1989 hides the effects of key changes to the tax structure. Between those years, the top statutory marginal rates came down from 70 per cent (80 per cent for single individuals) to 40 per cent. In 1988 the schedule tax on wages (with a top marginal rate of 22 per cent) was removed. Figure 11.4 displays such a drop. The income-weighted marginal rate for the top 0.1 per cent group dropped from around 62 per cent in 1979 to 40 per cent in 1989. The experience since 1989, when constant top marginal rates coexisted with an increasing trend in top shares, suggest that the level of marginal tax rates at the top cannot be a primary determinant of the level of top reported incomes.

International Comparison

How does Portugal stand in relationship with other countries? Figure 11.5 displays the top 0.1 per cent income shares in Portugal in comparison with a number of economies: Spain (from Chapter 10 and Alvaredo and Saez 2009), Italy (Chapter 12), France (Piketty 2001, Landais 2007), the United States

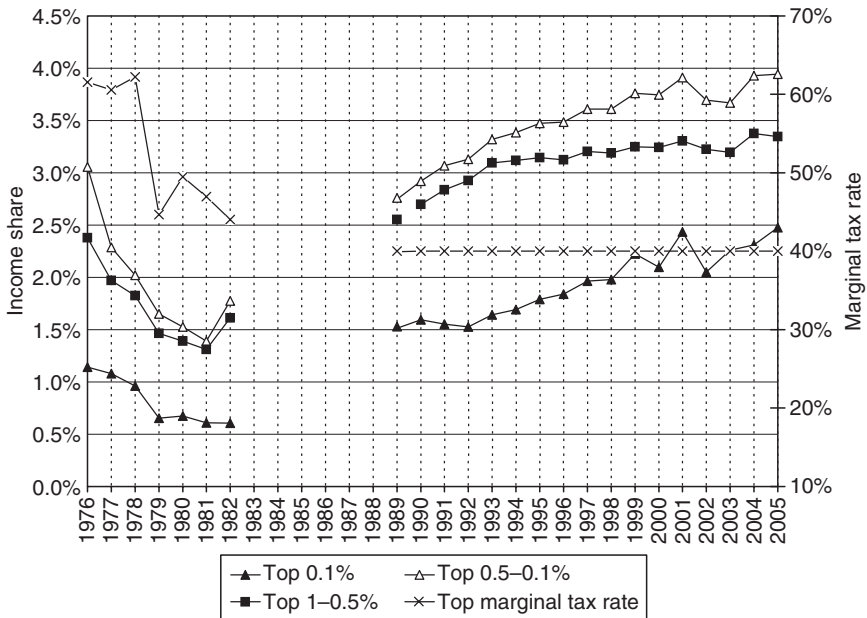


Figure 11.4 The top 1 0.5%, top 0.5 0.1%, and top 0.1% income shares and income weighted top marginal tax rate in Portugal, 1976 2005

Source: Table 11D.1, columns Top 1-0.5%, Top 0.5-0.1%, and Top 0.1%.

(Piketty and Saez 2003), Switzerland (Dell, Piketty, and Saez 2007), and the United Kingdom (Atkinson 2007). In the early 1940s, Portugal had a level of income concentration that was very similar to that of all the countries shown. Nevertheless, top shares in France and the United States fell more sharply than in Portugal after the Second World War. As a consequence, the level of concentration in Portugal between 1950 and 1970 remained high relative to the other countries, with one exception: between 1945 and the early 1960s the levels of concentration in Portugal and Switzerland were comparable. Between 1960 and the first half of the 1970s, top income shares in Switzerland were higher, but the distance to Portugal narrows if the emigration flows (analysed in the next section) are taken into account. The large drop in top shares since the beginning of the 1970s is noticeable not only in terms of the evolution of concentration in Portugal, but also from a comparative perspective. Nevertheless, it is clear 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 1970-5, even when the change in Portugal was definitely more radical. Finally, as in the cases of Spain and Italy, the increase in income concentration in the last years was small compared to the upsurge observed in the United States and other Anglo-Saxon countries; Portugal's experience was closer to those of continental Europe.

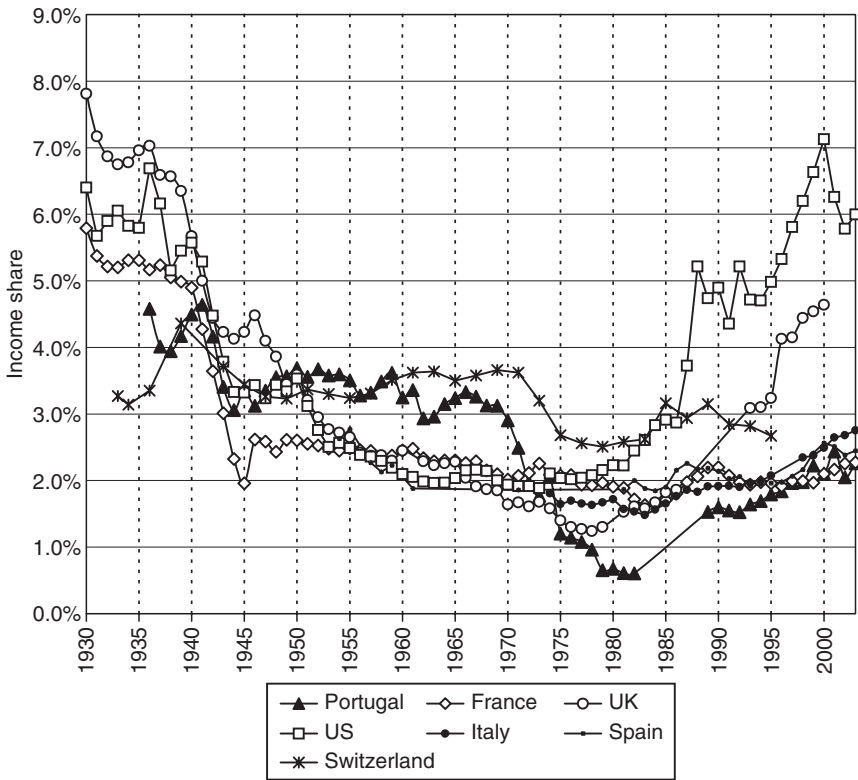


Figure 11.5 Top 0.1% shares in Portugal, UK, Italy, France, Switzerland, United States, and Spain

Sources: US: Piketty and Saez (2003); France: Piketty (2001) and Landais (2007); Spain: Chapter 10 and Alvaredo and Saez (2009); Italy: Chapter 12; UK: Atkinson (2007); Switzerland: Dell, Piketty, and Saez (2007); Portugal: Table 11D.1.

Emigration Flows and Sensitivity of the Results

Emigration has been one of the main features of the Portuguese socio-economic situation in Portugal during the twentieth 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 only grew from 8.5 million to 9.3 million between those years.²⁴ I would like to assess the effects of such large-scale migrations on the top shares estimates. Other things equal, adding up all emigrants each year to

²⁴ Valério (2001).

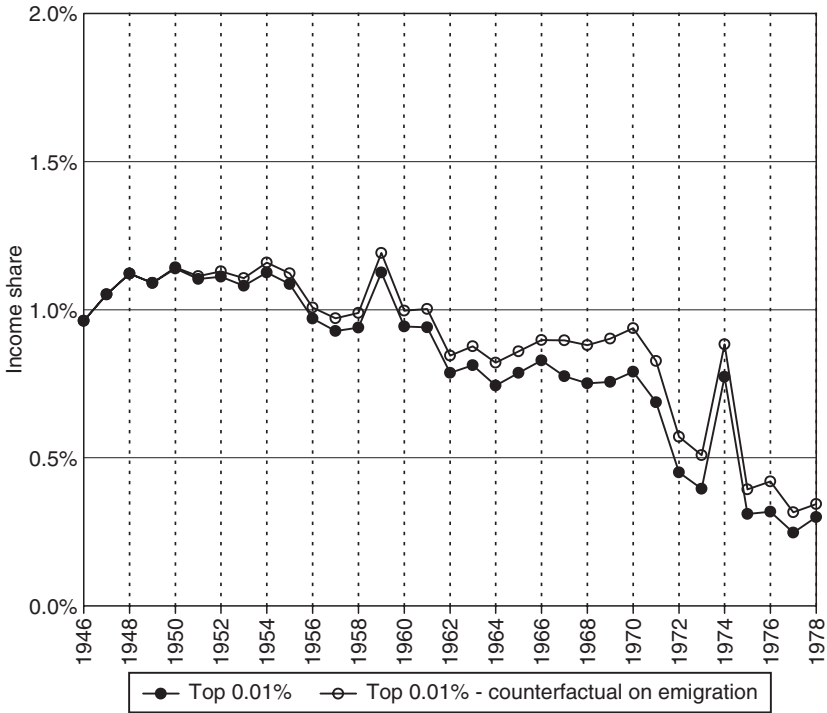


Figure 11.6 The top 0.01% income share in Portugal and counterfactual effects of emigration

the population control provides an *upper bound* for top shares.²⁵ Such a change increases estimates in 1970 by 19 per cent for the top 0.01 per cent and by 22 per cent for the top 0.1 per cent (meaning that the share of the top 0.01 per cent became 0.94 per cent in place of 0.79 per cent and the share of the top 0.1 per cent became 3.54 per cent in place of 2.91 per cent). The results are presented in Figure 11.6 for the top 0.01 per cent income share between 1946 and 1978 together with the counterfactual estimates. The main results are not altered. Consequently, one of the findings presented in the previous section—that the top 0.01 per cent share remained fairly stable between 1946 and 1961 and also stable between 1962 and 1971 at a slightly lower level—was not driven by the dynamics of migrant flows.

