ECOLE DES HAUTES ETUDES EN SCIENCES SOCIALES

FORMATION ANALYSE ET POLITIQUE ECONOMIQUES

Année 2008

THÈSE

Hauts Revenus : Une Perspective Historique et Fiscale
Les cas de l'Espagne, de l'Argentine, de l'Italie et du Portugal

Top Incomes in Historical and Fiscal Perspective
The cases of Spain, Argentina, Italy and Portugal

Facundo GONZALEZ ALVAREDO

Directeur: Professeur Thomas PIKETTY

Le 5 Mai 2008

JURY

Monsieur Anthony ATKINSON
 Department of Economics et Nuffield College, Oxford University
Monsieur Alfredo CANAVESE
 Departamento de Economía, Universidad Torcuato Di Tella et CONICET
Monsieur Thomas PIKETTY
 Ecole d'Economie de Paris et Ecole des Hautes Etudes en Sciences Sociales
Monsieur Leandro PRADOS DE LA ESCOSURA
 Departamento de Historia Económica, Universidad Carlos III de Madrid
Monsieur Emmanuel SAEZ
 Department of Economics, University of California at Berkeley

No puedo decir lo que con envidia oigo a otros: que no les ha costado afán el saber. ¡Dichosos ellos! A mí, no el saber (que aún no sé), sólo el desear saber me le ha costado tan grande.[1]

Sor Juan Inés de la Cruz, *Respuesta a Sor Filotea de la Cruz*, 1691

El Universo requiere la Eternidad. Por eso afirman que la conservación de este mundo es una perpetua creación, y que los verbos 'conservar' y 'crear', tan enemistados aquí, son sinónimo en el Cielo.[2]

Jorge Luis Borges, *Historia de la Eternidad*, 1936

---

[1] I am unable to say what I have with envy heard others state -that knowledge has cost them no effort. Blessed are they! For me, not knowledge, which I still do not possess, but merely the desire for knowledge has cost me so much.

[2] The Universe demands Eternity. That is why it is said that to conserve the world is to perpetually create it, and that the verbs 'conserve' and 'create', so opposed here, are synonymous in Heaven.

RÉSUMÉ

L'évolution de l'inégalité des revenus et des richesses au cours du processus de développement a fait l'objet de la plus grande attention dans la littérature économique. Un nombre significatif de travaux récents a porté sur la construction de séries à partir des tableaux statistiques publiés par les administrations fiscales après le dépouillement des déclarations d'impôt sur le revenu, dans plusieurs pays. Ces travaux traitent de la composition et du niveau des différent fractiles de hauts revenus. L'ouvrage récemment édité par Atkinson et Piketty, 2007, dans lequel la plupart de ces études sont réunies, est un exemple d'un tel intérêt. Les pays considérés sont des pays anglo-saxons (Royaume-Uni, Irlande, Etats-Unis, Canada, Nouvelle-Zélande et Australie) et des pays d'Europe continentale (France, Allemagne, Pays-Bas et Suisse). Les auteurs ont mis en évidence une baisse de la concentration du revenu lors de la première moitié du vingtième siècle (principalement entre la Grande Dépression et la fin de la Seconde Guerre Mondiale). Cette diminution (absente néanmoins dans le cas de la Suisse) a fondamentalement été le résultat d'une chute des plus hauts revenus du capital en raison de la destruction, l'inflation, les faillites et les politiques fiscales et monétaires visant à financer les dettes découlant de la guerre. Le moment et la magnitude du déclin varient selon les pays. La raison pour laquelle les revenus du capital ne se sont pas redressés pendant la seconde moitié du siècle reste une question ouverte. Piketty, 2003 et Piketty et Saez, 2006, suggèrent que l'introduction progressive et généralisée de l'imposition sur le revenu et sur le patrimoine a rendu un tel redressement impossible. Les trente dernières années présentent un panorama différent. Les Etats-Unis, le Canada et le Royaume-Uni ont été le théâtre d'une augmentation considérable des parts des hauts revenus, augmentation principalement poussée par les fortes hausses des hauts salaires, alors que ce phénomène n'a pas eu lieu en Europe continentale et au Japon. Des travaux ont aussi été réalisés sur les expériences en Inde, au Japon, en Suède, Finlande, Norvège, Chine et Indonésie. Aucune étude

de ce type n'a analysé les pays du Sud de l'Europe ou d'Amérique latine. Ce travail propose de combler cette lacune en analysant les expériences de l'Espagne, du Portugal, de l'Italie et de l'Argentine.

Le Chapitre 2 se concentre sur le cas de l'Espagne entre 1933 et 2004. Nous y présentons des séries statistiques concernant les hauts revenus et les fortunes, construites à partir de données fiscales. Les niveaux de concentration sont les plus élevés au cours des années 1930, ils chutent nettement pendant les deux premières décennies de la dictature de Franco et remontent légèrement depuis les années 1960, particulièrement depuis la moitié des années 1990. Le dernier centile de la répartition des revenus en Espagne sur la période 1933-1971 est comparable aux estimations réalisées pour les Etats-Unis et la France. Ces conclusions, ainsi qu'une analyse consciencieuse de toutes les données fiscales publiées, suggèrent que l'évasion et la fraude fiscales parmi les très riches avant 1980 étaient beaucoup moins répandues qu'il était généralement admis. La concentration de la richesse est restée relativement stable entre 1982 et 2004 : l'augmentation soudaine des prix de l'immobilier a bénéficié à la classe moyenne et a compensé la légère augmentation de la concentration de la richesse financière pendant les années 1990. Nous utilisons nos séries statistiques sur la répartition de la richesse et un modèle conceptuel simple pour analyser les effets de l'exonération d'impôt sur la fortune des actions détenues par les propriétaires-dirigeants introduite en 1994. Nous montrons que la réforme a provoqué des modifications considérables de l'assiette fiscale, de nombreux contribuables passant du statut d'imposable à celui d'exonéré d'imposition. Cette répercussion de l'impôt a substantiellement érodé l'assiette fiscale de l'impôt sur la fortune et c'est la raison pour laquelle l'exonération fiscale a généré des coûts d'efficacité élevés.

Le chapitre 3 analyse la part des hauts revenus en Argentine entre 1932 et 2004. À ce jour, les seuls travaux traitant de ce sujet pour les pays en voie de développement sont Banerjee and Piketty, 2005 à propos de l'Inde, Piketty and Qian, 2006, sur la Chine, Leigh and van der Eng, 2007, sur l'Indonésie et notre travail qui porte sur l'Argentine. L'Argentine est le premier cas d'Amérique

latine à être analysé. À notre connaissance, les informations statistiques sur lesquelles ces études reposent ne sont pas disponibles, sur une si longue période, dans un autre pays d'Amérique latine. C'est seulement récemment que les ministères du budget du Brésil, du Chili, d'Équateur et de Colombie ont accepté de produire des données (pas toujours publiques) pour un nombre d'années très limitées[3]. Cela renforce l'intérêt de porter attention à l'expérience argentine. Les résultats suggèrent que la concentration des revenus était plus grande pendant les années 1930 et la première moitié des années 1940 qu'elle ne l'est aujourd'hui. Le redressement de l'économie après la grande Dépression, favorisé par les conditions du commerce international pendant et après la seconde Guerre mondiale et les effets visibles de la politique péroniste entre 1945 et 1955 ont généré une courbe en U inversé dans la dynamique des hauts revenus. Les limites de la politique de redistribution péroniste sont mises en lumière : aux alentours de 1956, les parts des hauts revenus étaient encore plus grandes que celles observées dans le monde développé. Depuis lors, les parts des hauts revenus semblent avoir décrit une courbe forme de U.

Le chapitre 4 est consacré au cas de l'Italie entre 1974 et 2004. La période couverte, en raison de la disponibilité limitée des données fiscales, ne permet pas de construire une évolution séculière des parts de revenus les plus élevés. Les estimations concernant l'Italie pendant les trois dernières décennies fournissent cependant un aperçu intéressant des processus de concentration de revenu, montrant une augmentation constante depuis la moitié des années 1980, portée principalement par les hauts salaires et les revenus des travailleurs à leur compte. Malgré cette tendance, l'augmentation est très faible par rapport à la poussée qu'ont connue les hauts revenus aux Etats-Unis et dans les autres pays anglo-saxons. Par conséquent, l'expérience italienne est aussi plus proche de l'expérience des pays d'Europe continentale tels que la France ou l'Espagne.

---

[3] L'étude sur les hauts revenus et sur l'impôt sur le revenu dans plusieurs pays d'Amérique latine pendant ces dernières années fait partie d'un projet de recherche en cours. L'OCDE fournit l'appui institutionnel afin d'obtenir les données.

Le chapitre 5 traite le cas du Portugal entre 1936 et 2004. Le Portugal est un cas spécial de pays en développement doté d'une structure bureaucratique bien organisée en ce qui concerne l'imposition sur le revenu, influencée par la stabilité du régime autoritaire au pouvoir entre 1926 et 1974. Les dossiers administratifs et les données étaient régulièrement publiés depuis 1936. Malheureusement, ces archives et données présentent un blanc entre 1983 et 1988, une période durant laquelle de nombreuses réformes fiscales ont été introduites, ainsi que la transition entre « l'ancien » et le « nouvel » impôt sur le revenu réalisée en 1989. Les résultats montrent une relative stabilité des parts des hauts revenus entre la fin de la seconde Guerre mondiale et la fin des années 1960, suivie de dynamiques en forme de U, le bras ascendant du U apparaissant à partir du début des années 1980 quand les réformes ont été introduites afin de satisfaire aux conditions d'accession à la Communauté Économique Européenne. Des données-micro disponibles concernant les salaires mettent aussi à jour une augmentation de la part des hauts salaires.

Enfin, une documentation exhaustive des sources statistiques et des méthodes est fournie en annexes des chapitres 2 à 5. Elle s'avère être une contribution importante dans la mesure où les données publiées sur l'imposition sur le revenu et sur la fortune ont été largement négligées et oubliées dans ces pays pendant trois quarts du XXème siècle.

CONTENTS

CHAPTER 5: PORTUGAL 1936-2004

CHAPTER 1

INTRODUCTION

The evolution of income and wealth inequality during the process of development has attracted enormous attention in the economics literature. A number of recent studies have constructed series for shares of income accruing to upper income groups for various countries using income tax statistics. The book recently edited by Atkinson and Piketty, 2007a, where most of those studies are gathered, is an example of such interest. The countries considered are Anglo-Saxon countries (United Kingdom, Ireland, United States, Canada, New Zealand and Australia) and continental European countries (France, Germany, the Netherlands and Switzerland).[4] Atkinson and Piketty, 2007b, provide a detailed comparison of results.[5] The authors found a drop in income concentration in the first part of the twentieth century (mainly between the Great Depression and the end of the Second World War) that was essentially the result of a fall in top capital incomes due to destruction, inflation, bankruptcies and fiscal and monetary policies to finance war debts. The timing and the magnitude of the decline vary across countries but a clear feature is that drop in top shares was larger in countries strongly hit by the war. The reason why capital incomes did not recover during the second half of the century is still an open question; Piketty, 2003 and Piketty and Saez, 2006 suggest that the

---

[4] Atkinson, 2005, Atkinson and Leigh, 2007 a,b, Dell, 2007, Dell, Piketty and Saez, 2007, Nolan, 2007, Piketty, 2001, 2003, Piketty and Saez, 2003, Saez and Veall, 2005, Salverda and Atkinson, 2007. Other works on income and wealth concentration in the same countries analyzed in Atkinson and Piketty, 2007 include Atkinson and Harrison, 1978, Atkinson and Leigh, 2008, Kopczuk and Saez, 2004, Landais, 2007 and Piketty, Postel-Vinay and Rosenthal, 2006.

[5] See also Leigh, 2008 and Piketty and Saez, 2006.

introduction of generalized progressive income and estate taxation made such a reversal impossible. As supportive evidence of the tax-driven explanation, Dell, Piketty and Saez, 2007 show that the drop in top shares following the World Wars and the Great Depression was much more moderate in Switzerland, fully recovering in the post Second World War period: Switzerland never established a very progressive tax structure. Piketty, 2003 argues that the long-run effect of tax progressivity on wealth concentration is large enough to explain the magnitude of the observed changes.

The last thirty years tell a different story. In continental Europe there was a period of falling shares in the 1960s and 1970s followed by a relative stability over the last twenty years. As Atkinson and Piketty, 2007b put it, 'most striking is what did not happen: there has not been a U-shaped pattern over the twentieth century.' On the contrary, the United States, Canada, the United Kingdom, New Zealand, Australia and Ireland have displayed a remarkable convergence up to the 1970s to the bottom of a long-run U-shape and then some divergence, followed by a substantial increase in top shares since the 1980s, mainly driven by large increases in top wages.

Research has also been done on the experiences of India, Japan, Sweden, Finland, Norway, China and Indonesia.[6] No such study has analyzed Southern European or Latin American countries. This work proposes to start filling this gap by analyzing the experiences of Spain, Portugal, Italy and Argentina.

The methodological issues around the use of taxation data and aggregate income data (v.gr. national accounts) to estimate top income shares have been well canvassed in Atkinson, 2007. Tax statistics have many shortcomings. The definitions of taxable income and tax unit tend to change through time according to the tax laws. While there is a predisposition to under-reporting certain types of income, taxpayers also undertake a variety of avoidance responses, including planning, renaming and retiming of activities to legally

---

[6] Aarberge and Atkinson, 2008, Banerjee and Piketty, 2005, Leigh and van der Eng, 2007, Moriguchi and Saez, 2007, Piketty and Qian, 2006, Riihelä et al, 2005, Roine and Waldenström, 2006.

reduce the tax liability. Capital incomes and capital gains are taxed at different degrees in different countries. We devote a considerable part of the following chapters and appendixes to addressing these elements in the specific cases of the countries under scrutiny. Notwithstanding such drawbacks, no other source of information allows for the study of the distribution of top incomes covering virtually the whole twentieth century. The use of tax information to analyze the shares of top incomes is not new: it was already present in the works of Bowley, 1914, Stamp, 1914, 1936, Clark, 1932, Champernowne, 1936, Kuznets, 1953 and, more recently, Feenberg and Poterba, 1993.

Our main data consist of tables displaying the number of tax returns, the amounts reported, and the income (or wealth) composition for a large number of income (wealth) brackets. As the top tail of the income distribution is very well approximated by Pareto distributions, we use simple parametric interpolation methods to estimate the thresholds and average income (wealth) levels for each fractile. This method follows the classical study by Kuznets, 1953 and has been used in our chapters as well as in most of the top income studies presented in Atkinson and Piketty, 2007. This methodology, its limitations and alternative interpolation techniques are described at length in Atkinson, 2007.[7] Further details are provided in the appendixes.

The thesis is structured as follows. Chapter 2 is focused on the case of Spain between 1933 and 2004. We present series on top shares of income and wealth using personal. Top income shares are highest in the 1930s, fall sharply during the first two decades of the Franco dictatorship, and increase slightly since the 1960s, and especially since the mid-1990s. The top 0.01% income share in Spain estimated from income tax data is comparable to estimates for the United States and France over the period 1933-1971. Those findings, along

---

[7] As it is widely known, Pareto, 1896 first claimed that in the high-wealth range the population's wealth and income are distributed according to a power distribution function. Economic theory still has to provide a convincing explanation for this phenomenon, notwithstanding the extensive research done on the topic (just to cite a few, see Champernowne, 1953, Simon, 1955, 1957, Wold and Whittle, 1957, Mandelbrot, 1959, Lydall, 1968, Stiglitz, 1969, Shorrocks, 1973, Blinder, 1974, Levy and Levy, 2003). Today, power law distributions are pervasive in many other fields, as described in Mitzenmacher, 2004.

with a careful analysis of all published tax statistics, suggest that income tax evasion and avoidance among top income earners in Spain before 1980 was much less prevalent than previously thought. Wealth concentration has been about stable from 1982 to 2004 as surging real estate prices have benefited the middle class and compensated for a slight increase in financial wealth concentration in the 1990s. We use our wealth series and a simple conceptual model to analyze the effects of the wealth tax exemption of stocks for owners-managers introduced in 1994. We show that the reform induced substantial shifting from the taxable to the tax exempt status. This shifting has eroded the wealth tax base substantially and hence the tax exemption has generated large efficiency costs.

Chapter 3 analyzes top income shares in Argentina from 1932 to 2004. So far, Banerjee and Piketty, 2005 on India, Piketty and Qian, 2006 on China, Leigh and van der Eng, 2007 on Indonesia, and this paper on Argentina are the only works providing evidence for –currently– developing countries. Argentina is the first case to be analyzed in Latin America. To our knowledge, the statistical information on which these studies are built upon is not available in any other country in Latin America over such a long period. Only recently the tax agencies of Brazil, Chile and Ecuador have agreed to produce (not always public) tabulations for a very limited number of years.[8] This reinforces the interest in looking at the Argentine experience. The results suggest that income concentration was higher during the 1930s and the first half of the 1940s than it is today. The recovery of the economy after the Great Depression, favored by the international trade conditions during and after the Second World War, and the visible effects of the Peronist policy between 1945 and 1955 generated an inverted U shape in the dynamics of top incomes. There is evidence suggesting the limits of the Peronist redistributive policy: by 1956 the top income shares were still higher than the ones observed in the developed world. Since then top

---

[8] The study of top incomes and income taxation in several Latin American countries during recent years is part of an ongoing research project. The OECD is providing the institutional support to obtain the data.

shares seem to have followed a U-shape pattern, although several gaps in the data put a limit on the interpretation of such movements.

Chapter 4 is devoted to Italy between 1974 and 2004. Due to the limited availability of tax data, we cannot build a secular evolution of top income shares. Estimates for Italy for the last three decades provides however interesting insights on the process of income concentration, showing a persistent increase in the shares of top incomes since the mid-1980s, mainly driven by top wages and self-employment income. Notwithstanding this trend, the increase is very small relative to the surge experienced by top incomes in the United States and other Anglo-Saxon countries. Thus, the Italian experience is also closer to the one of continental Europe countries such as France and Spain.