²⁵ 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 they had stayed in Portugal. Therefore it is necessary 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.

11.4 WAGE CONCENTRATION

Unfortunately, tax statistics do not allow for a dynamic analysis of income composition at the top because the Portuguese tax tabulations do not provide information on the composition of top incomes. Notwithstanding this shortcoming, I can get more direct evidence on changes in inequality from wage statistics available on an annual homogeneous basis.

As done for overall personal income, Figure 11.7 displays top wage shares between 1964 and 2000 for three groups within the top decile: the bottom half of the top decile (top 10–5 per cent), the next 4 per cent (top 5–1 per cent), and the top percentile; while Figure 11.8 splits the top percentile in three groups: the top 1–0.5 per cent, the top 0.5–0.1 per cent, and the top 0.1 per cent. The information suggests that wage concentration (top 1 per cent 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 was a phenomenon concentrated in the top 1 per cent, and especially in the top fractiles within the top 1 per cent. Interestingly, despite important movements over the period, the level of concentration within the top 1 per cent by the end of the 1990s was comparable to the level of 1970 and slightly lower than the levels in 1964–9.

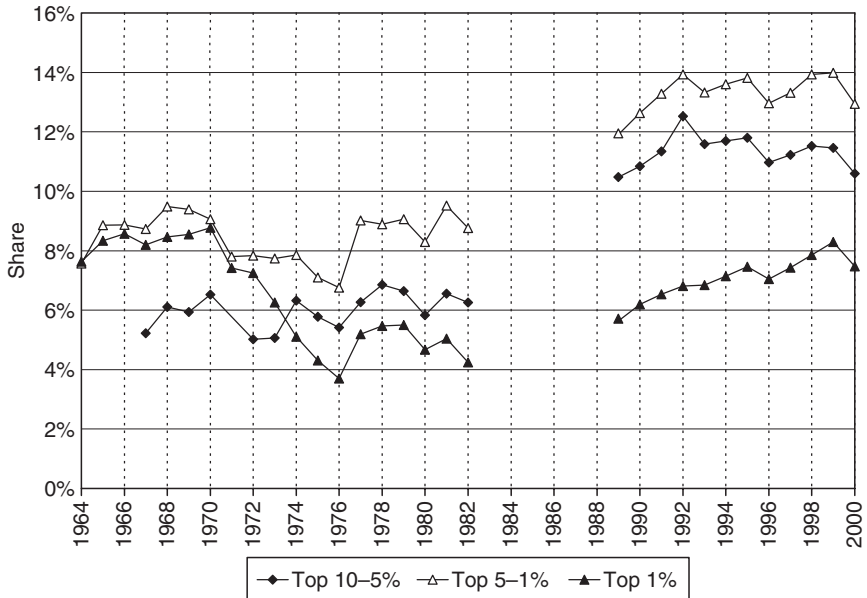


Figure 11.7 Top wage shares in Portugal from tax statistics, 1964–2000

Note: Civil service is excluded.

Source: Table 11D.4, columns Top 10–5%, Top 5–1%, Top 1%.

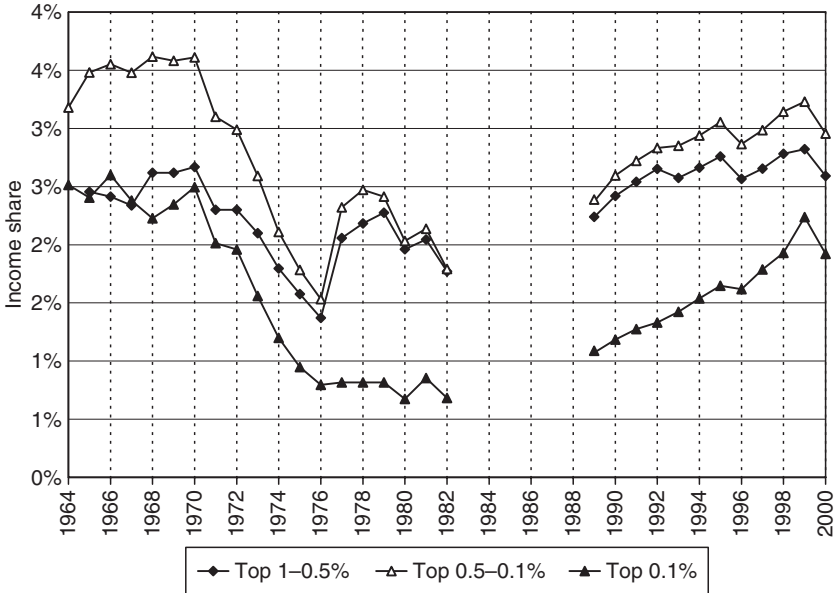


Figure 11.8 Top wage shares in Portugal, 1964 2000

Note: Civil service is excluded.

Source: Table 11D.4, columns Top 1-0.5%, Top 0.5-0.1%, Top 0.1%.

This suggests that the increase in overall income concentration over the last years in Portugal has also been extremely influenced by the evolution of top wages.

Figures 11.9 and 11.10 show the same shares but their results come from the micro-data from administrative records from 1985 to 2004. Two periods seem to be clearly identifiable: (i) until 1993 the increase in earnings concentration was mostly condensed in the top 5-0.1 per cent; the top 0.1 per cent was stable or even declined between 1985 and 1986; (ii) since 1994 the increase in concentration was mainly happening in the top 0.1 per cent, which augmented considerably from 1.4 per cent in 1994 to 2.4 per cent in 2004, that is, around 70 per cent.

These conclusions do not depend on the subset of workers included in the administrative records. Figure 11.11 compares the top 1-0.5 per cent, the top 0.5-0.1 per cent, and the top 0.1 per cent wage shares from the *quadros de pessoal* (already presented in Figure 11.10) with the series computed from income tax statistics (in which all workers filing a return are included, without distinction of sector of activity). Both sets of series follow the same pattern, and the income tax statistics display even larger increases. Figure 11.12 compares the shares within shares according to both sources. The similarity is not surprising, given that the data are not independent: wages reported by employers to the *quadros de pessoal* are subject to withholding tax.

Together with the estimates in Table 11D.6, the presented evidence suggests that the patterns are not only coincident with the findings of Cardoso (1998) for

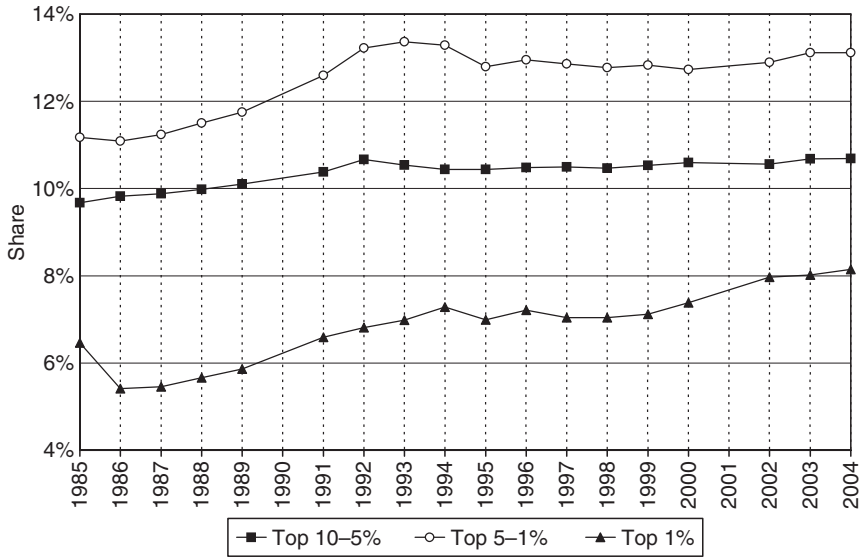


Figure 11.9 The top 10 5%, top 5 1%, and top 1% wage shares in Portugal, 1985 2004 from administrative records (*quadros de pessoal*)

Source: Table 11D.6, columns Top 10-5%, Top 5-1%, and Top 1%.

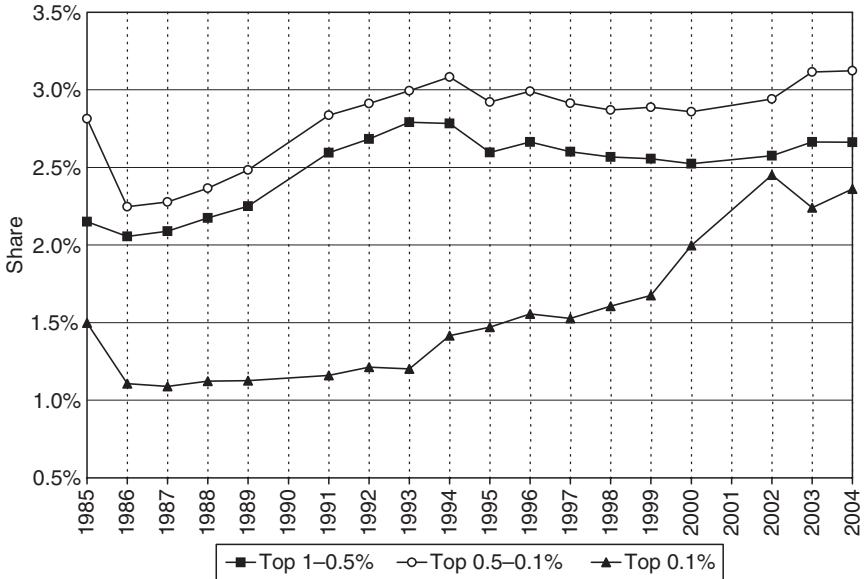


Figure 11.10 The top 1 0.5%, top 0.5 0.1%, and top 0.1% wage shares in Portugal, 1985 2004 from administrative records (*quadros de pessoal*)

Source: Table 11D.6, columns Top 1-0.5%, Top 0.5-0.1%, and Top 0.1%.