Chapter 5 studies the case of Portugal between 1936 and 2004. Portugal was a special case of a developing country with a well-organized bureaucratic structure over the income tax, influenced by the stability of the authoritarian regime in power between 1926 and 1974. Administrative records and tabulations were regularly published since 1936. Unfortunately there is a gap in the data between 1983 and 1988, a period in which many interesting tax reforms were introduced, along with the transition from the 'old' to the 'modern' income tax accomplished in 1989. Our results suggest that income concentration was much higher during the 1930s and early 1940s than it is today. Top income shares estimated from reported incomes deteriorated during the Second World War, even if Portugal did not take active participation in the conflict. However, the magnitude of the drop was less important than in other European countries. The level of concentration between 1950 and 1970 remained relatively high compared to countries such as Spain, France, UK or the United States. The decrease in income concentration, started very moderately at the end of the 1960s and which accelerated after the revolution of 1974, began to be reversed during the first half of the 1980s. During the last fifteen years top income shares have increased steadily. The rise in wage concentration contributed to this process in a significant way. The evidence since 1989 suggests that the level of marginal tax rates at the top has not been the primary determinant of the level

of top reported incomes: marginal rates have stayed constant in a context of growing top shares.

Spain, Portugal and Italy display a significant increase in top income shares over the last twenty years. It is worth noticing that such increase is much smaller than the one observed in Anglo-Saxon countries but more pronounced than in France, Germany, Switzerland or the Netherlands. Marginal tax rates dropped sharply in the three countries over the same period. Such findings corroborate the robust empirical finding that, starting from a very progressive tax system with very high top marginal rates, a drop in top marginal tax rates is a necessary -although not sufficient- condition for top income shares to rise significantly.

Exhaustive documentation of statistical sources and methods is provided in the Appendixes to Chapters 2 to 5. This is expected to be one important contribution, as published tabulations based on the income and wealth taxes have been mostly neglected or forgotten in these countries during the first three quarters of the XXth. century.

At this stage our work has focused on the construction of series of top income (and wealth) shares. Their dynamics have been analyzed from different perspectives: historical influences, economic policy reasons, changes in the tax codes (namely in the tax rates), movements in income composition (wage income, capital income, business income, etc). In particular, breaking down income concentration series by income sources is a key element of analysis to disentangle the forces at play. Unfortunately, composition data are not always available for every year, but we did our best to exploit existing information. It is worth noticing that a global explanation as to why top income shares have evolved in a particular way is still a pending and difficult task. Knowing that the upsurge in top income shares in Anglo-Saxon countries in the last years was mainly motivated by large increases in high wages, finding that top salaries also played an important role in Spain, Italy and Portugal and discovering that many top income earners in Italy are sport stars, all of them constitute extremely relevant facts. We could argue that the 'high wages' phenomenon is temporary

and that the process of capital accumulation itself will generate an increase in top capital incomes in the near future. Nevertheless, this only offers a partial explanation. We need to know why this has happened in some countries and not in others. Atkinson, 2007 provides several departure (and highly stylized) ideas that will certainly be at the basis of future research.

A final warning: each chapter is organized to be read independently, at the cost of repeating some details in the main text as well as in the appendixes.

REFERENCES

Aarberge, R. and A. B. Atkinson (2008). 'Top incomes in Norway', mimeo.

Atkinson, A. B. (2005). 'Top Incomes in the United Kingdom over the Twentieth Century', *Journal of the Real Statistical Society*, Series A, 168(2): 325-343.

Atkinson, A. B. (2007). 'Measuring Top Incomes: Methodological Issues', in A.B. Atkinson and T. Piketty, op. cit., Chapter 2.

Atkinson, A. B. and A. Harrison (1978). *Distribution of Personal Wealth in Britain.* Cambridge: Cambridge University Press.

Atkinson, A. B. and A. Leigh (2007a). 'The Distribution of Top Incomes in Australia', in A.B. Atkinson and T. Piketty, op. cit.

Atkinson, A. B. and A. Leigh (2007b). 'The Distribution of Top Incomes in New Zealand', in A.B. Atkinson and T. Piketty, op. cit.

Atkinson, A. B. and A. Leigh (2008). 'Top Incomes in New Zealand 1921-2005: Understanding the Effects of Marginal Tax Rates, Migration Threat and the Macroeconomy', *Review of Income and Wealth*, forthcoming.

Atkinson, A. B. and T. Piketty (2007a). *Top Incomes over the Twentieth Century: A Contrast Between European and English Speaking Countries*, Oxford: Oxford University Press.

Atkinson, A. B. and T. Piketty (2007b). 'Towards a Unified Data Set on Top Incomes', in A.B. Atkinson and T. Piketty, op. cit., Chapter 13.

Banerjee, A. and T. Piketty (2005). Top Indian Incomes 1922-2000, *The World Bank Economic Review,* 19(1): 1-20.

Blinder, A. (1974). *Towards an Economic Theory of Income Distribution*, Cambridge: MIT Press.

Bowley, A. (1914). 'The British Super-Tax and the Distribution of Income', *Quarterly Journal of Economics*, 28: 255-268.

Champernowne, D. (1936). 'The Distribution of Income between Persons', Prize Fellowship Dissertation, King's College, Cambridge.

Champernowne, D. (1953). 'A Model of Income Distribution', *Economic Journal*, 63: 318-351.

Clark, C. (1932). *The National Income, 1924-1931*, London: Macmillan.

Dell, F. (2007). 'Top Incomes in Germany Throughout the Twentieth Century: 1898-1998', in A.B. Atkinson and T. Piketty, op. cit.

Dell, F; T. Piketty and E. Saez (2007). 'Income and Wealth Concentration in Switzerland over the Twentieth Century', in A.B. Atkinson and T. Piketty, op. cit.

Feenberg, D. and J. Poterba (1993). 'Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns', in J. Poterba (ed.) *Tax Policy and the Economy*, vol. 7, Cambridge: MIT Press, pp. 145-177.

Kopczuk, W. and E. Saez (2004). 'Top Wealth Shares in the United States, 1916-2000: Evidence from Estate Tax Returns', *National Tax Journal*, 57(2): 445-487.

Kuznets, S. (1953). *Shares of Upper Income Groups in Income and Savings*, New York: National Bureau of Economic Research.

Landais, C. (2007). 'Les Hauts Revenus en France (1998-2006): Une Explosion des Inegalités?', Paris School of Economics Working Paper, June.

Leigh, A. (2008). 'Top Incomes', in B. Nolan, W. Salverda and T. Smeeding, *Oxford Handbook on Economic Inequality*, forthcoming.

Leigh, A. and P. van der Eng (2007). 'Top Incomes in Indonesia, 1920-2004', Discussion Papers from Centre for Economic Policy Research, n. 549, Research School of Social Sciences, Australian National University.

Levy, M. and H. Levy (2003). 'Investment Talent and the Pareto Wealth Distribution: Theoretical and Experimental Analysis', *The Review of Economics and Statistics*, 85(3): 709-725.

Lydall, H. (1968). *The Structure of Earnings*, Oxford: Oxford University Press.

Mandelbrot, B. (1959). 'A Note on a Class of Skew Distribution Function: Analysis and Critique of a Paper by H. A. Simon', *Information and Control*, 2:90-99.

Mitzenmacher, M. (2004). 'A Brief History of Generative Models for Power Law and Lognormal Distributions', *Internet Mathematics*, 1(2): 226-251.

Moriguchi, C. and E. Saez (2007). The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics, forthcoming *Review of Economics and Statistics*.

Nolan, B. (2007). Long-Term Trends in Top Income Shares in Ireland, in A.B. Atkinson and T. Piketty, 2007, op. cit.

Pareto, V. (1896). *Cours d'Economie Politique*, Geneva: Droz.

Piketty, T. (2001). *Les Hauts Revenus en France au 20ème siecle – Inegalités et Redistributions, 1901-1998*, Paris : Editions Grasset.

Piketty, T. (2003). 'Income Inequality in France 1901-1998', *Journal of Political Economy*, 111(5): 1004-1042.

Piketty, T. and E. Saez (2003). 'Income Inequality in the United States, 1913-1998', *Quarterly Journal of Economics*, 118(1): 1-39; updated version in A.B. Atkinson and T. Piketty, 2007, op. cit.

Piketty, T. and E. Saez (2006). 'The Evolution of Top Incomes: A Historical and International Perspective', *American Economic Review, Papers and Proceedings*, 96(2): 200-205.

Piketty, T. and N. Qian (2006). 'Income Inequality and Progressive Income Taxation in China and India', 1986-2015, Cepr Discussion Papers 5703.

Piketty, T., G. Postel-Vinay and J. Rosenthal (2006). 'Wealth Concentration in a Developing Economy: Paris and France, 1807-1994', *American Economic Review*, 96(1): 236-256.

Riihelä, M., R. Sullström and M. Tuomala (2005). 'Trends in Top Income Shares in Finland, VATT Discussion Paper 371, Government Institute for Economic Reseach, Helsinki.

Roine, J. and D. Waldenström (2006). 'The Evolution of Top Incomes in an Egalitarian Society: Sweden 1903-2004', SSE/EFI Working Paper Series in Economics and Finance n. 625.

Saez, E. and M. Veall, M. (2005). 'The Evolution of Top Incomes in Northern America: Lessons from Canadian Evidence', *American Economic Review*, 95(3): 831-849. Longer version in A.B. Atkinson and T. Piketty, 2007, op. cit.

Salverda, W. and A. B. Atkinson (2007). 'Top Incomes in the Netherlands over the Twentieth Century', in A.B. Atkinson and T. Piketty, 2007, op. cit.

Shorrocks, A. (1973). 'Aspects of the Distribution of Personal Wealth', London School of Economics PhD Dissertation.

Simon, H. (1955). 'On a Class of Skew Distributions', *Biometrika*, 42: 425-440.

Simon, H. (1957). 'The Compensation of Executives', *Sociometry*, 20: 32-35.

Stamp, J. (1914). 'A New Illustration of Pareto's Law', *Journal of the Royal Statistical Society*, 77: 200-204.

Stamp. J. (1936). 'The Influence of the Price Level on the Higher Incomes', *Journal of the Royal Statistical Society*, 99: 627-673.

Stiglitz, J. (1969). 'Distribution of Income and Wealth among Individuals', *Econometrica*, 37: 382-397.

Wold, H. and T. Whittle (1957). 'A Model Explaining the Pareto Distribution of Wealth', *Econometrica*, 25: 591-595.

CHAPTER 2

SPAIN 1933-2004

Abstract

This chapter presents series on top shares of income and wealth in Spain over the 20th century using personal income and wealth tax return statistics. Top income shares are highest in the 1930s, fall sharply during the first two decades of the Franco dictatorship, and have increased slightly since the 1960s, and especially since the mid-1990s. The top 0.01% income share in Spain estimated from income tax data is comparable to estimates for the United States and France over the period 1933-1971. Those findings, along with a careful analysis of all published tax statistics, suggest that income tax evasion and avoidance among top income earners in Spain before 1980 was much less prevalent than previously thought. Wealth concentration has been about stable from 1982 to 2004 as surging real estate prices have benefited the middle class and compensated for a slight increase in financial wealth concentration in the 1990s. We use our wealth series and a simple conceptual model to analyze the effects of the wealth tax exemption of stocks for owners-managers introduced in 1994. We show that the reform induced substantial shifting from the taxable to the tax exempt status. This shifting has eroded the wealth tax base substantially and hence the tax exemption has generated large efficiency costs.

JEL classification: D3, H2, N3, O1

2.1. Introduction

This chapter is focused on the analysis of income and wealth concentration in Spain between 1933 and 2004. Spain is an interesting country to analyze on several grounds. First, there are very few studies on the evolution of inequality in Spain from a historical perspective. A number of studies have analyzed the evolution of income, earnings and expenditure inequality over the last three decades using survey data. Research has also been done using income tax data for recent years.[1] Survey-based studies point to a reduction in income or expenditure inequality in the 1970s followed by relative stability in the 1980s and 1990s, while tax-based results display a worsening in the distribution of income in 1982-1991 and 1995-1998. Garde, Ruiz-Huerta, and Martínez, 1995 provide a survey of the literature until 1995.[2] More recently, Prados de la Escosura, 2006a, 2007b has constructed long historical series on income inequality such as ratios of GDP per capita to low skill wages or average wages, macro-based Gini coefficients and industry wage differentials. Those estimates are not based on micro-data but offer the best evidence to date on inequality trends in Spain from a historical perspective. Therefore, our study can be seen as the first serious attempt at compiling systematic and long run series of income concentration using primarily individual tax statistics, a source that has not been fully exploited by previous studies. It is also important to note that our series measure only top income (or wealth) concentration and hence are silent about changes in the lower and middle part of the distribution. As a result, our series can very well follow different patterns than broader measures of inequality such as Gini

---

[1] Those studies, which include Castañer, 1991, Lasheras et al., 1993, Ayala and Onrubia, 2001, and Rodríguez and Salas, 2006, focus primarily on the redistributive power of the income tax. They estimate global inequality indices such as Gini before and after taxes and do not specifically focus on top income groups as we do here.

[2] For key studies on income inequality in Spain over the last decades, see Alcaide, 1967, 1974, 1999, Alcaide and Alcaide, 1974, 1977, 1983, Alvarez et al., 1996, Ayala and Onrubia, 2001, Ayala and Sastre, 2005, Ayala et al., 1993, Bosch et al., 1989, Budría and Díaz-Giménez, 2007, Cordero et al., 1988, Del Río and Ruiz-Castillo, 2001a,b, Escribano, 1990, Febrer and Mora, 2005, Goerlich and Mas, 2001, 2004, Gradín, 2000, 2002, Martín-Guzmán et al., 1996, Oliver I

coefficients or macro-based estimates, an important point we will emphasize throughout.

Second, up to the 1950s, Spain was still largely an agricultural economy with a GDP per capita around $4,000 (in today dollars) similar to developing countries such as Pakistan or Egypt today.[3] Indeed, because of the civil war shock and the poor economic performance during the first two decades of the Franco dictatorship, Spain GDP per capita did not reach the peak of 1929 before 1951. Starting in the 1950s and following economic liberalization and openness to trade, economic growth resumed at a very quick pace. Today, Spain's GDP per capita is only about 20% lower than the GDP per capita of the largest western European economies such as France, Germany, or the United Kingdom. Therefore, it is quite interesting to analyze income concentration during the stagnation years and during the economic boom starting in the late 1950s to re-assess the link between economic development and income concentration.

Third, Spain has undergone dramatic political changes since the 1930s. Spain was a republic from 1931 to 1939. A progressive government first ran the republic from 1931 to 1933, followed by a conservative government from 1933 to 1935, when some reforms of the previous years were abandoned. The reformist parties returned to power in 1935; however, the division between the advocates of the democratic changes and those supporting a revolutionary process became evident soon. A military coup lead by General Franco, followed by a three year long civil war, transformed Spain into a dictatorship from 1939 till the death of Franco in 1975. Since then, Spain has returned to democracy and was run from 1982 to 1996 by the Socialist party, which tried to implement progressive policies such as the development of progressive income and wealth

---

Alonso et al. 2001, Pascual and Sarabia, 2004, Ruiz-Castillo, 1987, 1998, Ruiz-Castillo and Sastre, 1999. A summary of the key findings can be found in the appendix to this chapter.

[3] Prados de la Escosura, 2003, 2006b, 2007a has constructed historical GDP and growth series for Spain. He emphasizes that, before the economic stagnation of the 1930-1952 period, Spain experienced significant economic growth since 1850, in particular from 1850-1883 and in the 1920s. Maddison, 2001, 2003 also reproduces those historical series of real GDP per capita in Spain in his international compilation.

taxation, and of a welfare state with universal health coverage. The study of top income and wealth shares in Spain can cast light on the effects of the political regime and economic policies on inequality and concentration.

Finally, over the last twenty years, Spain has implemented large income and wealth tax reforms among which sharp reductions in top income marginal tax rates. Spain has also modified the wealth tax base by exempting corporate stocks and business assets for corporate and business owners actively involved in managing the business in 1994. Our constructed top income and wealth shares can be used to cast light on the effects of taxation on the economic and tax avoiding behavior of the affluent. We propose a detailed application in the case of the 1994 wealth tax exemption.

Our results show that income concentration was much higher during the 1930s than it is today. The top 0.01% income share estimated from reported incomes was about twice higher in the 1930s than over the last two decades. The top 0.01% income share fell sharply during the first two decades of the Franco dictatorship, and has increased slightly since the 1970s, and especially since the mid-1990s. Interestingly, both the level and the time pattern of the top 0.01% income share in Spain is fairly close to comparable estimates for the United States (Piketty and Saez, 2003) and France (Piketty, 2001, 2003) over the period 1933-1971, especially the post-World War II decades. Those findings, along with a careful analysis of all published tax statistics as well as a re-evaluation of previous academic work on income tax evasion in Spain, lead us to conclude that income tax evasion and avoidance in Spain before 1980 was much less prevalent than previously thought *at the top of the distribution*. As a result, those income tax statistics are a valuable primary data source for analysing income concentration.

Over the last two decades, top income shares have increased significantly due to an increase in top salaries and a surge in realized capital gains. The gains, however, have been concentrated in the top percentile (and especially the top fractiles within the top percentile) with little changes in income shares of upper income groups below the top percentile. Financial wealth concentration has also

increased in the 1990s due to a surge in stock prices, which are held disproportionately by the wealthy. However, real estate prices have increased sharply as well. As real estate wealth is less concentrated than financial wealth, on net, top wealth shares (including both financial and real estate wealth) have declined slightly during the period 1982-2002.

The data show that the wealth tax exemption of stocks for owner-managers since 1994 has gradually and substantially eroded the wealth tax base, especially at the very top: by 2002, the top 0.01% wealth holders could exempt about 40% of their wealth because of this exemption. We develop a simple conceptual model to explain this phenomenon, which we estimate using our wealth series. Our empirical results show evidence of very strong shifting effects whereby wealthy business owners were able to re-organize their business ownership and activities in order to take advantage of the reform. This suggests that this tax exemption both reduced the redistributive power of the progressive wealth tax and created substantial deadweight burden as business owners were taking costly steps to qualify for the exemption. The case study of the wealth tax exemption illustrates how our series can be used to cast light on the evaluation of tax policy reforms.