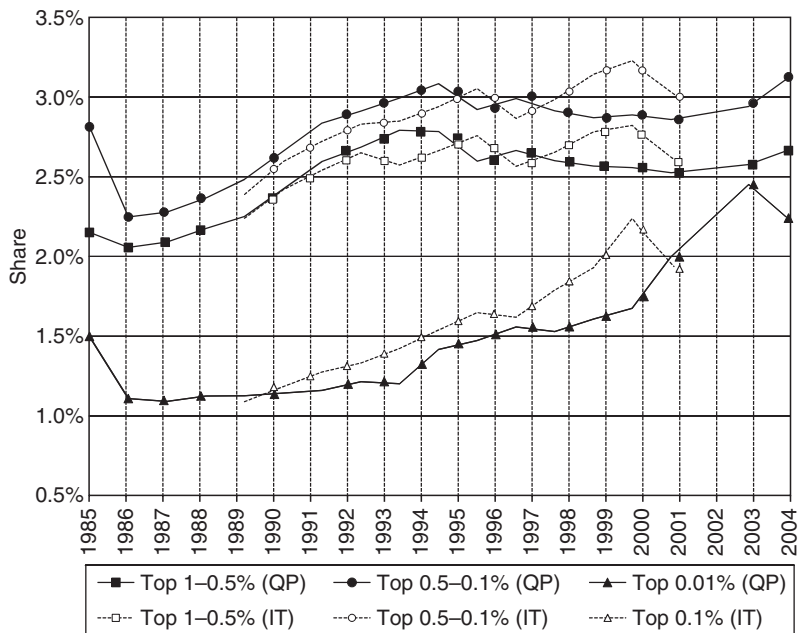


Figure 11.11 The top 1–0.5%, top 0.5–0.1%, and top 0.1% earnings shares in Portugal, 1985–2004: comparison between administrative records (*quadros de pessoal*) and income tax statistics

Notes: QP denotes results based on *quadros de pessoal*; IT denotes results based on income tax statistics.

Sources: Table 11D.4 and Table 11D.6, columns Top 1–0.5%, Top 0.5–0.1%, and Top 0.1%.

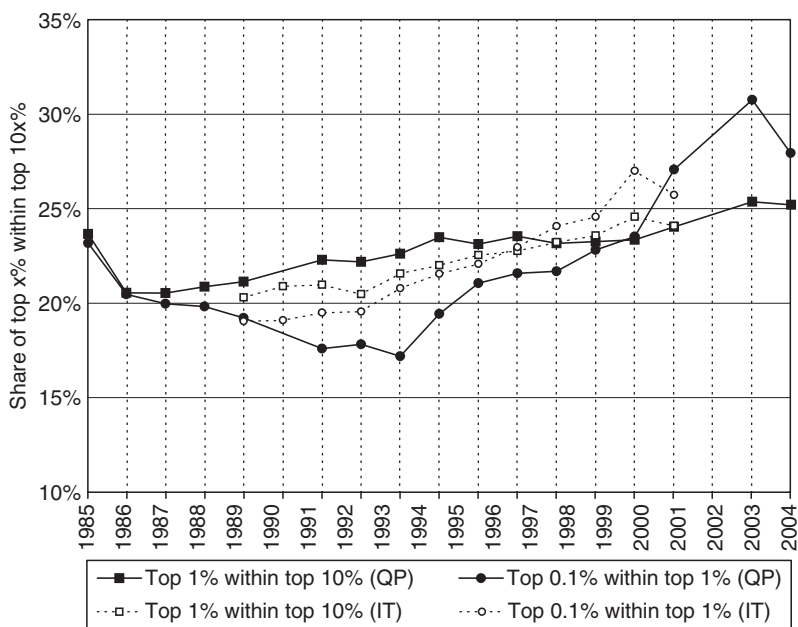


Figure 11.12 Shares within shares in Portugal 1985–2004: comparison between administrative records (*quadros de pessoal*) and income tax statistics

Notes: QP denotes results based on *quadros de pessoal*; IT denotes results based on income tax statistics.

Sources: Table 11D.4 and Table 11D.6.

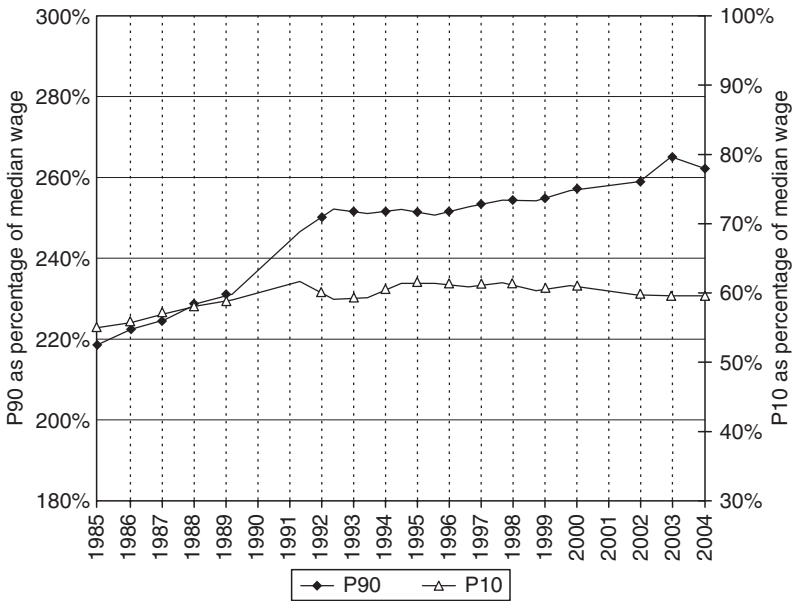


Figure 11.13 P10 and P90 earnings levels as percentage of median wage in Portugal, 1985-2004

Source: Table 11D.7.

the period 1983–92 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 inequality prevailing in the country’s labour 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 11.13 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.

11.5 CONCLUSION

This chapter has attempted to analyse income and earnings concentration in Portugal from a long-run perspective using the best available statistical evidence. My 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, the UK, or the United States. The decrease in income concentration, started in 1970–1 and accelerating after the revolution of 1974, began to be reversed in the early 1980s. During the last fifteen years the shares above the top 10 per cent have augmented steadily. The increase has been higher, the higher the fractile considered.

The evidence since 1989 suggests that the level of marginal tax rates at the top has not been a 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 behaviour of top wages. Between 1985 and 1994 the increase in earnings concentration was mostly condensed in the top 5–0.1 per cent. Since then, the increase in concentration has been happening mainly in the top 0.1 per cent of the wage distribution.

APPENDIX 11A: THE TAXES ON INCOME AND WAGES IN PORTUGAL

The 'Old' Income Tax

In Portugal, income taxation was enforced for the first time in 1641 as a 10 per cent 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 nineteenth century, the system evolved towards the scheme of independent schedule taxes: *contribuição predial*, *contribuição industrial*, *décima de juros*. With modifications, the schedule taxes survived until 1988.

Table 11A.1 summarizes the main features of the evolution of the personal income tax in Portugal between 1922 and 2005. 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 non compliance rate, and the turbulent macroeconomic environment of the First Republic forced its rapid replacement.

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). For many of the income components, presumptive and not actual revenues were in fact taxed. 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 28/2/1950). This tax affected a very small number of individuals and only a fraction of the income assessed for the *imposto complementar*: in 1951, for instance, only 537 individuals paid the *adicionamento*, out of 25,362 who filed for the *imposto complementar*.

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 and not reported, 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. Interest income and other capital income items are taxed at the source at flat rates and generally not reported. Consequently, the income definition excludes most capital gains and a fraction of capital incomes.

Between 1989 and 2005 the top marginal tax rate was stable at 40 per cent, while the bottom rate declined from 16 per cent in 1989–90, to 15 per cent in 1991–8, 14 per cent in 1999–2000, 12 per cent in 2001–4, and finally 10.5 per cent in 2005. Contrary to the worldwide trend of reducing the number of brackets of the statutory tax scale, Portugal moved first from a five bracket to a four bracket scale between 1990 and 1991, but then went back to five brackets in 1999 and to six brackets 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 11A.2.

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

Schedule Tax on Wages

In 1929 the government created the *imposto profissional*, a schedule tax on wages and salaries (including agriculture) and self employed liberal professionals; civil servants were excluded (Decree 16731 of 14/4/1929 and Decree 19359 of 19/2/1931).²⁶ Initially there was a progressive tax scale with marginal tax rates from 2 per cent to 8 per cent 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 16/2/1931, Law 1952 of 10/3/1937, Decree Law 33735 of 26/6/1944, Decree Law 34353 of 30/12/1944). A detailed description of the first fifteen years of the *imposto profissional* can be found in Mouteira Guerreiro (1947). After the fiscal reform of 1962–4 (Decree Laws 44305 of 27/4/1962, 45400 of 30/11/1963, 45676 of 24/4/1964, 45977 of 19/10/1964), statutory top marginal tax rates were successively increased to 15 per cent in 1964–1972, 20 per cent in 1973–5, and 22 per cent in 1976–88. The number of tax brackets also rose considerably. The tax was abolished in 1988 with the introduction of the *imposto sobre o rendimento das pessoas singulares*.

²⁶ Before 1929, a fraction of wage earners was already taxed under the *contribuição industrial*.