The chapter is organized as follows. Section 2.2 describes our data sources, outlines our estimation methods, and discusses the issue of income tax evasion in Spain. In Section 2.3 we present and analyze the trends in top income shares since 1933 as well as the composition of top incomes since 1981. Section 2.4 focuses on top wealth shares and composition since 1982. Section 2.5 uses the wealth series to analyze the efficiency costs of the wealth tax exemption of 1994. Finally, Section 2.6 offers a brief conclusion. The complete details on our data and methods, as well as the complete sets of results are presented in the Appendix to Chapter 2.

2.2. Data, Methodological Issues, and Context

2.2.1. Data and Series Construction

Our estimates are from personal income and wealth tax return statistics compiled by the Spanish fiscal administration for a number of years from 1933 to 1971 and annually from 1981 on. The statistical data presented are much more detailed for the 1981-2004 period than for the older period. Because the received wisdom is that the individual income tax was poorly enforced, especially in the pre-1981 period, we will discuss in great detail this issue in Section 2.2.2 and throughout the text in Section 2.3. Complete details on the methodology are provided in the appendix to this chapter.

Before 1981, because of very high exemption levels, only a very small fraction of individuals had to file individual tax returns and therefore, by necessity, we must restrict our analysis to the top 0.1% of the income distribution (and for 1933-1949 even the top 0.01%). From 1981 on, we can analyze the top 10% of the income distribution. Spain has adopted an annual personal wealth tax since 1978. Detailed statistics on the 'new' income and wealth tax have started to be published in 1981 and 1982 respectively.[4] The progressive wealth tax has high exemption levels and only the top 2% or 3% wealthiest individuals file wealth tax returns. Thus, we limit our analysis of wealth concentration to the top 1% and above, and for the period 1982 to 2004. For 1981 to the present, estimates are based on Spain excluding two autonomous regions: Pais Vasco and Navarra, because they manage the income tax directly and hence are excluded from the statistics. Those two regions represent about 10% of Spain in terms of population and income. From 1933 to 1935, estimates are based on all Spain; Navarra is excluded since 1937 and Alava (one of the three provinces of the Pais Vasco) since 1943.

Our top groups are defined relative to the total number of adults (aged 20 and above) from the Spanish census (not the number of tax returns actually filed). For example, in 2004, there are 30,718,000 adults in Spain (excluding Pais Vasco and Navarra) and hence the top 1% represents the top 307,180 tax filers, etc. The Spanish income tax is individually based since 1988 (although joint

filing remains possible, it is always advantageous to file separately when both spouses have incomes). Before 1988, the Spanish income tax was family based. We correct our estimates for 1981-1987 using the micro-data (which allow to compute both family and individual income after the reform) in order to account for this change in law.[5]

We define income as gross income before all deductions and including all income items reported on personal tax returns: salaries and pensions, self-employment and unincorporated business net income, dividends, interest, other investment income and other smaller income items. Realized capital gains are also included in the tax base since 1979 (but were excluded from the base in the earlier period). In order to create comparable series before and after 1979, we also estimate series excluding capital gains for the period 1981-2004. Our income definition is before personal income taxes and personal payroll taxes but after employers' payroll taxes and corporate income taxes.

The wealth tax is a progressive tax on the sum of all individual wealth components net of debts with a significant top rate of 2.5% in the top bracket for very large wealth holdings.[6] In general, real estate wealth is not taxed according to its market value but according to its registry value ("catastro") for property tax purposes. Market prices are about 2 to 3 times as high as registry value on average. Real estate wealth is a very large component of wealth in Spain. Therefore, we use two definitions of wealth, one including real estate wealth evaluated at market prices and one excluding real estate wealth (and excluding also mortgage debt on the passive side) which we call financial wealth. Total wealth is clearly a better measure of wealth but is not directly measured in the wealth tax statistics and hence requires making large adjustments. Financial

---

[4] The official publication exists since 1979 for the income tax and since 1981 for the wealth tax. However, the statistical quality of the data for the first years is defective with obvious and large inconsistencies which make the data non usable.

[5] The old income tax was based on individual income from 1933 to 1939 and based on family income from 1940 on. We do not correct estimates for the 1940-1971 period because, at the very top of the distribution, we expect spouses' incomes to be small during that period when very few married women worked.

[6] The wealth tax has always been individually based and not family based.

wealth is a more narrow definition of wealth but it is better measured in tax statistics.

Our main data consist of tables displaying the number of tax returns, the amounts reported, and the income or wealth composition for a large number of income brackets. As the top tail of the income distribution is very well approximated by Pareto distributions, we can use simple parametric interpolation methods to estimate the thresholds and average income levels for each fractile. This method follows the classical study by Kuznets, 1953 and has been used in these chapters as well as in most of the top income studies presented in Atkinson and Piketty, 2007. In the case of Spain, a very large cross-section of individual micro tax data over sampling high incomes is available for year 2002. A 2 percent panel of tax returns is also available from 1982 to 1998. Therefore, we use the micro data to check the validity of our estimations based on published tax statistics. We find that our tabulations based estimates are almost always very close (within 2-5 percent) to the micro-data based estimates, giving us confidence that the errors due to interpolation are fairly modest.[7]

In order to estimate shares of income, we need to divide the income amounts accruing to each fractile by an estimate of total personal income defined ideally as total personal income reported on income tax returns had everybody been required to file a tax return. Because only a fraction of individuals file a tax return (especially in the pre-1979 era), this total income denominator cannot be estimated using income tax statistics and needs to be estimated using National Accounts[8] and the GDP series created by Prados de la Escosura, 2003 for the pre-1979 period. For the recent period 1981-2004, we approximate the ideal income denominator as the sum of (1) total wages and salaries (net of social security contributions) from National Accounts, (2) 50% of Social Transfers from National Accounts (as pensions, which represent about

---

[7] We also use the micro-data to produce estimates on top wage income shares as the micro-data allow us to rank tax filers by size of wages and salaries.

[8] Using tax returns to compute the level of top incomes and national accounts to compute the total income denominator dates from the famous Kuznets' study, 1953 on American inequality. This method is also used in most of the studies compiled in Atkinson and Piketty, 2007.

half of such transfers, are taxed under the income tax), (3) 66.6% of unincorporated business income from National Accounts (as we estimate that about 1/3 of such business income is from the informal sector and hence escapes taxation), (4) all capital income reported on tax returns (as capital income is very concentrated, non-filers receive a negligible fraction of capital income[9]). Our denominator for the 1981-2004 period is around 66% of Spanish GDP (excluding Pais Vasco and Navarra) with small fluctuations across years, which is comparable to other studies in Atkinson and Piketty, 2007. For the pre-1979 period, because there are no detailed personal income series in the National Accounts series constructed by Prados de la Escosura, we define our denominator as 66% of GDP.[10] We proceed similarly to compute wealth shares. In that case, we use estimates of aggregate financial net wealth and real estate wealth from the Bank of Spain.

Table 2.1.A gives thresholds and average incomes for a selection of fractiles for Spain in 2004 including capital gains. Table 2.1B refers to income excluding capital gains in the same year. As just mentioned, the average income is estimated primarily from National Accounts and hence is largely independent of our tax statistics[11] and hence not biased downwards because of tax evasion or avoidance.

After analyzing the top share data, we turn to the composition of income and wealth. Using published information and a simple linear interpolation method, we decompose the amount of income for each fractile into employment income, entrepreneurial income (self-employment and small

---

[9] For example, in 2002, the top 10% income earners (representing about one fifth of all tax filers as only about half of adults file taxes) obtained 65% of total capital income reported on tax returns. Capital income in personal income in National Accounts is substantially different from capital income on tax returns because of imputed rents of homeowners, imputed interest to bank account holders, returns on (non-taxable) pension funds, etc. That is why we use capital income from tax returns to define our denominator. See e.g. Park 2000, for a comprehensive comparison in the case of the United States where over 90% of adults file tax returns.

[10] We take into account the exclusion of Navarra since 1937 and that of Alava since 1943.

[11] It is important to note that average incomes are low because they include a large number of non working adults (such as non working wives or students) with either no or very small individual incomes who rely on other family members' income.

business income), capital income, and capital gains (we also check the accuracy of our estimation using the micro-tax data for the years when the micro-data is available). We divide wealth into real estate (net of mortgage debt), fixed claim assets, corporate stocks, and other components (net of non mortgage debts).

2.2.2 The Issue of Tax Avoidance and Evasion

Income tax data have hardly been used before to study income concentration, especially prior to 1979, because there is a widely held view that income tax evasion in Spain was very high, and that consequently, the income tax data vastly under-estimate actual incomes.[12] A careful analysis of the income tax statistics shows that evasion and avoidance in Spain *at the very top of the distribution* during the first decades of existence of the tax was most likely not significantly higher than it was in other countries such as the United States or France. It is therefore critical to understand the roots of this widely held view, which is based on two main arguments.

First, very few individuals were paying income tax and the individual income tax was raising a very small amount of revenue relative to GDP. Second, the administration did not have the means to enforce the income tax, especially when the exemption thresholds were significantly reduced in the 1960s, and when tax filers could very easily exaggerate their deductions to avoid the tax.

The first argument is factually true as only about 1,500 individuals paid taxes in 1933 (about 0.01% of all adults), and throughout the 1950s and 1960s the number of taxpayers rarely exceeded 40,000 (about 0.2% of all adults). Combined with relatively low tax rates (except at the very top brackets), it is therefore not surprising that the income tax was only raising between 0.03% of

---

[12] Comín, 1994 and Comín and Zafra Oteyza, 1994 provide a historical account on the issues of fiscal fraud and tax amnesties over the last century in Spain; Díaz Fuentes, 1994 focuses on the period 1940-1990. For the view that income tax evasion was very high in the pre-1979 period, see Breña Cruz et al. 1974, Castillo Lopez, 1992, Instituto de Estudios Fiscales, 1973, Martí Basterrechea, 1974.

GDP in 1933 and 0.22% of GDP in 1978.[13] However, extremely high exemption levels can very well explain such facts even in the absence of tax evasion. Indeed, in 1933, the filing threshold was 100,000 Pesetas, that is, 66 times the average income per adult (equal to around 1,500 Pesetas based on our denominator estimation described in Section 2.2.1).[14] Our series will show that income concentration based on those tax statistics was very high in the 1930s (about twice as high as in recent decades), and actually not much lower than levels estimated for the United States or France. Therefore, there is no reason to believe that the number of filers and income reported at the very top are unreasonably low.

The second argument that enforcement was poor also needs to be qualified. It is undoubtedly true that the 1964-1967 income tax reform that eliminated the high exemption levels failed to transform the income tax into a mass tax as the fiscal administration kept using de facto high exemption levels and did not try to make taxpayers with incomes below 200,000 or even 300,000 Pesetas pay the tax (Martí Basterrechea, 1974).

However, there are three main reasons to believe that enforcement *for very top taxpayers* remained acceptable under the old income tax for most of the period for which we have data. First, historically, early progressive income tax systems always use very high exemption levels and therefore only a very small fraction of the population at the top was liable for the tax. The rationale for using income taxes on the very rich only is precisely because, at the early stages of economic development with substantial economic activity taking place in small businesses with no verifiable accounts, it is much easier to enforce a tax on a small number of easily identifiable individuals. The rich are identifiable because they are well known in each locality and they derive their incomes from large and modern businesses with verifiable accounts, or from highly paid (and

---

[13] We report in the appendix to this chapter, Table 2.G, the revenue (as a share of GDP) of each tax source in Spain between 1930 and 2005, based on Comín, 1985 and Instituto de Estudios Fiscales-BADESPE.

verifiable) salaried positions, or property income from publicly known assets (such as large land estates with regular rental income).[15] Therefore, the small size of the Spanish income tax is due to the fact that it was a tax limited to the very rich and should not be interpreted as the consequence of poor enforcement.[16] Indeed, official statistics show that the administration was able to audit a very significant fraction of individual tax returns in the pre-1960 period. The audit rates were on average around 10-20% and hence significantly higher than today (see Table 2.F.2 and Table 2.F.3 in the appendix to this chapter). It is likely that audit rates were even higher for the top 2,000 income earners in the top 0.01%.

Second, when the progressive income tax was started, Spain had already set in place schedule income taxes on wages and salaries, rents, corporate profits, business profits, and capital income.[17] As a result, most of the income components of the rich were already being taxed through those schedule taxes, which offered an alternative way to verify the incomes of the rich.[18]

---

[14] For further comparisons, in 1933, the annual salary of a qualified officer to the government statistics bureau was 4,000 pesetas, while a high-ranking postal service employee received 11,000 pesetas per year (*Gaceta de Madrid*, 12/31/1933).

[15] Seligman (1911) is the classical reference on the history of early income taxes. The studies gathered in Atkinson and Piketty, 2007 all show that the early income taxes in Western countries were limited to a small number of tax filers. All those studies show that income concentration measures derived from those early income tax statistics are always very high suggesting that enforcement of the income tax on the rich was acceptable. The case of Japan, which started an income tax in 1887 shows that a pre-industrial economy significantly less advanced than Spain in the 1930s could successfully enforce a tax on the rich (Moriguchi and Saez, 2007). The Spanish case seems to follow this general pattern as well.

[16] In the discussions leading to the creation of the income tax during 1932, it was recognized that enforcement would be acceptable only if the exemption threshold was chosen high enough. The parliamentary debates show that, although some congressmen considered that the exemption level was too high, it was recognized that the tax authority lacked both the managerial capabilities and the necessary human resources to administer a broader income tax (Vallejo Pousada, 1995). Most Western countries broadened their income tax during extraordinary events such as the World Wars, and this required a very large administrative effort.

[17] The time series of the revenue raised by each of those schedule taxes are reported in the appendix to this chapter, Table 2.G.

[18] Crosschecking of income tax returns with the schedule income tax returns did take place, as stated, for instance, in Albiñana et al., 1974 and Gota Losada, 1966. Starting in 1933, the administration prepared personal listings with information from all schedule taxes in order to identify individuals with very high incomes. Along the same lines, in 1940 the government launched the 'Registro de Rentas y Patrimonios' (Registry of Income and Wealth) in which information from personal wealth was gathered with the aim of assisting income tax audits. Additionally, the high level of land ownership concentration allowed local tax authorities to

Furthermore, like France, Spain also adopted and used presumptive income taxation based on external signs of wealth (such as ownership of cars, planes, or yachts, or employment of domestic workers) in cases where the administration suspected tax evasion or avoidance.[19]

Third, the administration also threatened to make public the list of taxpayers in order to shame prominent tax evaders (Albiñana, 1969a). Such lists were published for tax years 1933, 1934 and 1935 in the official state bulletin. Those lists show that virtually all the largest aristocratic real estate owners among the *Grandes de España* (the highest nobility rank) were taxpayers, demonstrating that the traditional aristocracy could not evade entirely the income tax.[20]

Contemporaneous observers (Albiñana, 1969a,b, Gota Losada, 1970) suggest that enforcement deteriorated during the last decade of Franco's regime.[21] This view is based primarily on the fact that the 1964-1967 reform virtually eliminated exemptions and transformed the income tax in a mass tax,

---

identify large estate proprietors and rents for rural rents tax purposes (see, for instance, Carrión, 1972, 1973, and Alvarez Rey, 2007).

[19] According to Albiñana et al., 1974, Castillo Lopez, 1992 and Martí Basterrechea, 1974, extraordinary deductions were among the main sources for tax evasion after the reform of 1964-1967. Tax statistics report the amount of extraordinary deductions, which are only around 5% of income in the late 1950s. Our series are estimated based on income before deductions and thus are not biased downwards due to excessive deductions.

[20] In 1932, the list of all the *Grandes de España* (who were part of the land reform expropriation) was published in the *Gaceta de Madrid* (12/16/1932). Carrión, 1973 provides details of the land area owned by the largest estate proprietors among them. By comparing these lists and the income tax lists it turns out that 100% of owners of more than 3,000 hectares were income taxpayers (36 people). If proprietors of more than 1,000 hectares are considered (65 people), 92% are present in the tax lists. They are listed in Appendix 2.H. It should be pointed out that this does not imply that the missing 8% were necessarily evaders; in most cases their ascendants paid the income tax, which reflects different timing between land ownership transfers and nobility title transfers (due, for example, to male preference). Additionally, close inspection of the income tax lists shows that over one tenth of all taxpayers in 1933-1935 were either *Grandes* or close relatives.

[21] The economic historian Francisco Comín reported to us a well-known story: during the final period of the dictatorship, the commission in charge of redesigning the income tax asked the fiscal authorities for the list of top taxpayers. Strikingly, the top of list consisted in famous bullfighters and show business stars rather than bankers or large business owners. Unfortunately, there does not seem to be any written reference on this and it is possible that the story has been widely exaggerated as it was told and re-told overtime. As just discussed, the published lists of taxpayers in 1933-1935 provide hard evidence that goes in the opposite direction.

linked to schedule taxes. In practice however, the income tax remained a tax on very high incomes only as the mass tax was not enforced. Therefore, a much more accurate statement is that the Spanish income tax could not become a mass tax (as this happened in most Western countries around the mid-20th century) without a significant administrative effort that the Franco regime never seriously attempted, hence giving the impression that the tax was primitive and poorly enforced relative to other countries.[22] However, this does not mean that the Spanish income tax was not properly enforced on very top incomes, and most of the hard evidence that we have been able to gather points toward enforcement levels and techniques *for the very top of the distribution*, that were comparable to those used in other countries.

2.3. Top Income Shares and Composition

Figure 2.1 displays the average personal income per adult estimated from National Accounts that is used as the denominator for our top income shares estimations along with the price index for the period 1932 to 2004. As discussed in the introduction and as shown in Prados de la Escosura, 2003, 2006b, 2007a, real economic growth (per capita) was negative from 1930 to the early 1950s. Rapid economic growth started in the 1950s. Growth was fastest in the 1960s. Economic growth stalled during the transition period to democracy and the first years of the democracy from 1975 to 1985, and then resumed again.

Figure 2.2 displays the top 0.01% income share from 1933 to 2004. The break from 1971 to 1981 denotes the change from the old income tax to the new income tax. Four important findings emerge from this figure.

First, the highest income concentration occurs in the 1930s. The top 0.01% share was around 1.5% and about twice as high as in the recent period. This finding is not surprising as Spain was a country with low average income

---

[22] Fiscal inspectors were highly regarded from a social point of view, and their work should not be questioned. Many of them have extensively written on income tax issues, as Albiñana, 1969a,b, Albiñana et al., 1974, Breña Cruz et al., 1974, Gota Losada, 1966, 1970, Martí Basterrachea, 1974, and many others.

and with high concentration of wealth and, in particular, land ownership.[23] However, lack of any statistics on income or wealth concentration made this claim impossible to establish rigorously. The use of the old income tax statistics demonstrates that Spanish income concentration was indeed much higher in the pre-civil war period than it is today.[24] Interestingly, tax statistics providing the composition of reported top incomes show that taxpayers in 1941 (representing the top 0.03%) obtained about 20% of their income from returns on real estate (rents), 35% from returns on financial assets, 25% from non farm business income, 5% from farm business income, and about 15% from employment income (see Table 2.H in the appendix to this chapter). This suggests that, at the beginning of the Franco regime, only a minority of top income earners were passive landowners deriving all their income from rents (the traditional image of the agrarian aristocracy of the *Grandes de España*, mainly concentrated in the central and southern areas of the country). Top income earners were much more likely to be also owners of financial assets and non-farm businesses.

Second, the old income tax statistics display a large decrease in the top 0.01% income share from 1.4% 1941 to 0.6% in the early 1950s, during the first decade of the Franco dictatorship. We have argued in Section 2.2.2 that there is no compelling hard evidence suggesting a deterioration of enforcement at the very top of the distribution and, therefore, we conclude that the poor economic management and the turn toward economic autarchy did not benefit top incomes and actually reduced income concentration in Spain. By 1953, the composition of top incomes had changed significantly relative to 1941: the fraction of non-farm business income has dropped from 26% to 9% while the fraction of farm business income has increased from less than 5% to over

---

[23] The land reform of the Second Republic was not successful in redistributing large land estates and was eventually abandoned (see Malefakis, 1971 and Carrión, 1973).

[24] If tax evasion at the very top was higher in the 1930s than today, then this reinforces our finding that income concentration was higher in the 1930s. However, as we argued above, we did not find compelling arguments showing that enforcement at the very top was particularly poor in the 1930s.

20%.[25] This suggests that the closing of the Spanish economy in the 1940s lead to a sharp reduction in successful non-farm business enterprises and as a result, non-farm business owners were replaced by large farm business owners at the top of the distribution.

Third, top income concentration estimated with income tax statistics remains around 0.6% from 1953 to 1971, the last year for which old income tax statistics are available, suggesting that the high economic growth starting the 1950s did not bring a significant change in income concentration. Interestingly, the level of income concentration measured with the new income tax statistics in the early 1980s is quite similar to the level of 1971. Assuming again a constant level of enforcement from 1971 to 1981, this suggests that the transition from dictatorship to democracy was not associated with a significant change in income concentration. Comparing the change in income composition in the top 0.05% from 1961 to 1981 is interesting: in the capital income category, there is a dramatic shift away from real estate to financial assets and in the business income category, there is a dramatic shift away from farm income toward non farm business income. This shows that the very fast economic expansion from 1961 to 1981 made traditional land and farm owners fall behind other business owners at the top of the distribution. Our top income share series show, however, that such a shift took place with no change in overall income concentration.

Finally, Figure 2.2 shows that there are fluctuations in very top income concentration since 1981 with sharp increases in the late 1980s and the late 1990s. At the peak of 2000, top 0.01% income earners captured 0.86% of total income while they earned only 0.53% of total income in 1993.

In light of our discussion in the introduction about the specific economic and political trajectory of the Spanish economy relative to other western countries analyzed previously, it is interesting to compare the trends in income concentration between Spain and other countries. Figure 2.3 displays the top

---

[25] The share of capital income from financial assets drops slightly from 36% to 29% and the share of labor income increases slightly from 13% to 19% from 1941 to 1953.

0.01% income share in Spain, France (from Piketty, 2001 and Landais, 2007), and the United States (Piketty and Saez, 2003). Two points are worth noting.

First, Spain starts with a level of income concentration in the 1930s that is slightly lower than France or the United States. However, income concentration in France and the United States falls more sharply than in Spain during World War II. Therefore, from the mid-1940s to 1971, income concentration across the three countries is actually strikingly close.[26] This shows that the number of high-income taxpayers is not inherently too low in Spain relative to other countries and supports our claim that enforcement at the top of the distribution was plausibly comparable across Spain and other Western countries. Second, although income concentration has increased in Spain in recent decades, this increase is very small relative to the surge experienced by top incomes in the United States. Thus, the Spanish experience is actually closer to the one of continental Europe countries such as France than Anglo-Saxon countries such as the United States.[27]

Detailed analysis since 1981

The tax statistics since 1981 are much more detailed than the old income tax statistics. Thus, we can study larger income groups such as the top 10% since 1981.

Figure 2.4 displays top income shares for three groups within the top decile: the bottom half of the top decile (top 10-5%), the next 4% (top 5-1%), and the top percentile. In contrast to Figure 2.2, we now include realized capital

---

[26] The series are estimated using similar methodologies across countries although there are of course differences in the details. However, it is important to note that the denominator (as a fraction of GDP) is comparable across countries and around 60% to 65%. It is actually slightly higher in Spain (66% of GDP) than in France (around 60% of GDP on average according to Piketty, 2001).

[27] The studies gathered in Atkinson and Piketty, 2007 show that Anglo-Saxon countries experienced a dramatic increase in income concentration in recent decades while continental European countries experiences either no or small increases in income concentration.

gains in the top income shares.[28] The figure shows that those top income shares have evolved quite differently: the top 1% increased very significantly from 7.7% in 1981 up to 10.2% in 2004. In contrast, the top 10-5%, and the top 5-1% shares actually slightly declined from 1981 and in 2004, with very modest fluctuations throughout the period. Therefore the increase in income concentration, which took place in Spain since 1981, has been a phenomenon concentrated within the top 1% of the distribution. This result could not have been derived from survey data, which have too small samples and top coding issues to reliably study the top 1%.

Figure 2.5 illustrates this concentration phenomenon further by splitting the top 1% into three groups: the top 1-0.5%, the top 0.5-0.1%, and the top 0.1%. As in Figure 2.4, the higher the fractile, the higher the increase in the share from 1981 to 2004: the top 1-0.5% increases modestly from 2.7 to 2.9 percent while the top 0.1% increases sharply by over 80% from 2 to 3.6 percent.

In order to understand the mechanisms behind this increase in income concentration at the top, we next turn to the analysis of the composition of top incomes.

Figure 2.6 displays the share and composition of the top 0.1% income fractile from 1981 to 2004. The figure shows that the increase in the top 0.1% income share is due solely to two components: realized capital gains and wage income. The remaining two components: business income and capital income have stayed about constant. The figure shows also that the 1986-1988 spike was primarily a capital gains phenomenon. In contrast, the wage income increase has been a slow but persistent effect, which has taken place throughout the full period. Capital gains tend to be volatile from year to year as they follow closely the large swings of the stock market. Indeed, Figure 2.7 displays the total real amounts of capital gains reported by the top 1% income earners along with the Madrid SE stock index from Global Financial data on a log scale from 1981 to 2004. The two series are strikingly correlated. Therefore, the capital gain

---

[28] To a large extent, realized capital gains were not taxed (and hence not reported) under the old income tax. Therefore, for comparison purposes, we also excluded realized capital gains in

component reflects largely stock market fluctuations. High-income individuals own a disproportionate fraction of corporate stock in the economy. When stock prices increase sharply as in the late 1980s or late 1990s, high incomes get a disproportionate share of the corresponding capital gains, explaining why top income shares tend to follow the stock market cycles.

Figure 2.8 reports series of wage concentration (based on micro tax statistics) for the period 1982-2002. It is important to keep in mind that those series capture only wage income concentration and hence are silent about changes in business and capital income concentration. The wage series for 1982-2002 based on tax return data show that there has been a steady increase in wage concentration during the last two decades. This increase has taken place primarily within the top 1%, which has increased significantly from 4.3% in 1982 to 6.5% in 2002.

2.4. Top Wealth Shares and Composition

In order to cast light on the capital income component of the income concentration series we discussed, we now turn to top wealth shares estimated from the wealth tax statistics. Figure 2.9 displays the evolution of average wealth (total net worth of the household sector divided by the total number of individuals aged 20 and above) and its composition from 1981 to 2004. Those average wealth statistics come solely from National Accounts and are hence fully independent from wealth tax statistics.

Three elements should be noted. First, wealth has increased very quickly during that period, substantially faster than average income: average wealth in 2004 is 2.4 times higher than in 1982 while average income in 2004 is only 1.5 times higher than in 1982. Second, real estate is an extremely large fraction of total wealth. It represents about 80% of total wealth throughout the period. Third and related, the growth in average wealth has been driven primarily by real

Figures 2.2 and 2.3 for the period 1981-2002.

estate price increases, and to a smaller degree by an increase in corporate stock prices. In contrast, fixed claim assets have grown little during the period.

Figure 2.10 displays the composition of wealth in top fractiles of the wealth distribution in 1982 and 1999. As one would expect, the share of real estate is declining and the share of stocks is increasing as we move up the wealth distribution. It is notable that real estate still represents over 60% of wealth for the bottom half of the top percentile. Thus, only the very rich hold a substantial share of their wealth in the form of stock holdings. The patterns in 1982 and 1999 are quite similar except that the level of stock ownership is higher across the board in 1999, a year with high stock market prices. Those compositional patterns suggest that an increase in real estate price will benefit relatively less the very top and should therefore reduce the very top wealth shares. In contrast, an increase in stock prices will benefit disproportionately the very rich and should increase the very top wealth shares.

Figure 2.11 displays the top 1% wealth share (net worth including real estate wealth) along with the top 1% financial wealth share (net worth excluding real estate wealth and mortgage debts). Unsurprisingly, the top financial wealth share is larger than the top wealth share because financial wealth is more concentrated than real estate wealth. Top financial wealth concentration is stable around 25% from 1982 to 1990, decreases to about 21% from 1990 to 1995 and then increases again to about 26% by 2004. In contrast the top 1% wealth share including real estate is much more stable and fluctuates within a narrow band between 16 and 18 percent. In contrast to financial wealth, total wealth concentration does not fall from 1990 to 1995 because, as shown on Figure 2.9, real estate wealth also falls in that period, and this advantages top wealth holders. The reverse happens from 1995 to 2004: in contrast to financial wealth, total wealth concentration does not increase because real estate prices increase sharply.

Figure 2.12 decomposes the top 1% total wealth share into three groups: the top 0.1%, the next 0.4%, and the bottom half of the top percentile. The graph shows that those top wealth groups have experienced different patterns.

The top 0.1% share has fallen substantially from 8% in 1982 to 5% by 2004. In contrast, the top 1-0.5% has increased from 4.3 to 5.2 percent and the top 0.5-0.1% has slightly decreased from 7.6 to 7.2 percent. Those differential patterns are due primarily to composition effects: the bottom groups in the top percentile hold mostly real estate and have benefited from the surge in real estate prices. In contrast, the top 0.1% has been hit by the sharp real estate prices increases from 1986 to 1991 (see Figure 2.9). The improvement in real estate prices from 1997 to 2004 has been compensated by a surge in stock prices leading to an overall flat pattern for the top 0.1% wealth share during this period.

Figure 2.13 displays the wealth composition of top 0.1% wealth holders from 1982 to 2004. It shows that the shares of real estate, business assets, and fixed claim assets have been decreasing and that the share of stocks has been increasing but not enough to compensate for the fall in the other components. Therefore, over the last two decades, the dramatic increase in real estate prices has been the primary cause of the reduction in the concentration of wealth in Spain.

In 2002 the Bank of Spain conducted a household wealth survey whose preliminary results are presented in Bover, 2004. It is instructive to compare the wealth reported on wealth tax returns with the wealth reported in the survey. The complete comparison is reported in Table 2.E.3 in the appendix. Three important findings emerge.

First, we find that wealth reported on wealth tax statistics for top income groups such as the top 1% is higher than the wealth reported on the survey by the top 1%, even under the assumption that all the household wealth belongs to the head of household. For example, including real estate, the average top 1% wealth from tax returns is 1.8 million Euros while it is only 1.2 million in the survey. This shows that, in contrast to popular belief, it is not clear that tax evasion for the wealth tax is pervasive as wealthy individuals seem to report more wealth for tax purposes than for the survey purposes.

Second, the total wealth reported in the survey (and especially financial wealth) is substantially lower than the aggregates from National Accounts that

we use as the denominator. For example, the survey reports total wealth of about 2,000 billion Euros while National Accounts report total wealth of about 3,000 billions Euros. This suggests that households are under-reporting their wealth in the survey or that the survey might not have been sampled adequately to reflect a fully representative cross section of Spanish households.

Finally, because the gap in the aggregate between the survey and National Accounts and the gap for top groups between the survey and the wealth tax data are of comparable magnitude, our top wealth shares computed using wealth tax statistics and National Accounts for the denominator are relatively close to the top wealth shares computed internally from the survey (using as denominator total survey wealth).

2.5. The Erosion of the Wealth Tax Base

In 1994, an exemption for business owners substantially involved in the management of their business was introduced in the wealth tax. More precisely, stocks of corporations where the individual owns at least 15%, or the individual and family own at least 20%, and where the individual is substantially engaged in this business activity (getting over 50% of his labor and business income from this activity) is exempted from the wealth tax. The value of those stocks still has to be reported to the fiscal administration and was included in our top wealth share series. The exemption was introduced in December 1993 for the first time, affecting wealth held by the end of 1994 (reported in 1995). Important for the empirical analysis below, the exemption criteria were relaxed for tax year 1995 (when the individual ownership requirement was lowered from 20% to 15%) and in tax year 1997 (when the 20% family ownership criteria was introduced).[29]

2.5.1 Conceptual Model

In principle, the 1994 wealth tax reform could have two effects. First, the tax cut for exempted business might spur business activity in the exempted

sector. We call this effect the supply side effect. Second, the tax cut for exempted business might induce some businesses, which did not originally meet the exemption criteria, to shift to the exempt sector in order to benefit from the tax cut. For example, business owners could increase their share of stock in the company in order to meet the 15% ownership threshold. Alternatively, they might become active managers in their businesses or drop other work activities outside the business. A business owner would be willing to shift to the exempt sector as long as the costs of shifting are less than the tax savings. We call this effect the shifting effect. In this subsection, we construct a simple model to capture those two effects and we propose an empirical application using our constructed wealth series in the following subsection.[30]

We assume that business owners have an objective function of the form $c - h(z)$ where z is pre-tax profits, c is net-of-tax profits, and $h(z)$ is an increasing and convex function representing the costs of earning higher profits. Those costs represent labor input costs (including the labor supply cost of the business owner if he is an active manager) and also capital input costs. The quasi-linear form of the objective function amounts to assuming away income effects or risk aversion effects, which simplifies the derivations and the welfare analysis.[31] Furthermore, we assume that the business owner can pay a cost $q \geq 0$ in order to meet the tax exemption status. Such costs represent for example the costs of increasing the business ownership to 15% or the opportunity costs of dropping outside work activities to meet the labor income requirement. We assume that q is distributed according to a cumulated distribution $P(q)$. A

---

[29] For tax year 2003 (beyond our study), the individual ownership requirement was further reduced from 15% to 5%.

[30] To the best of our knowledge, such a model has not been presented before in the literature on the efficiency costs of taxation. It could be easily applied to other tax settings. For example, in the United States, the issue of shifting business profits from the corporate income tax base to the individual income tax base has received a lot of attention (see e.g., Slemrod, 1995, 1996, Gordon and Slemrod, 2000, Saez, 2004). Such shifting occurs because businesses meeting specific criteria (number of shareholders) can elect to be taxed directly at the individual level.

[31] Including income effects would not change the qualitative nature of our findings but would complicate the presentation, as we would have to introduce compensated elasticities to capture efficiency costs in our formulas. In the case of wealthy business owners who actively work in

fraction $P_0 = P(q = 0)$ of businesses meet those criteria even in the absence of the tax preference. In reality, businesses differ in size, which could be modeled through heterogeneity in the cost function $h(z)$. However, as we consider only linear taxation (which is an approximation to the actual progressive tax system), the distribution of business sizes is irrelevant for the analysis and hence we assume that businesses differ only in q.

We assume that the tax rate on profits z in the taxed sector is τ_0 and that the tax rate in the exempt sector is τ_1, with of course $\tau_1 \le \tau_0$. Note that τ_1 is not necessarily zero as the business also faces corporate and individual income taxes. It is also important to note that we convert the wealth tax rate t into a tax rate τ on profits using the standard formula $\tau = t/r$ where r is the normal annual return on assets. We denote by l the tax status of the business with $l = 0$ denoting the standard taxable status and $l = 1$ the exempt status. The manager solves the following maximization problem:

$$\max_{l,z} z(1 - \tau_l) - h(z) - q \cdot l$$

This maximization problem can be decomposed into two stages. First, conditional on l, z maximizes $z(1 - \tau_l) - h(z)$ which generates the first order condition $1 - \tau_l = h'(z)$. This equation captures the within sector supply side effect, as a decrease in τ_l leads to an increase in z_l with an elasticity $e_l = \left((1 - \tau_l)/z_l\right)\partial z_l/\partial(1 - \tau_l) = h'(z_l)/\left(z_l h''(z_l)\right)$.

Second, the business chooses l. We denote by $V_l = \max_z \left[z(1 - \tau_l) - h(z)\right]$ the indirect utility in each taxable status $l = 0,1$ (not including the cost q of becoming tax exempt). Therefore, if $q \le V_1 - V_0$, then the exempt status $l = 1$ is optimal, while if $q > V_1 - V_0$, then $l = 0$ is optimal. As a result, a fraction $P^* = P(V_1 - V_0)$ of businesses chooses the exempt status. Using the envelope theorem, we have $\partial V_l/\partial \tau_l = -z_l$. Therefore, $\partial P^*/\partial \tau_0 = p(V_1 - V_0) \cdot z_0$ and

---

their business, it seems plausible to assume that income effects are small (if income effects were large, those business owners would not be working).