Table 11A.1 The income tax in Portugal, 1922-2005

Tax denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main allowances 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 dependant child (up to 4): 600 dependant child (above 4): 1,000 other dependants: 500	none	mandatory
Imposto Complementar	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 dependants	mandatory
	1964-1972 Decreto Lei 45.399	60,000	20% on wage income up to 20,000 spouse: 20,000 dependant <8 yo: 2,500 dependant aged 8-11 yo: 5,000 dependant aged 12-16 yo: 7,500 dependant aged 16-21 yo: 10,000 non residents: 40,000	none	mandatory
	30/11/1963 Decreto Lei 49.483/1969				

(continued)

Table 11A.1 Continued

Tax denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main allowances from gross income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint filing
	1973 1978 Decreto lei 375/1974 Decreto lei 667/1976	60,000	20% on wage income up to 25,000 spouse: 20,000 dependant <7 yo: 4,000 dependant aged 8 11 yo: 8,000 dependant aged 12 16 yo: 12,000 dependant 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 dependant <11 yo: 10,000 dependant 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 dependant <11 yo: 10,000 dependant aged 11 18 yo: 20,000 dependant 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 dependant <11 yo: 20,000 dependant aged 11 18 yo: 30,000	none	mandatory

1983 Decreto lei 192/1984	120,000	dependant aged 19 24 yo in undergraduate studies: 30,000 non residents: 40,000 30% on wage income up to 50,000 spouse: 120,000 dependant <11 yo: 25,000 dependant aged 11 18 yo: 40,000 dependant 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 dependant <11 yo: 30,000 dependant aged 11 18 yo: 50,000 dependant 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 dependant <11 yo: 40,000 dependant aged 11 18 yo: 60,000 dependant aged 19 24 yo in undergraduate studies: 60,000 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	none	mandatory

(continued)

Table 11A.1 Continued

Tax denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main allowances from gross income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint filing
			<p>dependant <11 yo: 60,000 dependant aged 11 18 yo: 70,000 dependant aged 19 24 yo in undergraduate studies: 70,000 dependant aged 19 24 yo unemployed: 70,000 non residents: 70,000</p>		
	1988	1,000,000	<p>30% on wage income up to 155,000 spouse: 200,000 dependant <11 yo: 60,000 dependant aged 11 18 yo: 70,000 dependant aged 19 24 yo in undergraduate studies: 70,000 dependant aged 19 24 yo unemployed: 70,000 non residents: 70,000</p>	<p>none</p>	mandatory
	Decreto lei 66/1989				
Imposto sobre a Rendas das Pessoas Físicas	1989	after tax wage income cannot be below the national minimum wage	<p>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</p>	<p>single: 20,000 married: 15,000 × 2 dependant: 10,000</p>	mandatory splitting
	Decreto Lei 442A/1988				
	1990	after tax wage income cannot be below the national minimum wage	<p>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</p>	<p>single: 23,000 married: 17,000 × 2 dependant: 12,000</p>	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 × 2 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 education expenses, life and other insurances pension up to 1,512,000	single: 27,500 married: 20,500 × 2 dependant: 15,100	mandatory 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 × 2 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 × 2 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 × 2 dependant: 17,500	mandatory splitting

(continued)

Table 11A.1 Continued

Tax denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main allowances from gross income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint filing
	1996	after tax wage income cannot be below the national minimum wage	highest of (a) 70% on wage income up to 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 × 2 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 to 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 × 2 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 to 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 × 2 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	single: 36,000 married: 27,400 × 2 dependant: 19,800 (1st.),	mandatory splitting

2000	<p>wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 1,445,000</p> <p>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</p>	<p>20,025 (2nd.), 20,250 (3rd.), 20,375 (+4th.)</p>	<p>mandatory splitting</p>
2001	<p>after tax wage income cannot be below 120% of the highest national minimum wage</p>	<p>single: 40,200 married: 33,500 × 2 dependant: 26,800 each</p>	<p>mandatory splitting</p>
2002	<p>after tax wage income cannot be below 120% of the highest national minimum wage</p>	<p>single: 60% of monthly minimum wage married: 50% of monthly minimum wage × 2 dependant: 40% of monthly minimum wage each</p>	<p>mandatory splitting</p>

(continued)

Table 11A.1 Continued

Tax denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main allowances 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	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: 60% of monthly minimum wage married: 50% of monthly minimum wage × 2 dependant: 40% of monthly minimum wage each	mandatory splitting
	2004	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 pension up to 7,778.74	single: 60% of monthly minimum wage married: 50% of monthly minimum wage × 2 dependant: 40% of monthly minimum wage each	mandatory splitting
	2005	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 pension up to 7,778.74	single: 60% of monthly minimum wage married: 50% of monthly minimum wage × 2 dependant: 40% of monthly minimum wage each	mandatory splitting

Table 11A.2 Tax scales: income taxes in 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
			165,000	180,000	7.50
			180,000	200,000	8.00
			200,000		8.50
beyond 55,000 escudos, rate increases 1% per each additional 5,000 escudos up to a maximum marginal rate of 30%					

Table 11A.2 Tax scale Imposto Complementar. Portugal 1933 1945

Range of Taxable Income (escudos)	Rate (%)	Range of Taxable Income (escudos)	Rate (%)	Range of Taxable Income (escudos)	Rate (%)	Range of Taxable Income (escudos)	Rate (%)	Range of Taxable Income (escudos)	Rate (%)
10,000	0.18	61,000	2.14	112,000	3.46	163,000	4.36		
11,000	0.33	62,000	2.49	113,000	3.48	164,000	4.38		
12,000	0.46	63,000	2.52	114,000	3.50	165,000	4.40		
13,000	0.57	64,000	2.54	115,000	3.52	166,000	4.42		
14,000	0.67	65,000	2.56	116,000	3.53	167,000	4.43		
15,000	0.78	66,000	2.58	117,000	3.55	168,000	4.45		
16,000	0.88	67,000	2.60	118,000	3.57	169,000	4.47		
17,000	0.97	68,000	2.62	119,000	3.58	170,000	4.49		
18,000	1.05	69,000	2.64	120,000	3.60	171,000	4.51		
19,000	1.12	70,000	2.66	121,000	3.62	172,000	4.52		
20,000	1.19	71,000	2.68	122,000	3.64	173,000	4.54		
21,000	1.25	72,000	2.70	123,000	3.66	174,000	4.56		
22,000	1.30	73,000	2.72	124,000	3.68	175,000	4.57		
23,000	1.35	74,000	2.73	125,000	3.70	176,000	4.59		
24,000	1.40	75,000	2.76	126,000	3.72	177,000	4.61		
25,000	1.44	76,000	2.78	127,000	3.73	178,000	4.62		
26,000	1.48	77,000	2.80	128,000	3.75	179,000	4.64		
27,000	1.52	78,000	2.82	129,000	3.77	180,000	4.66		
28,000	1.55	79,000	2.84	130,000	3.79	181,000	4.68		
29,000	1.58	80,000	2.86	131,000	3.80	182,000	4.69		
30,000	1.63	81,000	2.88	132,000	3.82	183,000	4.71		
31,000	1.67	82,000	2.90	133,000	3.84	184,000	4.73		
32,000	1.71	83,000	2.92	134,000	3.85	185,000	4.75		
33,000	1.75	84,000	2.94	135,000	3.87	186,000	4.76		
34,000	1.79	85,000	2.96	136,000	3.89	187,000	4.78		
35,000	1.82	86,000	2.98	137,000	3.91	188,000	4.80		
36,000	1.85	87,000	2.99	138,000	3.93	189,000	4.82		
37,000	1.88	88,000	3.01	139,000	3.95	190,000	4.83		
38,000	1.91	89,000	3.03	140,000	3.96	191,000	4.85		
39,000	1.94	90,000	3.05	141,000	3.98	192,000	4.86		
40,000				142,000		193,000			

Table 11A.2 Tax scale Imposto Complementar. Portugal 1946 1978

1946 1963			1964 1988			1969 1972			1973 1974			1975 1978		
Range of Taxable Income (escudos)	Rate (%)	Rate of Taxable Income (escudos)	Range of Taxable Income (escudos)	Rate (%)	Rate of Taxable Income (escudos)	Range of Taxable Income (escudos)	Rate (%)	Rate of Taxable Income (escudos)	Range of Taxable Income (escudos)	Rate (%)	Rate of Taxable Income (escudos)	Range of Taxable Income (escudos)	Rate (%)	Rate of Taxable Income (escudos)
50,000	3.0	50,000	50,000	3.0	50,000	50,000	3.0	50,000	50,000	3.0	50,000	50,000	3.0	50,000
100,000	4.0	100,000	100,000	4.0	100,000	100,000	4.0	100,000	100,000	4.5	100,000	100,000	4.5	100,000
150,000	5.0	150,000	150,000	5.0	150,000	150,000	5.0	150,000	150,000	6.0	150,000	150,000	6.0	150,000
200,000	6.0	200,000	200,000	6.0	200,000	200,000	6.0	200,000	200,000	6.0	200,000	200,000	8.0	200,000
250,000	7.0	200,000	250,000	7.0	200,000	250,000	7.0	200,000	250,000	7.0	200,000	250,000	10.0	300,000
300,000	8.0	250,000	300,000	8.0	250,000	300,000	8.5	250,000	300,000	8.5	250,000	300,000	12.0	400,000
350,000	9.0	300,000	350,000	9.0	300,000	350,000	10.0	300,000	350,000	10.0	300,000	350,000	14.0	500,000
400,000	10.0	350,000	400,000	10.0	350,000	400,000	11.5	350,000	400,000	11.5	350,000	400,000	17.0	600,000
450,000	11.0	400,000	450,000	11.0	400,000	450,000	13.0	400,000	450,000	13.0	400,000	450,000	20.0	700,000
500,000	12.0	450,000	500,000	12.0	450,000	500,000	14.5	450,000	500,000	14.5	450,000	500,000	23.0	800,000
550,000	13.0	500,000	550,000	13.0	500,000	550,000	16.0	500,000	550,000	16.0	500,000	550,000	26.0	900,000
600,000	14.0	550,000	600,000	14.0	550,000	600,000	17.5	550,000	600,000	17.5	550,000	600,000	29.0	1,000,000
650,000	15.0	600,000	650,000	15.0	600,000	650,000	19.0	600,000	650,000	19.0	600,000	650,000	32.0	1,000,000
700,000	16.0	650,000	700,000	16.0	650,000	700,000	21.0	650,000	700,000	21.0	650,000	700,000	35.0	1,000,000
750,000	17.0	700,000	750,000	17.0	700,000	750,000	23.0	700,000	750,000	23.0	700,000	750,000	38.0	1,000,000
800,000	18.0	750,000	800,000	18.0	750,000	800,000	25.0	750,000	800,000	25.0	750,000	800,000	41.0	1,000,000
850,000	19.0	800,000	850,000	19.0	800,000	850,000	27.0	800,000	850,000	27.0	800,000	850,000	44.0	1,000,000
900,000	20.0	850,000	900,000	20.0	850,000	900,000	29.0	850,000	900,000	29.0	850,000	900,000	48.0	1,000,000
950,000	21.0	900,000	950,000	21.0	900,000	950,000	31.0	900,000	950,000	31.0	900,000	950,000	52.0	1,000,000
1,000,000	22.0	950,000	1,000,000	22.0	950,000	1,000,000	33.0	950,000	1,000,000	33.0	950,000	1,000,000	56.0	1,000,000
1,050,000	23.0	1,000,000	1,050,000	23.0	1,000,000	1,050,000	35.0	1,000,000	1,050,000	35.0	1,000,000	1,050,000	60.0	1,000,000
1,100,000	24.0	1,050,000	1,100,000	24.0	1,050,000	1,100,000	37.0	1,050,000	1,100,000	37.0	1,050,000	1,100,000	64.0	1,000,000
1,150,000	25.0	1,100,000	1,150,000	25.0	1,100,000	1,150,000	39.0	1,100,000	1,150,000	39.0	1,100,000	1,150,000	68.0	1,000,000
1,200,000	26.0	1,150,000	1,200,000	26.0	1,150,000	1,200,000	41.0	1,150,000	1,200,000	41.0	1,150,000	1,200,000	72.0	1,000,000
1,250,000	27.0	1,200,000	1,300,000	27.0	1,200,000	1,250,000	43.0	1,200,000	1,250,000	43.0	1,200,000	1,250,000	76.0	1,000,000
1,300,000	28.0	1,300,000	1,400,000	28.0	1,300,000	1,400,000	45.0	1,300,000	1,400,000	45.0	1,300,000	1,400,000	80.0	1,000,000

1,350,000	1,400,000	29.0	1,400,000	1,500,000	29.0	1,300,000	1,350,000	47.0
1,400,000	1,500,000	30.0	1,500,000	1,600,000	30.0	1,350,000	1,400,000	49.0
	1,600,000		1,600,000	1,700,000	31.0	1,400,000	1,450,000	51.0
	1,700,000		1,700,000	1,800,000	32.0	1,450,000	1,500,000	53.0
	1,800,000		1,800,000	1,900,000	33.0	1,500,000		
	1,900,000		1,900,000	2,000,000	34.0			
	2,000,000		2,000,000	2,100,000	35.0			
	2,100,000		2,100,000	2,200,000	36.0			
	2,200,000		2,200,000	2,300,000	37.0			
	2,300,000		2,300,000	2,400,000	38.0			
	2,400,000		2,400,000	2,500,000	39.0			
	2,500,000		2,500,000	2,600,000	40.0			
	2,600,000		2,600,000	2,700,000	41.0			
	2,700,000		2,700,000	2,800,000	42.0			
	2,800,000		2,800,000	2,900,000	43.0			
	2,900,000		2,900,000	3,000,000	44.0			
	3,000,000		3,000,000		45.0			

Table 11A.2 (continued) Tax scale Imposto Complementar. Portugal 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)	Range of Taxable Income (escudos)	Range of Taxable Income (escudos)			
100,000	100,000	150,000	150,000	150,000	180,000	180,000	4.0	4.8
200,000	200,000	300,000	300,000	300,000	360,000	360,000	6.0	7.2
350,000	350,000	500,000	500,000	500,000	600,000	600,000	8.0	9.6
500,000	500,000	700,000	700,000	700,000	840,000	840,000	14.0	16.8
650,000	650,000	900,000	900,000	900,000	1,080,000	1,080,000	20.0	24.0
800,000	800,000	1,100,000	1,100,000	1,100,000	1,320,000	1,320,000	26.0	31.2
950,000	950,000	1,300,000	1,300,000	1,300,000	1,560,000	1,560,000	34.0	40.8
1,100,000	1,100,000	1,500,000	1,500,000	1,500,000	1,800,000	1,800,000	42.0	50.4
1,250,000	1,250,000	1,700,000	1,700,000	1,700,000	2,040,000	2,040,000	50.0	60.0
1,400,000	1,400,000	1,900,000	1,900,000	1,900,000	2,280,000	2,280,000	60.0	72.0
1,400,000		1,900,000	1,900,000		2,280,000	2,280,000	70.0	80.0

Table 11A.2 (continued) Tax scale Imposto Complementar: Portugal 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	4.0	280,000	4.0	320,000	4.0	320,000	4.0	375,000	4.0
440,000	6.0	550,000	6.0	630,000	6.0	630,000	6.0	740,000	6.0
720,000	8.0	900,000	8.0	1,040,000	8.0	1,040,000	8.0	1,220,000	8.0
1,080,000	14.0	1,350,000	14.0	1,550,000	14.0	1,550,000	14.0	1,820,000	14.0
1,300,000	20.0	1,650,000	20.0	1,900,000	20.0	1,900,000	20.0	2,215,000	20.0
1,900,000	26.0	2,350,000	26.0	2,700,000	26.0	2,700,000	26.0	3,160,000	26.0
2,500,000	34.0	3,100,000	34.0	3,530,000	34.0	3,530,000	34.0	4,120,000	34.0
3,100,000	42.0	3,900,000	42.0	4,450,000	42.0	4,450,000	42.0	5,190,000	42.0
3,700,000	50.0	4,600,000	50.0	5,250,000	50.0	5,250,000	50.0	6,120,000	50.0
4,300,000	60.0	5,300,000	60.0	6,050,000	60.0	6,050,000	60.0	7,050,000	60.0
4,300,000	70.0	5,300,000	70.0	6,050,000	70.0	6,050,000	70.0	7,050,000	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	4.8	230,000	4.8	270,000	4.8	270,000	4.8	315,000	4.8
360,000	7.2	450,000	7.2	520,000	7.2	520,000	7.2	610,000	7.2
600,000	9.6	750,000	9.6	870,000	9.6	870,000	9.6	1,015,000	9.6
840,000	14.4	1,050,000	14.4	1,210,000	14.4	1,210,000	14.4	1,415,000	14.4
1,080,000	21.6	1,350,000	21.6	1,560,000	21.6	1,560,000	21.6	1,820,000	21.6
1,580,000	31.2	1,950,000	31.2	2,240,000	31.2	2,240,000	31.2	2,610,000	31.2
2,080,000	40.8	2,600,000	40.8	2,960,000	40.8	2,960,000	40.8	3,465,000	40.8
2,580,000	50.4	3,200,000	50.4	3,650,000	50.4	3,650,000	50.4	4,260,000	50.4
3,080,000	60.0	3,850,000	60.0	4,400,000	60.0	4,400,000	60.0	5,135,000	60.0
3,580,000	72.0	4,450,000	72.0	5,000,000	72.0	5,000,000	72.0	5,830,000	72.0
3,580,000	80.0	4,450,000	80.0	5,000,000	80.0	5,000,000	80.0	5,830,000	80.0

APPENDIX 11B: REFERENCES ON DATA SOURCES FOR PORTUGAL

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 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. Therefore, this information, if interesting from the historical point of view, has not been used in the estimations.

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

1936 45: The published tables show the distribution of the number of taxpayers by ranges of tax collection. Instituto Nacional de Estatística, *Anuário estatístico das contribuições e impostos 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945*.

1946 63: The published tabulations display (i) the number of taxpayers and the gross assessed income organized by ranges of total before tax income, (ii) the number of taxpayers and the taxable income by ranges of taxable income, and (iii) 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 82: The published statistics are organized by range of taxable income (gross income net of allowances), and they provide the distribution of the number of taxpayers and taxable income by brackets. The data also provide information on total allowances. 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 8: 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 the series have a gap in those years.

1989 2005: 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 allowances and deductions. No information is provided about the composition of income. Individuals 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. Tabulations for 2004 and 2005 come from Direcção de Serviços do IRS, *Estatísticas do IRS (declaração modelo 3), exercícios de 2004 e 2005*.

Statistics on Wages and Salaries

The information on earnings is obtained from the tabulations of the schedule tax on wages and salaries, the *imposto profissional* (1936–82), the income tax (1989–2000), and the micro data from the *quadros de pessoal* (1985–9 (1990 missing), 1991–2000 (2001 missing), and 2002–4).

1936–82: 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 1936–82; however, homogeneous estimates can only be produced for the period 1964–82. I used the tax code to recover the brackets of gross 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*.