$\partial P^* / \partial \tau_1 = -p(V_1 - V_0) \cdot z_1$, where $p(q)$ denotes the density of the distribution $P(q)$. Unsurprisingly, if there are firms on the margin between the tax exempt and taxable status, then increasing the tax τ_0 in the taxable sector generates a shift toward the tax-exempt sector. Conversely, reducing the tax advantage of the exempt sector by increasing τ_1 reduces the number of firms in the tax-exempt sector.

We denote by $T = (1 - P^*) \tau_0 z_0 + P^* \tau_1 z_1$ the total tax revenue and by $W = (1 - P^*) V_0 + \int_0^{V_1 - V_0} (V_1 - q) dP(q)$ the private surplus in the economy. Social surplus is $SW = W + T$. Routine computations show that:

$$\frac{\partial T}{\partial \tau_0} = (1 - P^*) z_0 \left[1 - \frac{\tau_0}{1 - \tau_0} e_0 - \frac{p^*}{1 - P^*} (\tau_0 z_0 - \tau_1 z_1) \right] \qquad (1)$$

$$\frac{\partial T}{\partial \tau_1} = P^* z_1 \left[1 - \frac{\tau_1}{1 - \tau_1} e_1 + \frac{p^*}{P^*} (\tau_0 z_0 - \tau_1 z_1) \right] \qquad (2)$$

The first term (equal to one) inside the square brackets of (1) and (2) represents the mechanical increase in tax revenue absent any behavioral response. The last two terms inside the square brackets represent the loss of tax revenue due to the supply side effect and the shifting effect respectively. The reduction in private surplus due to the tax change is equal to the mechanical tax increase (absent behavioral responses).[32] Therefore, the last two terms represent the net effect on social surplus SW of the tax increase or equivalently (minus) the marginal deadweight burden of increasing taxes. Absent shifting effects $(p^* = 0)$, we obtain the standard Harberger formula showing that the marginal loss in tax revenue (per dollar) is proportional to the supply side elasticity e and the tax rate τ.

If the tax rate τ_0 in the taxable sector is below the Laffer rate maximizing tax revenue (when taking into account only supply side effects) then $\tau_0 z_0 > \tau_1 z_1$.

---

[32] This can be seen directly from the fact that $\partial V_l / \partial \tau_l = -z_l$, which is a direct consequence of the envelope theorem.

Therefore, equation (1) shows that shifting effects increase the marginal deadweight burden of increasing the tax in the taxable sector. In contrast, equation (2) shows that shifting effects decrease the marginal deadweight burden of increasing the tax in the exempt sector. The economic intuition is transparent: increasing the tax differential across the two sectors leads to more shifting: the marginal shifters spend q for a tax saving equal to q, which is pure deadweight burden. Strikingly, in the extreme case where $\tau_1 = 0$,[33] $\partial SW/\partial \tau_1 = p^* \tau_0 z_0 / P^*$: social surplus increases with an increase in τ_1 no matter how large the supply side effect in the tax exempt sector is. Therefore, providing a wealth tax exemption for businesses meeting some specific set of criteria has two opposite effects on social surplus. First, it has a positive effect on social surplus through the standard supply side effect: exempt businesses face lower taxes and hence might expand their economic activity. This effect is measured through the supply side elasticity e. This leads to an increase in business activity and hence reported business wealth in the exempt sector with no effect on the taxable sector. Second, however, the exemption might induce some businesses to shift to the exempt status and waste resources in doing so. This shifting effect leads to an increase in reported business wealth in the exempt sector, which comes at the expense of reported business wealth in the taxable sector. We propose an empirical estimation using our wealth composition series below.

2.5.2 Empirical Estimation

Figure 2.14 displays the composition and share of financial wealth held by the top 0.01% wealth holders. Stocks are now divided into three components: publicly traded stock, taxable closely held stocks, and exempted closely held stock. In 1994, the first year the exemption was introduced, exempted stock represents only about 15% of total closely held stock reported by the top 0.01%. By 2002, the fraction has grown to 77%. Presumably, in 1994,

---

[33] As we discussed above, even though business owners benefiting from the exemption are exempt from the wealth tax, business owners still pay income taxes on the profits so that in reality $\tau_1 > 0$.

individuals did not have time to reorganize substantially their business activity. Therefore, the 15% fraction of closely held stock benefiting from the exemption in 1994 must be close or just slightly above the fraction of closely held stock which would benefit from the exemption absent any behavioral response to the introduction of the exemption.[34] The fraction of business exempt wealth grows enormously from 1994 to 2002, which is consistent either with a very large supply side effect or a significant shifting effect. However, the fraction of taxable closely held stocks shrinks significantly from 1994 to 2002 which strongly suggests that the great increase in tax exempt wealth comes, at least in part, at the expense of taxable wealth through the shifting channel. We use our series to quantify the relative size of each effect.

We propose a simple quantitative analysis using our estimated series and the model described above. Let us assume that, taking the tax or exempt status as fixed, business wealth is given by $z = \bar{z}(1-\tau)^e$ where τ is the total tax rate (including income and wealth taxes) on profits, e is the supply side elasticity, and $\bar{z}$ is potential wealth absent any taxes. We assume that the fraction of businesses in the tax-exempt sector is given by $P = P(\tau_0, \tau_1)$. We use subscript b to denote before reform variables and subscript a to denote after reform variables. Hence P_b is the fraction of businesses meeting the exemption criteria just before the reform and P_a is the fraction of businesses meeting the exemption criteria after the reform. Hence $P_b - P_a$ captures the shifting effect (purged from the supply side effect)

For a given top group (such as the top 1% or the top 0.01%), after the reform, we observe exempt closely held stocks $P_a \bar{z}_a (1-\tau_0)^e$ and non-exempt closely held stock $(1-P_a)\bar{z}_a(1-\tau_1)^e$. Before the reform, we observe only the total closely held stocks held by the top group $P_b \bar{z}_b (1-\tau_0)^e + (1-P_b)\bar{z}_b(1-\tau_0)^e$ as there is no distinction between taxable and exempt stock.

---

[34] Those would be businesses for which the cost of shifting q was zero because the businesses already met the criteria.

We estimate τ_0 and τ_1 as the sum of the income tax on profits and the wealth tax. We assume that the income tax on profits (corporate income tax if the business is incorporated or individual income tax is the business is unincorporated and taxed directly at the individual level) is 30% for the top 1% wealth holders and 40% for top 0.01% holders. We assume that the wealth tax rate (when the business is taxable) is 0.8% of the value of assets for the top 1% and 1.3% for the top 0.01%.[35] We convert wealth tax rates into an implicit tax on profits assuming a return rate on assets equal to 5%. Therefore, the total tax rates on profits for non-exempt businesses are 46% and 66% for the top 1% and top 0.01% respectively. Although there is significant uncertainty about the exact tax rates, they only affect the estimation of e (and not P_a and P_b).

In order to estimate the three key parameters e, P_a and P_b, and the two auxiliary variables $\bar{z}_a$ and $\bar{z}_b$ from the three observed quantities, we need to make two important additional assumptions. First, we assume that the fraction of closely held stocks meeting the exemption criteria before the reform P_b is given by the observed fraction of stocks meeting the exemption the first year the reform is implemented. This assumption is reasonable if businesses do not have time to respond to the tax change in the first year after the reform. In any case, if businesses start responding in the first year, then we will over-estimate P_b, hence under-estimate the shifting effect $P_a - P_b$ and overestimate the supply side elasticity e.[36] In the empirical estimation, we need to take into account the fact that the wealth tax exemption criteria were relaxed in 1995 and in 1997. Therefore, we assume that the growth in the fraction exempt from 1994 to 1995 and from 1996 to 1997 is entirely due to the relaxation of the criteria (and hence that the fraction exempt would have stayed constant absent the relaxation). This

---

[35] Those estimates are based on the tabulated data. The wealth tax rates go from 0.2% in the lowest bracket to 2.5% in the top bracket but the effective tax rates are substantially lower due to numerous exemptions.

[36] A counter argument could be that business owners did not know about the wealth tax exemption in the first year after the reform and hence failed to claim it even in cases where they were fully eligible. This argument is difficult to believe in the case of large wealth holders who use tax accountants to file their taxes. More broadly, the costs of learning about complex

is a very conservative estimation as the fraction exempt grows in every single year from 1994 to 2002. As a result, we assume that the fraction exempt (before the reform) is actually about twice as large as the fraction actually exempt in 1994. This conservative assumption leads to a conservative estimate of the shifting effect.

Second, we assume that, absent any tax change, total closely held stocks (taxable and non-taxable) would have grown at a rate g equal to the growth rate of other financial assets held by the top 1%. In that case, $\bar{z}_a = (1+g) \cdot \bar{z}_b$ where $1+g$ is taken as the ratio of other financial assets held by the top 1% after and before the reform. This is clearly a strong assumption. Using our pre-reform series, we show that it holds as a first approximation in the pre-reform period.[37] Panel A of Table 2.2 presents those key parameters for the top 1% (left panel) and for the top 0.01% (right panel) for various choices for the pre-reform base year and the post-reform year.

With those two assumptions, we can estimate the behavioral parameters e, P_a and P_b, (Panel B in Table 2.2) as well as evaluate the tax and efficiency consequences (Panel C in Table 2.2). Three important results arise from this exercise. First and most important, all the estimates robustly suggest that there is a very large shifting effect: the fraction of businesses benefiting from the exemption jumps from less than 1/3 to about 2/3 for the top 1%. The shifting is even more extreme for the top 0.01% and goes from 37% exempt to over 80% exempt. It is important to reiterate that this represents the pure shifting effect (controlling for the supply side effect).[38] Of course such a large shifting effect is not surprising in light of Figure 2.14 which showed a striking drop in

tax exemptions can be incorporated into the cost q of meeting the exemption criteria and our model and results would go through unchanged.

[37] For example from 1982 to 1993, among the top 1%, the (real) growth of other financial assets was 63% while the growth of closely held stocks was 44%. However from 1987 to 1993, closely held stock (in the top 1%) grew faster (37%) than other financial assets (17%).

[38] Such shifting effects are quite robust to assuming a rate of growth of closely held stock that is slower (absent any tax change) than other financial assets. For example, one would have to assume that closely held assets would have declined by 15% in real terms from 1993 to 2002 to make the shifting effects disappear for the top 1% group, which seems very unrealistic given the growth that closely held stock experienced in the pre-tax reform period from 1982 to 1993.

taxable closely held wealth compensated by an increase in exempt closely held wealth. Second, the estimates for the supply side elasticity are sensitive to the choice of the comparison years and hence cannot be estimated precisely with our series.[39] However, the elasticity estimates are never extremely large and are often around zero (or even negative). This shows that the data series do not display consistent evidence of a very large supply side effect. Third and finally, Panel C shows that the combination of large shifting effects with moderate supply side elasticity implies that the actual tax loss due to the reform is much larger than the predicted tax loss of the reform absent any behavioral response. Even in the case of column (1) where the supply side elasticity e is largest and equal to 0.83, the actual loss in tax revenue from the top 1% wealth holders is larger than the loss in tax revenue assuming no behavioral response. When the supply side elasticity estimate is smaller, the loss in tax revenue with behavioral responses can be three to four times larger than with no behavioral responses. As our theoretical model showed, the difference between actual changes in tax revenue and predicted changes in tax revenue (absent the behavioral response) are a measure of the efficiency costs of the tax change.[40] The last row in Table 2.2 displays such an estimated change in total surplus due to the tax change.

Therefore, our estimates suggest that the wealth tax exemption was a very inefficient way to provide tax relief: the welfare gain to taxpayers was substantially smaller than the loss in tax revenue because resources were dissipated by taxpayers in meeting the tax exemption criteria. This ends up increasing the deadweight burden of taxation as individuals change their behavior in order to benefit from the tax reductions (Feldstein, 1999). Our empirical analysis could be made more precise using directly longitudinal micro-

---

[39] In contrast to shifting parameters, e is also sensitive to the assumption about the growth rate g of closely held assets absent the tax change.

[40] This is exactly true in the case of small tax changes. In the case of the relatively large change we are considering, this is only a first order approximation.

data on wealth taxpayers. Such data could provide direct evidence of shifting and of shifting costs.[41]

2.6. Conclusion

This chapter has attempted to analyze income and wealth concentration in Spain from a long-run perspective using the income and wealth taxes statistical evidence. We recognize that our data sources, especially before the return to democracy, cover only the very top of the income distribution so that we cannot speak of overall income inequality patterns. We have argued, however, that the extent of tax evasion at the top of the distribution, was likely much lower than commonly thought and that, as a result, those tax statistics can cast new useful light on the patterns of income concentration in Spain before the return to democracy.

Our results show that income concentration was much higher during the 1930s than it is today: the top 0.01% income share was about twice as high in the 1930s than over the last two decades. Income concentration dropped during the 1940s and remained fairly stable throughout the Spanish economic miracle from the 1950s to the 1970s. During the last two decades, income concentration has increased significantly and this phenomenon is concentrated in the top 1%, and especially in the top fractiles within the top 1%. A large fraction of the increase is due to a surge in realized capital gains following the stock market boom of the late 1990s and since 2002. The data also show evidence of an increase in top salaries, which has contributed to the increase in top income shares. It should be noted that the increase in income concentration in Spain is much smaller than the increase in concentration that took place in the United States.

Wealth concentration in Spain has declined modestly since 1982. The sharp increase in real estate prices, which tend to reduce wealth concentration,

---

[41] Unfortunately, we have not been able to obtain access to such data and it is unlikely that access could be obtained in the near future.

have been to a large extent offset by large stock price increases, leaving the overall wealth concentration relatively stable.

The exemption of stocks from the wealth tax base for business owners actively involved in managing their business introduced in 1994 constitutes a striking example of the perverse effects of eroding the tax base, both on efficiency and redistributive grounds. This exemption had a minor effect on the tax base initially but now reduces the tax base of the wealthiest taxpayers by about 40%, weakening substantially the redistributive effects of the progressive wealth tax. Furthermore, the erosion of the tax base has been due primarily to wealthy business owners shifting from the taxable status to the non-taxable status. This suggests that not only the costs of the tax cut are much higher than predicted based on a scenario with no behavioral response, but also that those tax losses create substantial additional deadweight burden as business owners expend significant resources to qualify for the non-taxable status.

TABLE 2.1.A.

Thresholds and Average Incomes in Top Income Groups in 2004

(including realized capital gains)

Percentile threshold (1)	Income threshold (2)	Income Groups (3)	Number of adults (aged 20+) (4)	Average income in each group (5)
		Full Adult Population	30,718,000	14,653 €
Top 10%	27,890 €	Top 10-5%	1,535,900	31,768 €
Top 5%	37,214 €	Top 5-1%	1,228,720	48,907 €
Top 1%	73,329 €	Top 1-0.5%	153,590	83,965 €
Top .5%	99,347 €	Top 0.5-0.1%	122,872	136,502 €
Top .1%	225,919 €	Top 0.1-0.01%	27,646	376,286 €
Top .01%	873,487 €	Top 0.01%	3,072	1,898,388 €

Notes: Computations based on income tax return statistics and National Accounts.

Income defined as annual gross income reported on tax returns including capital gains

and before individual income taxes but net of all social contributions (employer and employee)

Amounts are expressed in current 2004 Euros.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example,

an annual income of at least 27,890 Euros is required to belong to the top 10% tax units, etc.

TABLE 2.1.B.

Thresholds and Average Incomes in Top Income Groups in 2004
excluding realized capital gains

Percentile threshold (1)	Income threshold (2)	Income Groups (3)	Number of adults (aged 20+) (4)	Average income in each group (5)
		Full Adult Population	30,718,000	14,653 €
Top 10%	27,417 €	Top 10-5%	1,535,900	31,229 €
Top 5%	36,194 €	Top 5-1%	1,228,720	47,056 €
Top 1%	69,161 €	Top 1-0.5%	153,590	77,597 €
Top .5%	89,365 €	Top 0.5-0.1%	122,872	119,423 €
Top .1%	180,328 €	Top 0.1-0.01%	27,646	271,498 €
Top .01%	559,871 €	Top 0.01%	3,072	1,063,857 €

Notes: Computations based on income tax return statistics and National Accounts.

Income defined as annual gross income reported on tax returns excluding capital gains

and before individual income taxes but net of all social contributions (employer and employee)

Amounts are expressed in current 2004 Euros.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example,

an annual income of at least 27,417 Euros is required to belong to the top 10% tax units, etc.

Table 2.2. Estimating Behavioral Responses from the 1994 Wealth Tax Exemption

	Top 1% Wealth Holders			Top 0.01% Wealth Holders		
	(1)	(2)	(3)	(4)	(5)	(6)
A. Observed variables and assumptions						
Before the Reform (base year)	**1993**	**1993**	**1990**	**1993**	**1993**	**1990**
Imputed exempt closely held stock (E_b)	14,575	14,575	14,278	4,301	4,301	4,405
Imputed taxable closely held stock (T_b)	29,161	29,161	28,568	7,237	7,237	7,412
After the Reform (post year)	**2002**	**2001**	**2002**	**2002**	**2001**	**2002**
Exempt closely held stock (E_a)	61,308	53,694	61,308	13,252	12,444	13,252
Taxable closely held stock (T_a)	24,923	25,269	24,923	4,002	4,100	4,002
Growth in other financial wealth from base year to post year (g)	70.1%	82.6%	87.5%	80.7%	104.2%	77.1%
Total tax rate on profits for non-exempt closely-held businesses (τ_0)	46%	46%	46%	66%	66%	66%
Total tax rate on profits for exempt closely-held businesses (τ_1)	30%	30%	30%	40%	40%	40%
B. Estimates of key behavioral parameters						
Fraction of closely held businesses exempt before tax change (P_b)	33.3%	33.3%	33.3%	37.3%	37.3%	37.3%
Fraction of closely held businesses exempt after tax change (P_a)	66.5%	68.4%	69.0%	80.8%	82.6%	80.9%
Supply side elasticity (e)	0.83	-0.06	0.39	-0.42	-0.79	-0.43
C. Tax and Welfare Implications of 1994 Wealth Tax Reform						
-Change in tax revenue assuming no behavioral responses	-198	-213	-214	-101	-114	-101
-Change in tax revenue including behavioral responses	-218	-450	-355	-291	-393	-294
-Estimated change in total social surplus	-20	-237	-141	-190	-279	-192

Notes: All amounts are in millions of 2002 Euros. The tax rates are computed by adding the income tax rate on profits (30% for top 1% and 40% for top 0.01%) and the wealth tax. The wealth tax rate (0.8% for top 1% and 1.3% for top 0.01%) is converted into a profit tax rate assuming a return on assets of 5%.
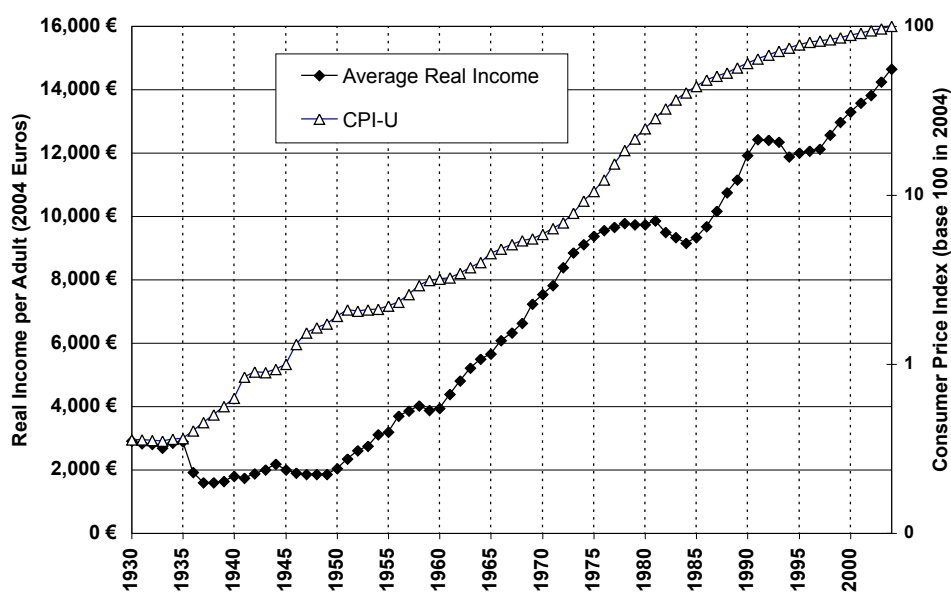
FIGURE 2.1.
Average Real Income and Consumer Price Index in Spain, 1930-2004

Source: Table 2.A.1.
Figure reports the average real income per adult (aged 20 and above), expressed in real 2004 Euros.
CPI index is equal to 100 in 2004.
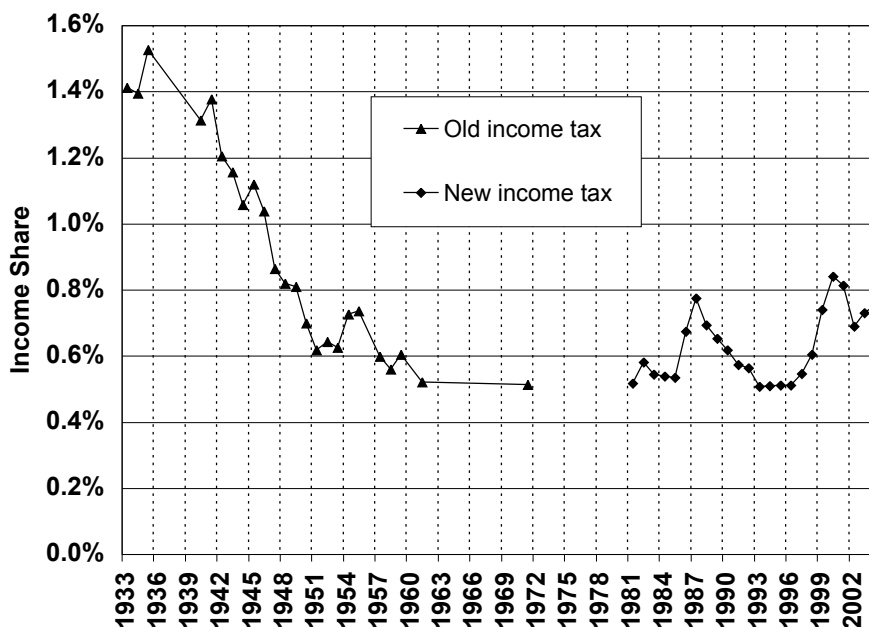
FIGURE 2.2
The Top 0.01% Income Share in Spain, 1933-2004

Source: 1933-1971 from Table 2.B.3 (column top 0.01%), 1981-2004 from Table 2.B.2 (column top 0.01%).
For 1933 to 1971, estimations based on the old income tax statistics.
For 1981 to 2004, estimations based on income excluding realized capital gains (for homogeneity
with older income tax).
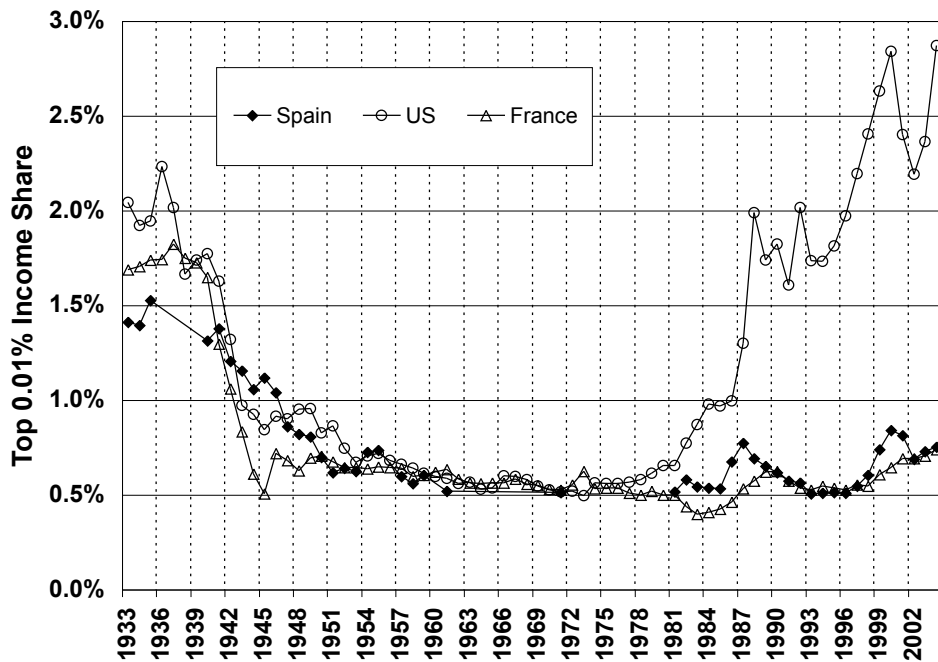
FIGURE 2.3

The Top 0.01% Income Share in Spain, US and France, 1933-2004

Sources: US: Piketty and Saez (2003); France: Piketty (2001) and Landais (2007);
Spain: 1933-1971 from Table 2.B.3 (column top 0.01%), 1981-2004 from Table 2.B.2 (column top 0.01%).
Top 0.01% income share excludes realized capital gains.
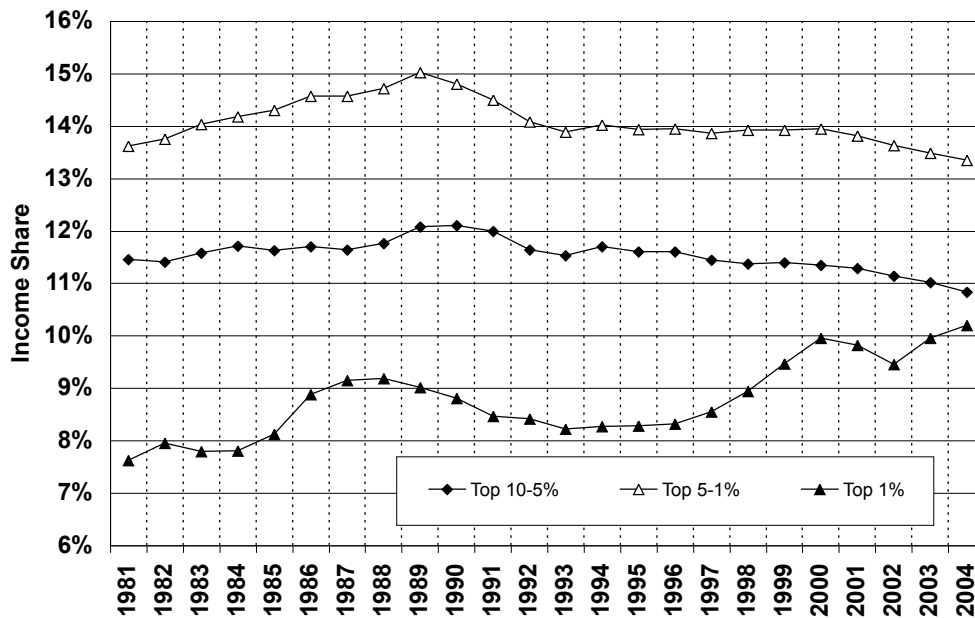
FIGURE 2.4

The Top 10-5%, Top 5-1%, and Top 1% Income Share in Spain, 1981-2004

Source: Table 2.B.1, columns top 10-5%, top 5-1%, and top 1%.
Income includes realized capital gains
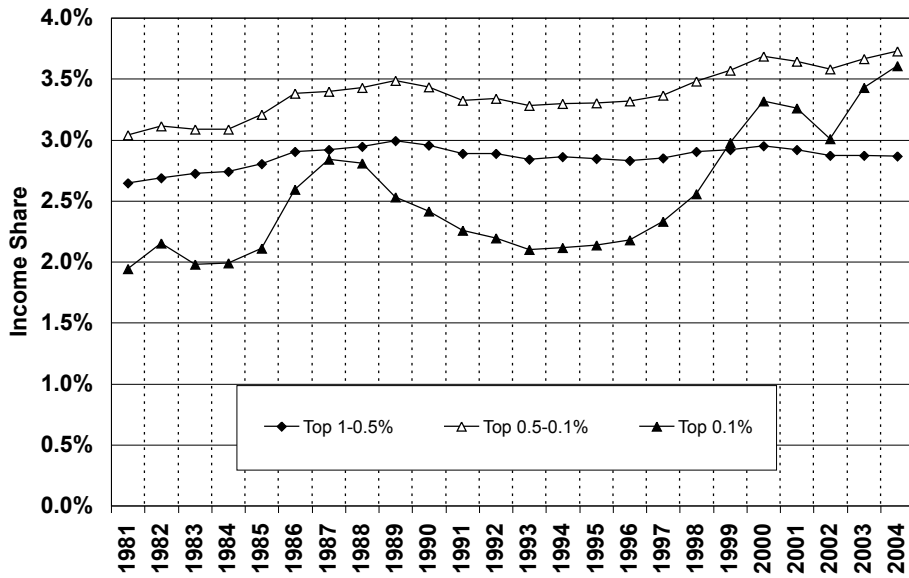
FIGURE 2.5

The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Income Share in Spain, 1981-2004

Source: Table 2.B.1, columns top 1-0.5%, top 0.5-0.1%, and top 0.1%.
Income includes realized capital gains
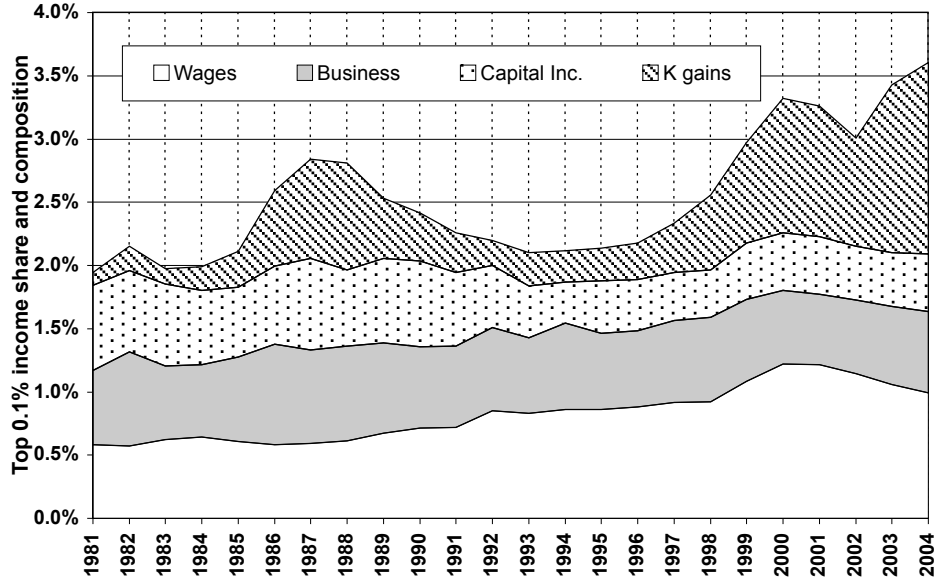
FIGURE 2.6

The Top 0.1% Income Share and Composition in Spain, 1981-2004

Source: Table 2.B.1, top 0.1% income share and Table 2.C, composition columns for top 0.1%.
The figure displays the income share of the top 0.1% tax units, and how the top 0.1% incomes are
divided into four income components: wages and salaries (including pensions),
business and professional income, capital income (interest, dividends, and rents), and realized capital gains.
For example, in 1981, the top 0.1% was 1.95% of total income. Of those 1.95%, 0.55% were
from wage income, 0.6% from business income, 0.7% from capital income, and 0.1% from capital gains.
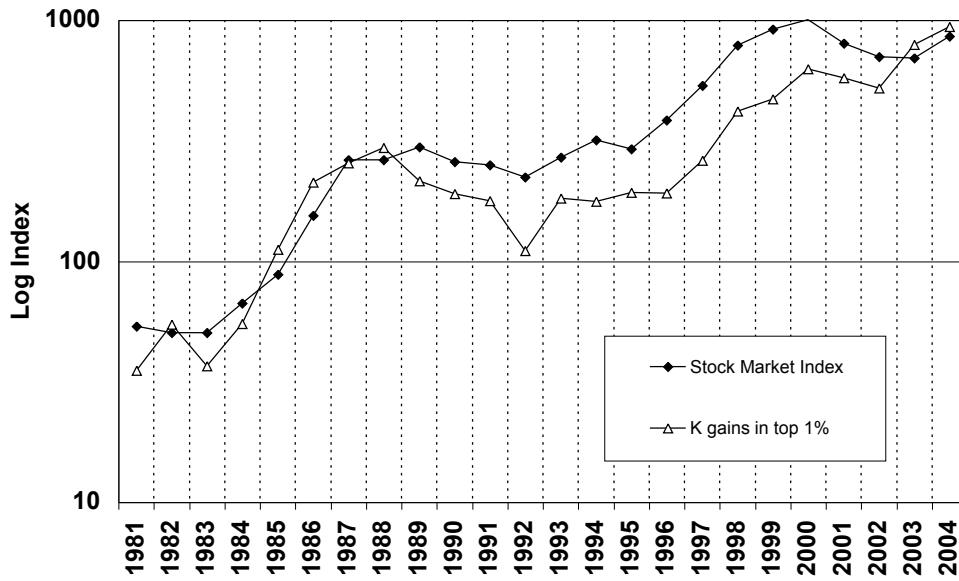
FIGURE 2.7
Madrid Stock-Market Index and Capital Gains at the Top, 1981-2004

Source: Madrid Stock Market Index from Globalfinance data.
For each year, the mean of the low and high is reported.
Capital gains at the top 1% is the real amount of capital gains reported by the top 1% income earners
The vertical axis measures the logarithm of the Madrid Stock Market Index and the logarithm of
the top 1% capital gains.
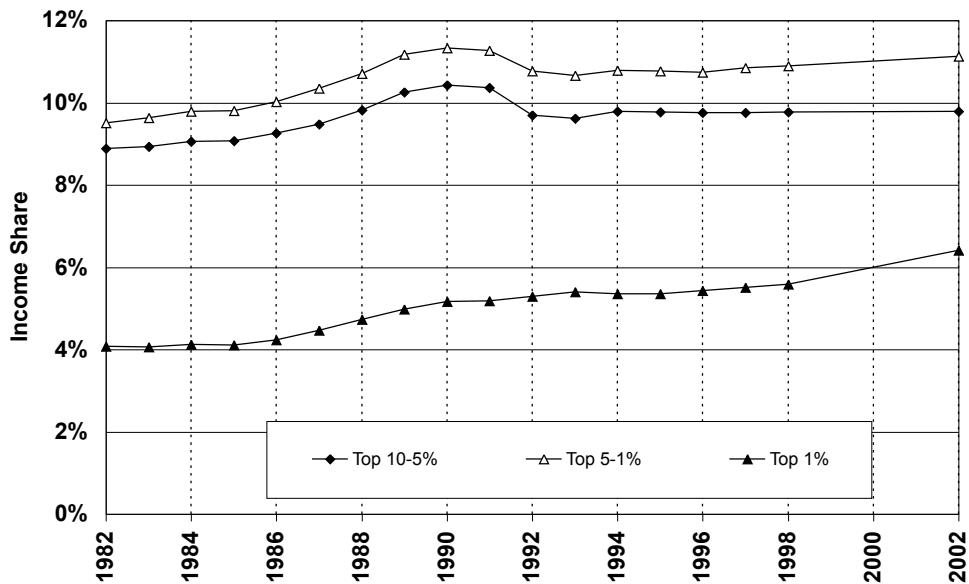
FIGURE 2.8
Top Wage Income Shares in Spain, 1982-2002

Source: Table 2.D, columns Top 10-5%, Top 5-1%, Top 1%.