1989–2000: 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*. No usable information on earnings is available from the tax statistics since 2001.

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 1985–93, 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 the *quadros de pessoal* can be made, since a census of manufacturing is available. As argued in Cardoso (1998a), comparison of the two sets reveals that the *quadros de pessoal* cover more workers than the census itself, despite the fact that the census includes very small productive units (mainly firms with no wage earners) 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 online). The data were first collected in 1982 but micro data start in 1985. All results based on the *quadros de pessoal* were computed from the micro data for 1985–9 (1990 missing), 1991–2000 (2001 missing), and 2002–4.

APPENDIX 11C: CONTROL TOTALS FOR INDIVIDUALS, INCOME, AND WAGES

Total Number of Individuals and Tax Units

As 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 above a given threshold. The 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. I assume that the number of minors with enough income to file separately is negligible. 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, Instituto Nacional de Estatística, 1985, *Portugal 50 anos, 1935 1985*, and Valério (2001). Table 11C.1 reports the number of adults (column 1), the number of tax units (column 2), and the number of tax returns actually filed (column 3).

Total Number of Employees

The number of employees comes from (a) Banco de Portugal, *Séries longas para a economia portuguesa: pós II Guerra Mundial*, vols. i and ii (1953 95); (b) Instituto Nacional de Estatística, 2003, *Contas nacionais anuais definitivas base 1995*, and Instituto Nacional de Estatística, 2005, *Contas nacionais anuais definitivas base 2000 (1996 2004)*; and (c) the national census of 1930, 1940, and 1950; missing years have been linearly interpolated (1936 52).

The number of civil servants was obtained from (d) the national census of 1930, 1940, and 1950 (1936 52); (e) Banco de Portugal, *Séries longas para a economia portuguesa: pós II Guerra Mundial*, vols. i and ii (1953 67); and (f) International Labor Organization Database. Between 1964 and 1982 the control total for employees excludes civil servants, as most of them were not subject to the *imposto profissional* and were excluded from the published statistics.

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*, vols. i and 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 1936–52 the previously described series were extended backwards using the information from Batista et al. (1997).

For the period 1989–2005, total income is defined as wages and salaries from National Accounts net of effective social security contributions, plus 50 per cent of social transfers, plus 66 per cent of unincorporated business income plus all non business, non labour income reported on tax returns. This methodology generates an income denominator that fluctuates around 55–60 per cent of Portuguese GDP, which is similar to that used for France (Piketty 2001) and Spain (Alvaredo and Saez 2009). For the period 1936–83, I use as denominator 60 per cent of the Portuguese GDP from the sources listed above. The total income denominator series expressed in 2005 euros is reported in Table 11C.1, column 5. The average income per adult is reported in column 6 while the average income per tax unit is displayed in column 7.

Total Wage Denominator

Total wages are defined as wages and salaries from national accounts net of effective social contributions. The information for 1953–95 has been taken from Banco de Portugal, *Séries longas para a economia portuguesa: pós II Guerra Mundial*, vols. i and 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 Instituto Nacional de Estatística, 2003, *Contas nacionais anuais definitivas base 1995* and Instituto Nacional de Estatística, 2005, *Contas nacionais anuais definitivas base 2000*. The wage denominator excludes civil service between 1964 and 1982.

Prices

The price index is based on the following sources: (a) for the period 1936–45: Instituto Nacional de Estatística, *Anuário estatístico, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945*, Índices de Preços de Retalho, base 1914 = 100; (b) for the period 1946–51, 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, years 1952–1975* and Instituto Nacional de Estatística, Divisão de Estatísticas da Distribuição e Serviços, *Indicadores da actividade económica: índices de preços do consumo*, several years. Table 11C.1, column 8, shows the CPI index (base 100 in year 2005).

Data on Emigration Flows

The number of emigrants from Portugal, used for the results shown in Figure 11.7, was obtained from Valério (2001), which builds on Baganha (1990, 1991, 1993, 1994) and Pereira (1993).

Table 11C.1 Reference totals for population, income, and inflation, Portugal, 1936-2005

	Tax units			(4)	Total income			Inflation		Taxes
	(1)	(2)	(3)		(5)	(6)	(7)	(8)	(9)	
Adults ('000s)	Tax units ('000s)	Number of tax returns ('000s)	(3)/(2) (%)	Total income (millions) (2005 euros)	Average income per adult (2005 euros)	Average income per tax unit (2005 euros)	CPI (base 2005)	Top marginal tax rate (%)		
1936	4,298	3,025	43	1.44	9,155	2,130	3,026	0.61	8.5	
1937	4,357	3,062	45	1.47	9,405	2,158	3,072	0.63	8.5	
1938	4,418	3,099	48	1.53	10,364	2,346	3,344	0.61	8.5	
1939	4,479	3,136	50	1.60	10,979	2,451	3,501	0.57	8.5	
1940	4,541	3,174	54	1.72	10,167	2,239	3,203	0.60	8.5	
1941	4,604	3,213	58	1.81	9,689	2,105	3,016	0.68	8.5	
1942	4,668	3,252	62	1.91	9,221	1,975	2,836	0.83	8.5	
1943	4,732	3,291	67	2.05	10,150	2,145	3,084	0.93	8.5	
1944	4,798	3,331	74	2.21	11,433	2,383	3,432	0.96	8.5	
1945	4,865	3,372	97	2.88	11,146	2,291	3,306	1.04	8.5	
1946	4,932	3,412	11	0.34	12,176	2,469	3,568	1.06	30	
1947	5,000	3,454	14	0.42	12,515	2,503	3,624	1.08	30	
1948	5,070	3,496	16	0.45	12,811	2,527	3,665	1.10	30	
1949	5,140	3,538	18	0.52	13,039	2,537	3,685	1.12	30	
1950	5,211	3,581	22	0.62	13,632	2,616	3,807	1.14	30	
1951	5,254	3,600	25	0.70	14,498	2,760	4,027	1.14	30	
1952	5,296	3,619	25	0.68	14,604	2,757	4,035	1.14	30	
1953	5,339	3,638	27	0.75	15,383	2,881	4,228	1.15	30	
1954	5,383	3,658	28	0.76	16,427	3,052	4,491	1.14	30	
1955	5,426	3,677	29	0.79	17,201	3,170	4,678	1.14	30	
1956	5,470	3,697	35	0.94	17,819	3,257	4,820	1.17	30	
1957	5,515	3,716	38	1.01	18,648	3,381	5,018	1.19	30	
1958	5,560	3,736	40	1.08	19,574	3,521	5,240	1.21	30	
1959	5,605	3,756	35	0.93	20,563	3,669	5,475	1.22	30	
1960	5,650	3,776	34	0.90	21,342	3,777	5,653	1.25	30	

1961	5,633	3,747	34	0.92	21,647	3,843	5,777	1.28	30
1962	5,616	3,718	37	0.99	23,672	4,215	6,366	1.31	30
1963	5,599	3,690	44	1.19	23,829	4,256	6,457	1.35	45
1964	5,582	3,662	29	0.80	25,202	4,515	6,882	1.38	45
1965	5,565	3,634	44	1.22	28,565	5,133	7,860	1.42	45
1966	5,548	3,607	45	1.25	29,023	5,231	8,047	1.49	45
1967	5,531	3,579	53	1.48	30,812	5,571	8,608	1.58	45
1968	5,514	3,552	58	1.63	31,415	5,697	8,844	1.67	45
1969	5,497	3,525	64	1.81	30,973	5,634	8,787	1.82	55
1970	5,480	3,498	75	2.13	32,856	5,995	9,392	1.93	55
1971	5,565	3,543	87	2.47	33,966	6,104	9,587	2.17	55
1972	5,650	3,588	106	2.97	36,187	6,404	10,085	2.40	55
1973	5,737	3,634	125	3.45	37,893	6,605	10,428	2.71	80
1974	5,825	3,680	149	4.04	35,858	6,155	9,743	3.39	80
1975	5,915	3,727	128	3.43	36,020	6,090	9,664	3.90	80
1976	6,006	3,775	684	18.13	36,693	6,109	9,721	4.58	80
1977	6,098	3,823	559	14.62	36,844	6,042	9,638	5.87	80
1978	6,192	3,872	548	14.15	37,537	6,062	9,696	7.12	80
1979	6,287	3,921	702	17.90	38,430	6,112	9,801	8.85	80
1980	6,384	3,971	837	21.07	40,945	6,414	10,311	10.79	70(married) 80 (single)
1981	6,482	4,022	1,112	27.65	41,010	6,327	10,197	12.94	70(married) 80 (single)
1982	6,548	4,078	1,333	32.68	40,522	6,189	9,936	15.84	70(married) 80 (single)
1983	6,614	4,135	1,389	33.58	41,246	6,236	9,974	19.88	70(married) 80 (single)
1984	6,681	4,194	1,385	33.03	39,170	5,863	9,341	25.71	70
1985	6,749	4,252	1,189	27.95	40,295	5,971	9,476	30.68	50(married) 60 (single)
1986	6,817	4,312	1,259	29.20	44,099	6,469	10,227	34.26	50(married) 60 (single)
1987	6,886	4,373	1,436	32.84	47,495	6,897	10,861	37.48	50(married) 60 (single)
1988	6,956	4,434	542	12.22	51,692	7,431	11,657	41.11	50(married) 60 (single)
1989	7,027	4,497	2,104	46.79	49,094	6,987	10,918	46.31	40
1990	7,098	4,560	2,606	57.15	51,994	7,325	11,403	52.16	40
1991	7,170	4,624	2,642	57.14	55,177	7,696	11,933	58.48	40
1992	7,251	4,697	2,781	59.21	57,619	7,947	12,267	64.00	40