Average net worth per adult (in 2000 Euros)

Legend:
- Other-other debts
- Stocks
- Fixed Claim Assets
- Net Real Estate

Y-axis: 0, 20,000, 40,000, 60,000, 80,000, 100,000, 120,000, 140,000

X-axis: 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
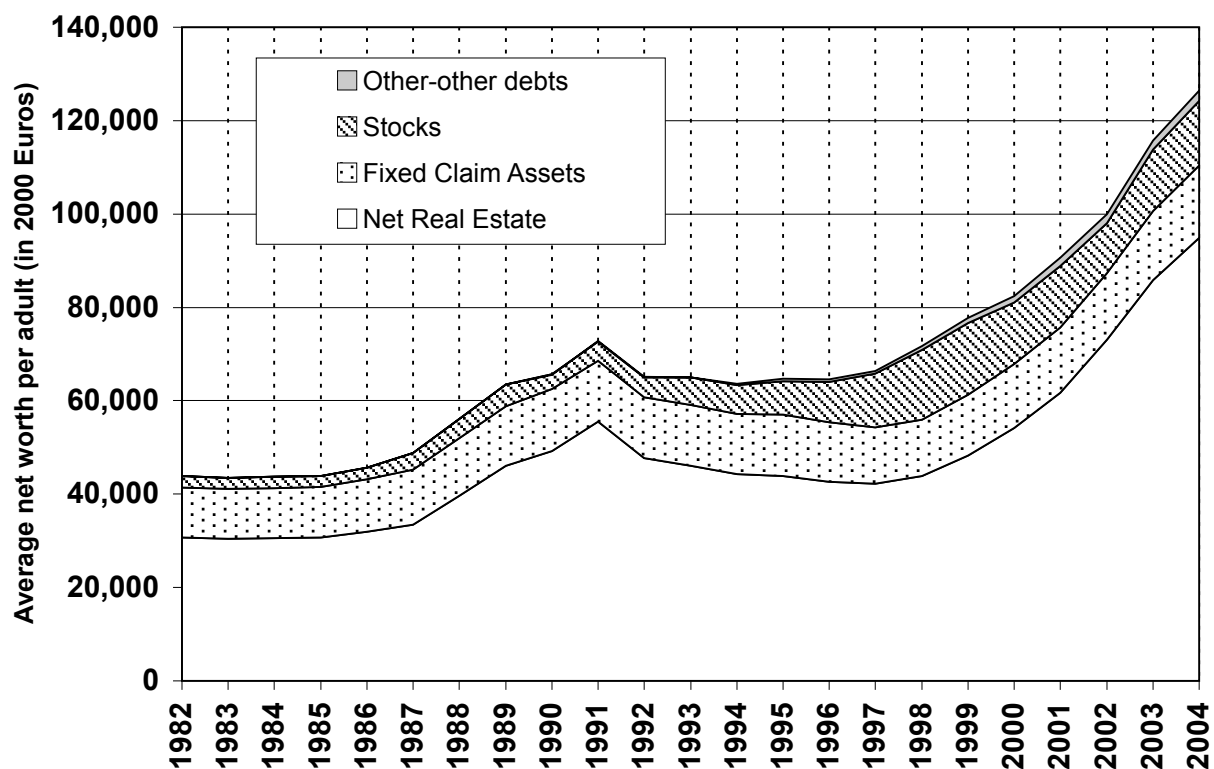
FIGURE 2.9
Average Net Worth and Composition, 1982-2004

Source: Table 2.A.2.
Net real estate is defined as total household real estate wealth net of mortgage debt
Fixed claim assets are cash, deposits, and bonds.
Stocks include publicly traded and closely held stock, directly or indirectly held.
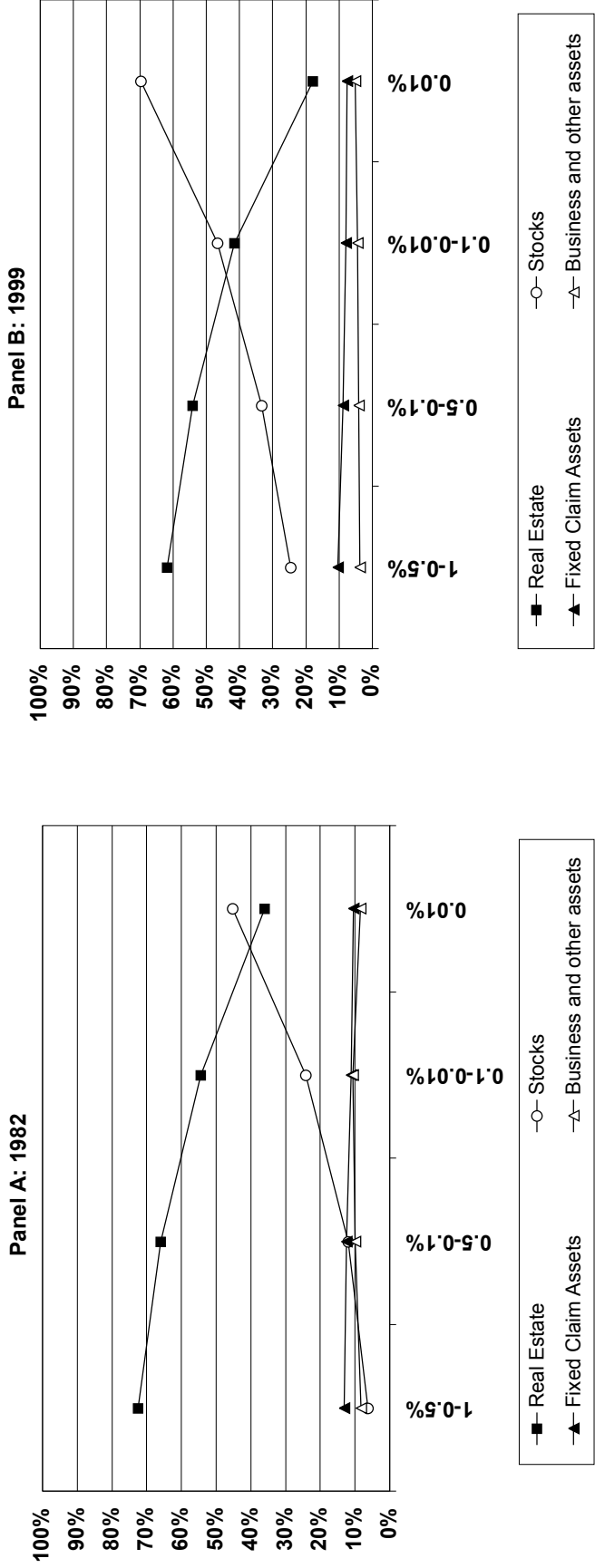
FIGURE 2.10

Income Composition of Top Groups within the Top Decile in 1982 and 1999

Source: Table 2.E.2, rows 1982 and 1999.
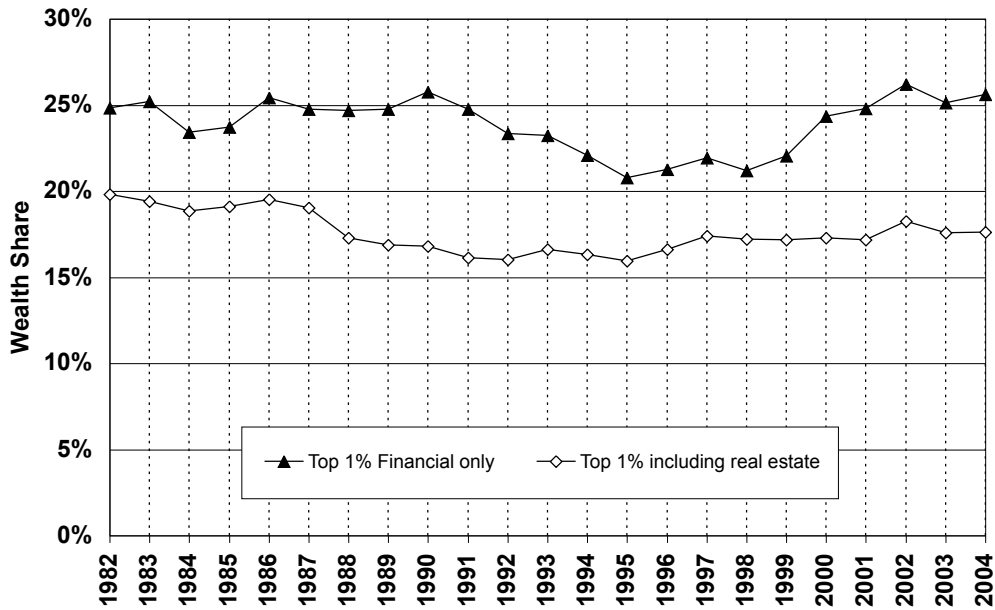
FIGURE 2.11
Top 1% Wealth Share in Spain, 1982-2004

Source: Table 2.E.1, column top 1%.
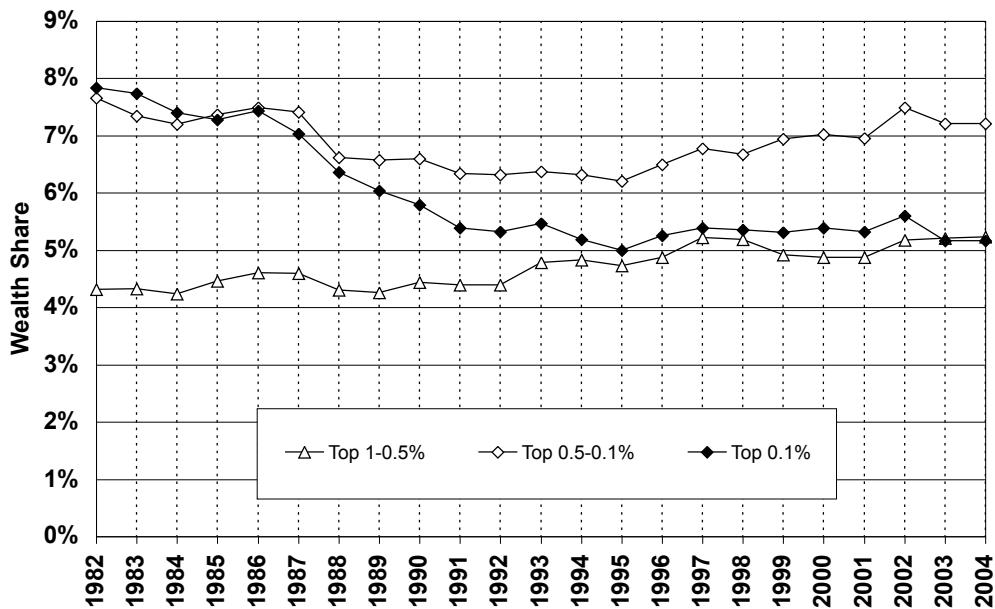
FIGURE 2.12
Top Wealth Shares (including real estate) in Spain, 1982-2004
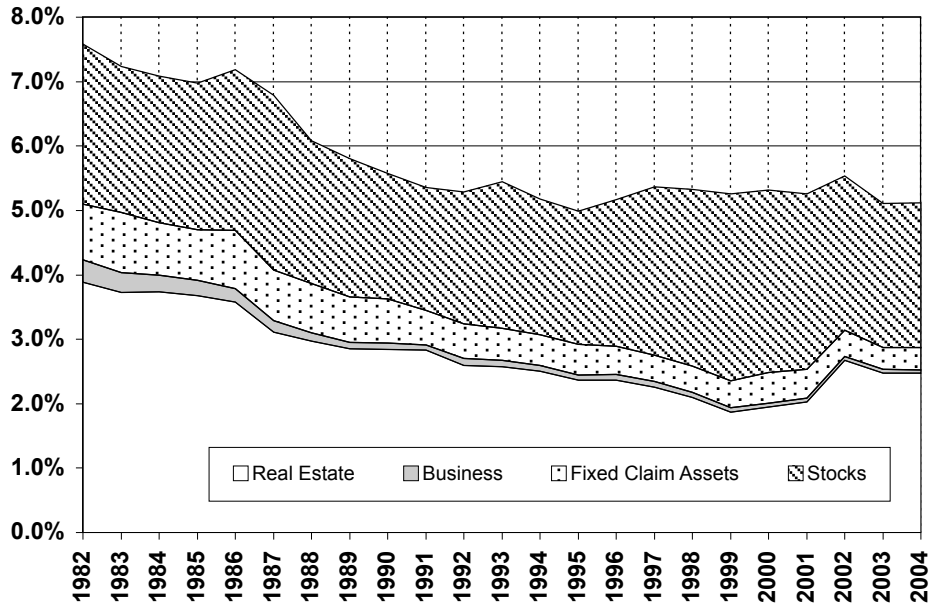
Source: Table 2.E.1

FIGURE 2.13

The Top 0.1% wealth Share and Composition in Spain, 1982-2004

Source: Table 2.E.1 and 2.E.2, columns top 0.1%.
The figure displays the wealth share of the top 1% tax units, and how the top 1% wealth holdings are
divided into 4 components: real estate, business assets, fixed claim assets (cash, deposits, bonds),
and stocks (publicly traded or closely held).
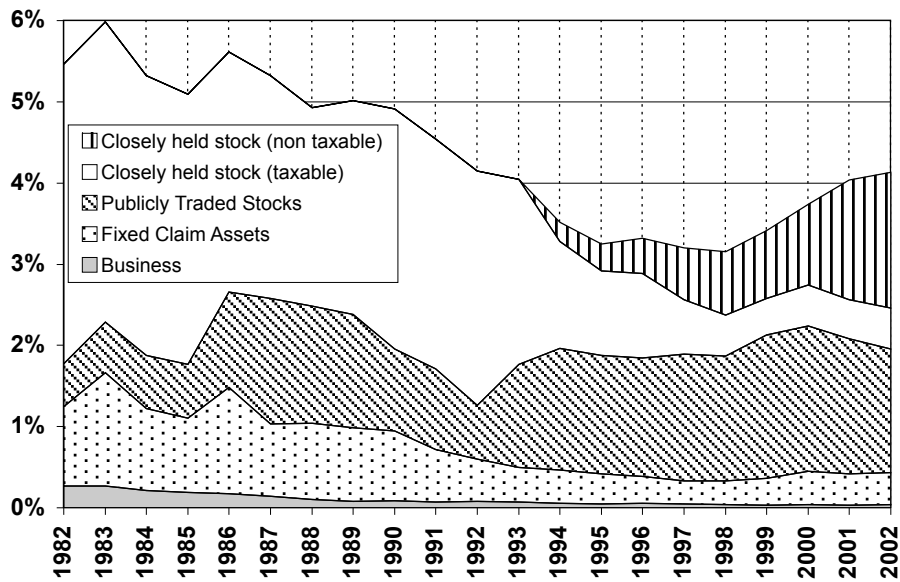
FIGURE 2.14

The Top 0.01% Financial Wealth Share and Composition in Spain, 1982-2002

Source: Table 2.E.1 and 2.E.2, and direct computations based on wealth tax statistics.
The figure displays the financial wealth share and composition of the top 0.01% tax units.
Stocks are broken down into three components: publicly traded stocks, taxable closely held stocks,
and exempted closely held stocks.

APPENDIX TO CHAPTER 2

2.A. The Income and Wealth Taxes in Spain

2.A.1. The 'Old' Income Tax

After six unsuccessful attempts since 1910, the first personal income tax (*Contribución General sobre la Renta*) was established in all the territory of Spain, including Guipúzcoa and Vizcaya, in 1932 (Law 20/12/1932) during the Second Republic. Based on their historical autarky privileges, Navarra and Alava were excluded since 1937 and 1943 respectively.[1]

Taxable income included income from real estate, capital, rural and mining activities, commercial and industrial business, labor and pensions. Mainly due to the narrow managerial capabilities of the government, this first law determined a high taxable income threshold (100,000 pesetas lowered to 80,000 pesetas in 1936) together with low progressive rates, ranging from 1% to 11% (Table 2.F.1). In 1933 there were only 1,446 tax returns and income tax collection represented 0.03% of GDP and 0.35% of total tax collection (Table 2.B.3 and Table 2.G). The income tax was based on individual income (as opposed to family income) from 1933 to 1939.

The fiscal reform of 1940 (Law 16/12/1940), which made changes in the whole tax system, was mainly motivated by the need to increase fiscal revenues to solve the post civil war problems and to cancel war debts. Consequently, the reform relied on the traditional schedule income and consumption taxes, which were much easier to collect. Concerning the *Contribución sobre la Renta*, it reduced the minimum taxable income to 70,000 pesetas and substantially increased the progressivity of the rates, with a top marginal tax rate of 40% for incomes above 1,000,000 pesetas. It also raised the taxes on lower incomes, with the minimum tax rate jumping from 1% to 7.5%. It introduced family deductions and a supplementary 30% rate for single individuals. The new law applied to 1941 incomes. From 1940 on, the income tax was based on family income (instead of individual income from 1933 to 1939).

---

[1] The autarky regimes governing the territories of Navarra and País Vasco and their relationship with the central administration is not a new issue in the history of Spain. Those regimes date back to the XV century. More recently, Navarra's privilegies were regulated by the *Ley Paccionada* (1841). The *Régimen de Concierto* was negotiated with Alava, Guipúzcoa and Vizcaya in 1877, for which the provinces were responsible for the collection of national administration taxes while making lump sum transfers to Madrid. The 1936-1939 civil war and Franco's policy towards 'traitor' local nationalisms changed the scenario. On the one hand, Alava and Navarra received a preferential treatment and kept their prerogatives after their contribution to the war on Franco's side. On the other, the autarky of Vizcaya and Guipúzcoa was abolished in 1937 (Decree Law 23/6/1937), even before the conflict had ended. Financial autonomy was recognized again during transition to democracy (Royal Decree-Law 30/10/1976).

Tax rates were further increased in 1942 (Law 6/2/1943), when the minimum threshold was set to 60,000 pesetas. Two new reforms (Law 16/12/1953 and Law 26/12/1957) failed to generalize the coverage of the tax. The definition of "unjustified wealth gains" (defined as those which could not be explained by declared income flows) for audit purposes helped improve the inspection results, and had a positive impact on the tax collection.

By the mid-1960s the *Contribución* had been pushed down in the fiscal agenda.[2] The stabilization plan of 1959 had been extremely successful in terms of government revenues so the tax reform of 1964 was not motivated by fiscal deficits but to promote growth and development. The Law 11/6/1964 and the Decree 27/11/1967 made the valuation of taxable income dependent on the system of schedule taxes.[3] Consequently the personal income tax completely lost its autonomy. Theoretically there were no minimum threshold to file; however, the usual obligation began at 200,000-300,000 pesetas. Tax rates ranged from 15% to 61.4%, with an average maximum rate of 50%.