(continued)

Table 11C.1 Continued

	Tax units			Total income			Inflation		Taxes
	(1) Adults (‘000s)	(2) Tax units (‘000s)	(3) Number of tax returns (‘000s)	(4) (3)/(2) (%)	(5) Total income (millions) (2005 euros)	(6) Average income per adult (2005 euros)	(7) Average income per tax unit (2005 euros)	(8) CPI (base 2005)	(9) Top marginal tax rate (%)
1993	7,332	4,771	2,734	57.31	55,712	7,598	11,677	68.35	40
1994	7,415	4,847	2,897	59.78	56,966	7,683	11,754	71.99	40
1995	7,498	4,923	2,882	58.54	57,690	7,694	11,718	74.99	40
1996	7,583	5,001	3,046	60.90	62,480	8,240	12,494	77.29	40
1997	7,668	5,080	3,215	63.29	65,845	8,587	12,962	79.11	40
1998	7,754	5,160	3,312	64.18	69,577	8,972	13,483	81.32	40
1999	7,842	5,242	3,425	65.35	73,667	9,394	14,054	83.20	40
2000	7,930	5,325	3,662	68.78	76,963	9,705	14,454	85.58	40
2001	8,019	5,409	3,869	71.53	79,871	9,960	14,767	89.30	40
2002	8,110	5,494	3,969	72.24	82,384	10,159	14,994	92.51	40
2003	8,201	5,581	3,979	71.29	81,433	9,930	14,591	95.53	40
2004	8,293	5,669	4,244	74.86	82,743	9,977	14,595	97.78	40
2005	8,387	5,759	4,294	74.57	84,143	10,033	14,611	100.00	40

APPENDIX 11D: ESTIMATING TOP SHARES

Pareto Interpolation

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

Adjustments to Raw Pareto Interpolations for Income

1936–45: Statistics are organized by ranges of tax paid and they only display the number of tax files. I estimated the ranges of gross income by means of the statutory tax scale and the taxable thresholds given in Tables 11A.1 and 11A.2. Only the ranges of gross income, the number of tax units, and the assumption of a Pareto distribution were used to estimate top fractiles and top shares in this period.

1964–82: Statistics are organized by ranges of taxable income, and they provide information on taxable income and tax files. Total income equals taxable income plus family allowances (which were introduced in 1964) plus other allowances (their evolution is described in Table 11A.1). As allowances are reported only in aggregate, I imputed them to each bracket by assuming that on average each tax filer is entitled to the same amount. This implies assuming that no re ranking takes place in the gross and taxable income distributions.

The estimates of top income shares between 1936 and 2005 are presented in Table 11D.1, while top fractile income series 1989–2005 are reported in Table 11D.2. Table 11D.3 describes the composition of top incomes under the old income tax between 1946 and 1963; as composition data are only available in aggregates, the size of top groups varies across those years.

Adjustments to Raw Pareto Interpolations for Wages

1964–82: Statistics are organized by ranges of tax paid and they display the amounts of tax collections and the number of workers taxed. I estimated the ranges of gross wages by means of the statutory tax scale of the *imposto profissional* between those years.

The estimates of top earnings shares between 1964 and 2000 are presented in Table 11D.4, while selected fractiles for 1989–2005 are reported in Table 11D.5.

Estimating Top Shares from Administrative Records on Earnings

We also computed shares of top wages using micro data from the *quadros de pessoal* between 1985 and 2004 (1990 and 2001 missing). The number of observations ranges from 1,898,675 in 1985 to 2,912,304 in 2004. However, not all of them refer to workers.

Table 11D.1 Top income shares in Portugal, 1936-2005

	(3)	(4)	(5)	(6)	(7)	(8)	(11)	(12)	(13)	(14)	(15)	(16)
	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.01%	Top 10 5%	Top 5 1%	Top 1 0.5%	Top 0.5 0.1%	Top 0.1 0.01%	Top 0.01%
1936					4.58	1.37					3.21	1.37
1937					4.01	1.14					2.87	1.14
1938					3.94	1.12					2.83	1.12
1939					4.17	1.21					2.97	1.21
1940					4.49	1.25					3.24	1.25
1941					4.64	1.33					3.31	1.33
1942					4.16	1.20					2.96	1.20
1943					3.41	0.97					2.44	0.97
1944					3.06	0.88					2.18	0.88
1945					3.35	1.05					2.30	1.05
1946					3.12	0.96					2.16	0.96
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	1.13					2.49	1.13
1960					3.25	0.94					2.30	0.94
1961					3.36	0.94					2.42	0.94
1962					2.93	0.79					2.15	0.79
1963					2.96	0.81					2.15	0.81

Table 11D.1 Continued

	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.01%	Top 10 5%	Top 5 1%	Top 1 0.5%	Top 0.5 0.1%	Top 0.1 0.01%	Top 0.01%
	(3)	(4)	(5)	(6)	(7)	(8)	(11)	(12)	(13)	(14)	(15)	(16)
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
2004	38.24	25.95	9.62	6.24	2.31	0.60	12.29	16.33	3.38	3.93	1.71	0.60
2005	38.25	26.01	9.77	6.42	2.48	0.69	12.24	16.24	3.35	3.94	1.78	0.69

Table 11D.2 Top fractiles income levels in Portugal, 1989–2005 (amounts in 2005 euros)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	P90	P95	P99	P99.5	P99.9	P99.99
1989	32,973	43,430	74,706	93,636	166,926	486,837	22,517	35,611	55,776	75,314	131,380	18,938	27,227	50,613	62,678	100,938	228,592
1990	35,567	47,202	82,255	103,003	182,001	517,899	23,931	38,439	61,507	83,254	144,679	20,104	29,083	55,558	69,274	111,456	264,214
1991	38,700	51,518	88,984	110,264	185,240	472,006	25,882	42,151	67,703	91,521	153,377	21,600	31,714	61,200	76,345	120,245	271,061
1992	40,671	54,254	93,033	114,247	187,320	423,047	27,089	44,559	71,819	95,979	161,128	22,535	33,307	64,688	80,402	126,516	270,660
1993	40,495	54,316	94,057	115,832	191,620	428,325	26,675	44,380	72,282	96,885	165,319	22,048	32,998	64,939	80,593	128,192	277,753
1994	41,154	55,269	96,309	119,329	198,846	437,141	27,040	45,009	73,288	99,450	172,369	22,358	33,395	65,826	82,089	132,084	287,484
1995	41,461	55,874	98,519	123,354	209,753	461,657	27,048	45,212	73,685	101,754	181,764	22,384	33,363	66,541	83,386	137,889	303,488
1996	43,817	59,245	105,557	133,058	229,853	514,411	28,388	47,667	78,056	108,859	198,236	23,430	35,222	70,062	88,959	149,437	334,440
1997	46,347	62,920	113,766	144,491	254,682	578,442	29,774	50,209	83,042	116,943	218,709	24,523	36,978	74,034	95,012	163,949	372,366
1998	47,795	64,974	118,342	150,674	266,757	606,514	30,616	51,632	86,010	121,653	229,006	25,176	38,055	76,350	98,149	171,598	390,156
1999	50,848	69,445	129,759	168,194	312,620	760,393	32,251	54,367	91,323	132,088	262,867	26,502	40,091	80,938	104,437	191,942	466,865
2000	52,214	71,048	131,329	168,950	303,434	701,367	33,379	55,978	93,708	135,329	259,219	27,527	41,458	83,524	107,593	193,020	446,153
2001	55,868	76,185	142,500	187,402	359,427	912,555	35,551	59,606	97,598	144,396	297,968	29,218	43,772	87,340	111,621	213,985	543,291
2002	55,142	74,592	134,489	172,261	307,326	703,541	35,693	59,618	96,718	138,495	263,302	29,316	43,812	86,824	110,301	196,784	450,485
2003	53,131	72,055	133,142	173,093	329,955	985,525	34,207	56,783	93,191	133,878	257,114	28,237	42,152	84,103	107,571	187,866	504,655
2004	55,810	75,736	140,341	182,130	337,258	871,103	35,884	59,584	98,551	143,348	277,942	29,609	44,038	87,489	114,276	203,406	509,836
2005	55,887	75,999	142,703	187,594	361,793	1,012,397	35,776	59,323	97,812	144,044	289,503	29,504	43,885	87,054	113,979	206,538	557,582

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. Fractiles are defined by total income.

Source: Computations based on tax statistics.

Table 11D.3 Composition of top incomes under old income tax, Portugal, 1946-1963

Year	Top income group fractile	Composition (%)			
		Returns from real estate and farm income	Returns from 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

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

Source: Income tax statistics.

Table 11D.4 Top earnings shares from tax statistics in Portugal, 1964-2000

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.01%	Top 10 5%	Top 5 1%	Top 1 0.5%	Top 0.5 0.1%	Top 0.1 0.01%	Top 0.01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(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

(continued)

Table 11D.4 Continued

	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.01%	Top 10 5%	Top 5 1%	Top 1 0.5%	Top 0.5 0.1%	Top 0.1 0.01%	Top 0.01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
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 1964–82, and from tabulations of the Imposto sobre o Rendimento das Pessoas Singulares 1989–2000. The results for 1964–82 exclude civil servants.

Table 11D.6 Top earnings shares from administrative records in Portugal, 1985-2004

	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 0.01%	Top 10 5%	Top 5 1%	Top 1 0.5%	Top 0.5 0.1%	Top 0.1 0.01%	Top 0.01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(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: Own computations based on micro-data from *quadros de pessoal*.

Table 11D.7 Fractiles of earnings from administrative records in Portugal, 1985-2004 (amounts in 2005 euros)

Year	Median																	
	Wage (1)	P90 (2)	P95 (3)	P99 (4)	P99.5 (5)	P99.9 (6)	P99.99 (7)	P90 (8)	P95 (9)	P99 (10)	P99.5 (11)	P99.9 (12)	P99.99 (13)	P90 (14)	P95 (15)	P99 (16)	P99.5 (17)	P99.9 (18)
1985	6,158	13,462	17,351	30,195	38,451	90,681	163,533	21,304	32,150	58,899	78,593	136,519	229,303	15,077	21,765	33,516	54,797	107,927
1986	6,456	14,364	18,359	30,587	37,503	62,260	134,220	21,466	26,911	44,118	54,710	90,310	179,374	16,035	22,636	33,566	45,866	80,542
1987	6,756	15,186	19,509	32,771	40,437	65,864	137,378	22,864	28,722	46,947	57,938	93,783	175,280	16,995	24,149	35,932	48,946	84,672
1988	6,795	15,554	20,182	34,530	42,696	70,076	141,124	23,771	30,066	49,602	61,125	98,348	174,849	17,491	25,204	38,115	51,858	90,018
1989	6,785	15,680	20,559	35,859	44,863	73,371	133,540	24,340	30,934	51,455	63,399	98,916	166,057	17,754	25,814	39,531	54,546	91,507
1990																		
1991	7,165	17,668	23,884	45,380	57,346	89,501	146,171	28,933	37,553	64,515	78,207	113,469	184,464	20,315	30,804	50,772	69,377	105,590
1992	7,529	18,986	26,624	50,412	63,157	97,833	158,504	31,960	41,715	70,900	85,911	126,341	244,212	22,208	34,426	55,901	75,810	113,254
1993	7,663	19,237	26,897	53,078	67,303	99,669	157,139	32,858	43,294	74,304	89,243	127,780	239,191	22,412	35,525	59,337	79,571	115,387
1994	7,789	19,634	27,094	54,137	69,095	108,636	187,612	33,740	44,767	79,249	97,924	154,062	378,943	22,804	36,294	60,824	84,221	129,631
1995	7,889	19,775	26,764	50,584	64,634	108,683	230,402	32,858	43,024	76,005	95,549	160,059	324,866	22,684	34,766	56,441	79,395	141,635
1996	8,104	20,482	27,942	53,716	68,669	115,457	258,357	34,508	45,413	81,241	102,420	175,281	354,659	23,510	36,321	59,773	83,869	154,893
1997	8,141	20,707	27,926	52,936	66,909	113,073	259,803	34,355	44,992	79,598	100,404	172,691	354,908	23,709	36,328	58,768	82,304	152,427
1998	8,381	21,306	28,769	53,807	68,198	114,592	295,954	35,329	46,239	82,173	104,446	187,482	437,290	24,490	37,364	60,062	83,939	160,205
1999	8,427	21,636	29,378	54,466	68,524	118,462	291,706	36,024	47,159	84,146	107,850	197,970	523,842	24,936	37,959	60,532	85,451	162,142
2000	8,642	22,392	30,061	54,912	69,361	122,401	319,950	37,220	48,757	89,487	117,965	242,973	931,921	25,664	38,549	61,157	86,594	165,763
2001																		
2002	8,836	22,851	31,145	57,775	73,370	130,077	492,789	39,220	52,083	99,458	134,621	306,051	1,327,662	26,302	40,156	64,167	91,583	192,343
2003	8,772	23,003	31,349	59,133	75,853	141,257	392,081	39,530	52,521	99,639	133,111	278,449	972,375	26,477	40,647	66,028	96,537	201,191
2004	8,771	23,040	31,513	59,223	76,333	141,174	424,320	39,871	53,063	101,661	136,863	294,690	1,127,089	26,681	40,917	66,462	97,410	202,354

Note: Original information refers to monthly earnings. Amounts have been annualized by considering 14 monthly pays per year. Source: Own computations based on micro-data from *quadros de pessoal*.

Table 11D.7 (continued) Fractiles of earnings from administrative records in Portugal, 1985–2004 (amounts in 2005 euros)

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	6,158	3,386	4,370	4,837	5,462	6,158	6,958	8,225	10,135	13,462	8,413	8,964	9,587	10,325	11,227	12,395	14,012	16,461	21,304	4,005	4,593	5,150	5,807	6,549	7,533	9,104	11,606
1986	6,456	3,598	4,586	5,116	5,768	6,457	7,338	8,662	10,780	14,364	8,786	9,349	9,983	10,740	11,668	12,865	14,512	16,933	21,466	4,294	4,912	5,445	6,110	6,888	7,931	9,682	12,416
1987	6,756	3,853	4,788	5,440	6,022	6,756	7,642	9,118	11,424	15,186	9,267	9,863	10,536	11,342	12,335	13,621	15,398	17,998	22,864	4,499	5,145	5,696	6,376	7,186	8,284	10,192	13,123
1988	6,795	3,952	4,790	5,436	6,026	6,795	7,697	9,173	11,577	15,554	9,423	10,038	10,737	11,575	12,607	13,950	15,810	18,568	23,771	4,504	5,150	5,714	6,423	7,238	8,378	10,300	13,377
1989	6,785	4,002	4,735	5,315	6,016	6,785	7,682	9,150	11,468	15,680	9,445	10,069	10,782	11,641	12,699	14,071	15,968	18,824	24,340	4,457	5,078	5,634	6,352	7,211	8,385	10,259	13,314
1990																											
1991	7,165	4,419	5,051	5,675	6,329	7,165	8,352	10,031	12,659	17,668	10,526	11,242	12,083	13,098	14,365	16,023	18,331	21,865	28,933	4,792	5,358	5,995	6,760	7,729	9,100	11,258	14,795
1992	7,529	4,449	5,185	5,861	6,547	7,529	8,729	10,530	13,396	18,986	11,202	11,993	12,917	14,035	15,438	17,280	19,864	23,871	31,960	4,881	5,521	6,229	7,002	8,080	9,520	11,851	15,785
1993	7,663	4,547	5,211	5,967	6,700	7,663	8,889	10,728	13,737	19,237	11,448	12,267	13,220	14,371	15,812	17,707	20,359	24,478	32,858	4,880	5,593	6,312	7,166	8,223	9,752	12,109	16,090
1994	7,789	4,782	5,553	6,091	6,823	7,789	9,027	10,922	14,097	19,634	11,710	12,549	13,523	14,701	16,176	18,125	20,867	25,118	33,740	5,001	5,756	6,481	7,356	8,414	9,939	12,414	16,564
1995	7,889	4,842	5,503	6,155	6,927	7,889	9,099	10,988	14,151	19,775	11,683	12,507	13,459	14,614	16,059	17,964	20,635	24,737	32,858	5,076	5,838	6,526	7,386	8,435	9,950	12,424	16,609
1996	8,104	4,933	5,661	6,325	7,129	8,104	9,311	11,287	14,538	20,482	12,096	12,952	13,942	15,147	16,659	18,657	21,472	25,827	34,508	5,191	6,003	6,681	7,563	8,628	10,174	12,712	17,079
1997	8,141	5,005	5,738	6,402	7,163	8,141	9,379	11,368	14,707	20,707	12,152	13,009	13,999	15,202	16,714	18,712	21,518	25,838	34,355	5,268	6,073	6,776	7,643	8,716	10,292	12,874	17,314
1998	8,381	5,058	5,927	6,599	7,402	8,381	9,702	11,765	15,153	21,306	12,522	13,400	14,421	15,662	17,217	19,277	22,156	26,571	35,329	5,492	6,273	6,993	7,907	9,006	10,669	13,365	17,865
1999	8,427	5,145	5,987	6,685	7,500	8,427	9,812	11,785	15,192	21,636	12,678	13,563	14,596	15,852	17,428	19,514	22,446	26,995	36,024	5,557	6,345	7,069	7,982	9,097	10,737	13,367	17,994
2000	8,642	5,206	6,120	6,797	7,653	8,642	10,017	12,114	15,561	22,392	13,024	13,940	15,010	16,312	17,947	20,106	23,145	27,889	37,220	5,677	6,437	7,196	8,133	9,301	10,984	13,647	18,547
2001																											
2002	8,836	5,267	6,205	6,930	7,774	8,836	10,296	12,408	15,945	22,851	13,434	14,396	15,515	16,878	18,596	20,866	24,064	29,091	39,220	5,711	6,548	7,319	8,271	9,500	11,248	13,980	18,924
2003	8,772	5,226	6,140	6,875	7,702	8,772	10,234	12,281	15,830	23,003	13,400	14,367	15,490	16,860	18,586	20,872	24,109	29,224	39,530	5,633	6,491	7,255	8,209	9,420	11,136	13,846	18,874
2004	8,771	5,235	6,114	6,841	7,732	8,771	10,266	12,321	15,866	23,040	13,461	14,436	15,572	16,957	18,702	21,003	24,264	29,428	39,871	5,647	6,480	7,264	8,234	9,496	11,219	13,937	18,987

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

Source: Own computations based on micro-data from *quadros de pessoal*.

Individuals are classified as employers, family employees with no salary, employees, and cooperative workers. In the estimations I only consider individuals with non zero wages in the last two groups. Shares of top wages are presented in Table 11D.6, where I also provide estimations for the left part of the distribution. Original amounts reflect monthly earnings. Table 11D.7 shows income levels of selected fractiles, where I annualized the amounts by upscaling monthly earnings by a factor of 14 (to take into account two annual bonuses).

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