The collection results were well below expectations again and the situation remained unchanged after the reforms of 1973 and 1975 (Decree-Laws 12/1973 and 13/1975). The top marginal rate was reduced to 56.12% with an average maximum rate of 40%. Finally, and just before the introduction of the modern income tax in 1979, the Law 50/1977 offered a tax amnesty; this was a success as 213,000 tax filers responded positively.

2.A.2. The Modern Income tax

The modern income tax was established in 1979 (Law 44/1978), with two major reforms in 1991 and 1998. Albi (2006) provides a detailed description of the current system along with all the reforms from 1979 to date.

From 1984 to 1987 the top marginal rate was 66%; however the average tax rate could not exceed 46%. In 1988 the tax scale was completely restructured downwards; the top marginal rate decreased from 66% to 56%, but the 46% limit was eliminated (Table 2.A.1, column 9).

The reform of 1991 did not modify either the tax rates or the main deductions. It updated the legislation in terms of individual and joint filing after the Constitutional Court decided in 1989 that the obligation to file jointly for married couples was thereafter unconstitutional. It also introduced changes in the taxation of capital gains, which we briefly describe below.

Since the reform of 1998 (Law 40/1998), the system was not supposed to tax overall but disposable income, after the deduction of a personal and family minimum income threshold (family-related reductions existed before, but they

---

[2] A result of this diminishing relevance is the inexistence of official statistics between 1961 and 1979.

[3] The powerful banking and industrial sectors, with strong influence in the dictatorship of Franco, seem to have been the source of a systematic attempt to block any generalization of the *Contribución sobre la Renta* and to sustain the statu quo of the taxation scheme. See, for example, Albiñana, 1969a and Vallejo Pousada, 1995, for details on how some private banks sketched income tax codes to be imposed to the government.

were applied to the amount of the tax and not to the income). For this reason, the joint-filer tax scale disappeared, so that the same scale applies to everybody since that year. The reform also meant a general rate reduction in the marginal rates. The drops ranged from 2% (from 20% to 18% for the bottom bracket) to 8% (from 56% to 48% for the top bracket). It also reduced the number of brackets from eight to six and eliminated the 0% rate for the lowest income.

Concerning capital gains, the following facts are worth mentioning. Between 1978 and 1991, capital gains (excluding gratuitous *inter-vivos* and *mortis causa* transfers) were taxed as regular income, according to the tax rate scale. From 1992 to 2004, a distinction was made between short run (or 'regular', meaning below one year) capital gains and long run (or 'irregular') capital gains. Short run capital gains are added to the main income and taxed according to the tax scale.

Until 1998 long run capital gains were first corrected downwards by a coefficient depending both on the nature of the asset and the number of years the asset had been held (real estate, -5.26% per year; stock: -11.11% per year; -7.14% per year for other assets). Finally, the tax was computed as the maximum of (a) adding 50% of irregular capital gains to the regular income and applying the tax scale to the result; and (b) applying the individual average tax rate to 100% of the irregular gains. Since 1996 the average tax rate affecting irregular capital gains could not exceed 20%.

From 1997 to 1998, long run capital gains generated in one to two years continued to follow the rules described above. For those produced in more than two years, a 20% rate was applied only to any amount beyond 200,000 pesetas.

Since 1999 only gains generated in more than two years are considered "irregular" and consequently taxed in a different way from the rest of income, at a 20% rate (18% since 2002).

2.A.3. The Wealth Tax

The Law 50/1977 established a "transitory" and "exceptional" tax on net wealth, declared and paid annually at the same time as the income tax but on a separate form. Originally it was meant to serve as a control over the income tax, with limited redistributive goals. Tax filing was done on an individual basis, with the exception of married couples under joint tenancy; joint filing was optional between 1988 and 1990.

Concerning taxable wealth and valuation rules: (a) urban real estate was valued at property registry values (catastro), corrected by coefficients which depended upon the year of construction; (b) rural real estate value was the result of capitalizing at 4% the amount fixed by the local estate tax; (c) checking, savings accounts and time deposits corresponded to the annual average balance, net of any amount used to purchase other components of wealth or to cancel debts; (d) life insurance corresponded to recovery value; (e) bonds and traded stock, at the monthly average price during the last quarter; (f) closely held stock, at liquidating value; (g) small personal goods, 3% of wealth below 20 million pesetas and 5% beyond; (h) other items, at market prices and (i) debts at nominal value. Urban

real estate declared historical monuments and art works involved in cultural activities were exempted.

Since 1992, a major reform by the Law 19/1991 put an end to the transitory an exceptional character of the tax. It established a strictly individual filing and introduced changes in some of the included components as well as in their valuation rules. In particular, (a) real estate is valued at the highest of (i) the property registry value, (ii) the purchasing price, (iii) the value determined for other taxes; (b) checking, savings accounts and time deposits, valued at the highest of the final balance or the 4th quarter average balance; (c) bonds and traded stock, at the average of market price during the 4th quarter; (d) closely held stock, at the theoretical value according to the last audited balance; if the audit is still pending the value is obtained from the highest of the last audited balance or the average of the last three annual profits capitalized at 12.5%;[4] (e) life insurance at recovery value; (f) annuities at capitalization value; (g) art works and antiques, at market value; (h) intellectual and industrial property rights, exempted if belonging to the original author and valued at purchasing prices otherwise; (i) other items, at market prices and (i) debts, at nominal value. Small personal items and pension funds are not taxed. The main residence was exempted up to 25 million pesetas (150,253.03 euros) since 2000 (Law 6/2000).

Of particular importance for Section 2.5 in the main text, the Law 22/1993 introduced the following new exemptions, starting in 1994:

(a) Goods necessary for business activities constituting the main income source, performed in a direct and personal way by the individual.

(b) Closely held stocks of business corporations whenever all three of the following conditions were met:

(i) the individual is substantially engaged in the business activity (he is the manager), getting over 50% of his total labor, business and professional income from it;

(ii) the individual owns at least 20% of the capital;

(iii) the corporation is not involved in wealth management as main activity.

Since 1995 the minimum share requirement was reduced to 15% (Law 42/1994) for the individual, and set to 20% for the family in 1997 (Law 13/1996). In 1998, professional activities were also included in the exemption mentioned in (a) (Law 66/1997). In 2003, the individual ownership threshold was lowered to 5% (Law 51/2002).[5]

As of 1/1/1997 the wealth tax revenues were transferred to the local governments (Law 46/1996).

---

[4] Capitalization rate was raised to 20% in 1999 (Law 50/1998).

[5] In 1994 the fiscal authorities found it difficult to predict the results of the new exemptions (Memoria de la Administración Tributaria 1994, p. 124).

2.B. References on Data Sources for Spain

2.B.1 Tax Statistics

Income tax statistical information covering the "old" income tax was published regularly between 1933 and 1961: Dirección General de Rentas Públicas, Estadística de la Contribución General sobre la Renta 1933-1934; Dirección General de Contribución sobre la Renta, Estadística de la Contribución sobre la Renta, 1935-1940, 1941,1942; Dirección General de Contribución sobre la Renta, Estadística de Servicios 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950; Ministerio de Hacienda, Dirección General de la Contribución sobre la Renta, Estadística de Servicios 1951, 1952, 1953, 1954, 1955; Ministerio de Hacienda, Dirección General de Impuestos sobre la Renta, Estadística de Servicios de la Contribución sobre la Renta 1956, 1958, 1959, 1960, 1962. Tables display the distribution of taxpayers by level of income together with taxable income and tax paid.

There are no official income tax statistics publications from 1962 to 1979. The Instituto de Estudios Fiscales (1973, 1974) has published a set of statistics covering total tax files between 1963 and 1974 together with the distribution of files by income brackets for 1971.

Much more detailed data describe the evolution of the income and wealth taxes between 1981 and 2004: Agencia Estatal de la Administración Tributaria, Departamento de Informática Tributaria, Madrid, Estadísticas IRPF y Patrimonio 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000; Dirección General de Tributos, Subdirección General de Política Tributaria (2002), El Impuesto sobre la Renta de las Personas Físicas y el Impuesto sobre el Patrimonio en 1999; Ministerio de Economía y Hacienda, Memoria de la Administración Tributaria, 1982-1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005.

2.B.2 Wages and Salaries

Results displayed in Table 2.D are based on the panel of individual income tax returns 1982-1998 (Instituto de Estudios Fiscales, Panel IRPF-AEAT) and the 2002 sample of income tax files (Instituto de Estudios Fiscales, Muestra de Declarantes de IRPF 2002). Individual wage incomes are obtained from the corresponding box in the tax file. Therefore, Table 2.D includes civil servants. As for the denominator, total wages and salaries are defined as total employment income from National Accounts, net of social security, and excluding País Vasco and Navarra. Total number of employees is total salaried employment from National Accounts. As the wages of spouses are aggregated for income tax purposes until 1987, we corrected estimates for 1982-1987 along the same lines as explained in Appendix 2.D.2.

2.C. Wealth and Income Denominators

2.C.1 Wealth Denominator

In order to compute wealth shares we need to estimate the total personal wealth. We have used two definitions of personal wealth: financial wealth (wealth excluding pension funds -which are not taxed-, real estate and mortgage debt) and total wealth (including real estate and mortgage debt but still excluding pension funds).

The wealth denominator relies on five statistical sources:

(a) Banco de España (2005), Cuentas Financieras de la Economía Española 1990-2005. Table II.21, Hogares e Instituciones sin fines de Lucro al servicio de los Hogares.

(b) Banco de España (2004), Encuesta Financiera de las Familias (EEF): Descripción, Métodos y Resultados Preliminares, Boletín Económico 11/2004.

(c) Banco de España, Indicadores del Mercado de la Vivienda, www.bde.es/infoest/sindi.htm, Table sindi15. Data refer to averages in the 4th quarter between 1987 and 2004.

(d) Ministerio de Economía y Hacienda, Dirección General de Catastro, Estadísticas Catastrales 1990-2004.
http://www.catastro.minhac.es/esp/estadisticas1.asp

(e) Caixa de Catalunya (2004), Report Monográfico: El Crecimiento del Stock de Riqueza de las Familias Españolas y su Impacto sobre el Consumo en el Período 1995-2003: Una Version Territorial, in Informe sobre el Consumo y la Economía Familiar, June.

Financial Wealth: Financial wealth is defined as the sum of bank deposits, currency holdings, stocks and investment funds, other fixed claim assets and insurance contracts on the asset side, minus commercial and other credit on the liability side. To match the definition of taxable wealth, we do not include pension funds. Also long run loans are excluded as a proxy for mortgage debt. The data were selected from (a) and correspond to the 4th quarter, covering the period 1989-2002.

In order to estimate the financial wealth for the period 1982-1988, we proceeded in the following way. The GDP shares of deposits and currency holdings, insurance contract net of pensions, other fixed claim assets and debts were rather stable for the first years for which data exist (1989-1992); consequently we fixed the ratios for 1982-1988 at the 1989 level. On the other hand, the stock and investment funds GDP share has displayed an increasing tendency during the decade of 1990, in parallel with the Madrid stock market index. Therefore, for 1986-1988, we applied the 1989 stock and investment funds/GDP ratio corrected by the evolution of the stock market index during the 4th quarter (highest minus lowest values). For 1982-1985 the share was set at the same level of 1986.

Real Estate Wealth: The consistency between valuation rules in the tax code and the data available posed several methodological problems to estimate this fraction of wealth. Between 1978 and 1992, urban real estate was mainly priced at cadastral values. Rural estate valuation formula required capitalizing at 4% the amount fixed in the local estate tax. Since 1992, real estate, both urban and rural, must be valued at the highest of (a) the property registry value, (b) the purchasing price, (c) the value determined for other local taxes. Local real estate taxes are based on cadastral values, computed following an established formula with price-coefficients defined for land surface, construction type, urban zone, etc, and which can be updated periodically by local authorities. Nevertheless, cadastral values are generally less than 50% of market prices. This can be easily verified comparing the Bank of Spain statistics (based on market prices, source (c)) with the property registry statistics (source (d)). For instance, between 1990 and 2002 the ratio between both series ranged from 30% to 45%. This implies a gap difficult to correct between the numerator and the denominator. For this reason, we also studied separately the distribution of financial wealth (net of real estate) in the main text.

Real estate net wealth is the result of deducting mortgage loans from household real estate wealth. The former is taken from Banco de España, Indicadores del Mercado de la Vivienda (source (c)). Data correspond to the 4th quarter and cover years 1987 to 2004. These estimates are constructed upon the series of residential units, average surface and average market prices. On the liability side, mortgage debts are approximated by long run debts from Cuentas Financieras de la Economía Española (source (a)). For the years 1982-1986 we fixed the real estate wealth/GDP ratio at the 1987 level.

Wealth tax information excludes Navarra and Pais Vasco. To take this fact into account, we corrected total wealth as follows. We assumed that total wealth in those regions was roughly proportional to real estate wealth. The share of Navarra and Pais Vasco real estate wealth in Spain is taken from Caixa de Catalunya (2004) (source (e)), based on Ministerio de Fomento.

The numerator, that is, the real estate declared in the wealth tax files, was also adjusted to reflect market prices. The correction factor is the ratio between the market-priced wealth (source (c)) and the GDP from 1987 to 2002. Between 1982 and 1986 the factor was set to the 1987 value. This decision was based on the fact that the ratio [real estate wealth from source (c)/ real estate wealth from property registry statistics source (d)] displays a very similar pattern but is available for a shorter period.

2.C.2 Total Number of Individuals

For the period 1933-1971, total number of individuals is computed as the number of individuals in the Spanish population aged 20 and above; this excludes Navarra and Alava since 1937 and 1943 respectively. These series are based on Census interpolations provided by INE and reported in Table 2.B.3, column 1. Column 2 also indicates the total number of tax returns (with positive

taxable income) actually filed as well as the fraction of adult population filling a tax return (Column 3).

For the period 1982-2002, total individuals correspond to the number of adults aged 20 and over excluding País Vasco and Navarra. Again this series come from Census interpolations and are reported in Table 2.A.1, Column 1. The census data have been taken from Presidencia del Consejo de Ministros, Dirección General del Instituto Geográfico Catastral, Censo de la Población de España 1930; Ministerio de Trabajo, Dirección General de Estadística, Censo de la Población de España 1940; Presidencia del Gobierno, Instituto Nacional de Estadística, Censo de la Población de España 1950; Censo de la Población y las Viviendas de España 1960; Censo de la Población de España 1970; Instituto Nacional de Estadística, Censo de Población y Viviendas 1980, 1991, 2001.

2.C.3 Total Income Denominator

For the period 1981-2004 total income is defined as wages and salaries from National Accounts net of social contributions, plus 50% of social transfers, plus 66.6% of unincorporated business income (excluding Navarra and Pais Vasco), plus all non-business, non labor income reported on tax returns. The total denominator series expressed in 2000 Euros is reported in Column 4 of Table 2.A.1. The average income per adult is reported in Column 7 while the CPI index (base 100 in year 2000) is reported in Column 6.

For the period 1933-1971, we use as denominator 66% of the Spanish GDP from Prados de la Escosura (2003). The number 66% is chosen to be consistent with our denominator for the recent period, which fluctuates between 63% and 69% of Spanish GDP (excluding Pais Vasco and Navarra). Our denominator for the 1933-1971 period is reported in Table 2.B.3. The first official consumer price index dates back to 1940. Table 2.B.3, Column 4 displays the income series converted in 2000 Euros.

2.D. Estimating Top Shares

2.D.1. Basic Pareto Interpolation

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

The first step consists then in estimating the income thresholds corresponding to each of the percentiles P90, P95, P99, …, P99.99, that define our top income groups. For each percentile p, we look first for the published income bracket [s,t] containing the percentile p. We estimate then the parameters a and k of the Pareto distribution by solving the two equations: $k=s$

p(1/a) and k=t q(1/a) where p is the fraction of tax returns above s and q the fraction of tax returns above t.[6] Note that the Pareto parameters k and a may vary from bracket to bracket. Once the density distribution on [s,t] is estimated, it is straightforward to estimate the income threshold, say y_p, corresponding to percentile p.

The second step consists of estimating the amounts of income reported above income threshold y_p. We estimate the amount reported between income y_p and t (the upper bound of the published bracket [s,t] containing y_p) using the estimated Pareto density with parameters a and k. We then add to that amount the amounts in all the published brackets above t.

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

Results are presented in Table 2.B.1 (income including capital gains between 1981 and 2004), Table 2.B.2 (income excluding capital gains between 1981 and 2004), Table 2.B.3 (income excluding capital gains between 1933 and 1971), Table 2.I.1 (top fractiles income levels including capital gains between 1981 and 2004) and Table 2.I.2 (top fractiles income levels excluding capital gains).

2.D.2. Adjustments to Raw Pareto Interpolations

Period 1933-1971

For the period 1933-1971 we adopt the following adjustments to the statistics. In 1935 and 1940, the statistics also report tax filers from previous years, who have been subject to an audit and a subsequent increase in reported income. Those audited tax filers are placed in the bracket where they belonged in the previous year but only the additional income uncovered by the audit is reported. As a result of those audited tax filers, the number of filers in each bracket is too high relative to income reported. In order to remove those audit taxpayers, we discard the information on the number of tax filers per bracket and we use only the total income per bracket. We recover the number of tax filers by assuming that average income per current year taxpayer in 1935 and 1940 is the same as in 1934. Our estimates are slightly over-estimated due to the additional income due to audits. However, additional income due to audits is probably small relative to regular reported income. Furthermore, income including audits is a closer approximation to real incomes than income before audits (although for 1935 and 1940, the additional income from audits corresponds to an earlier year).

---

[6] This is the standard method of Pareto interpolation used by Kuznets, 1953 and Feenberg and Poterba, 1993.

For 1941, about 14% of tax returns were reported separately and only in the aggregate. As the average income for those 14% returns is extremely close to the average for remaining returns, we assume that those 14% returns are distributed by brackets in the same way as the rest of returns. The same issue arises for 1957, 1958, 1961 where a significant fraction of returns were not processed in time for the regular publication and are only reported in aggregate in the subsequent publication year. In each case, we assume that those late returns are distributed as the regular returns. Because the average income of late returns is close to the average for regular returns, this seems an acceptable assumption.

From 1942, a deduction for dependent children was introduced and the tax returns are presented by size of income net of this dependent children exemption. The deduction is 3,000 Pesetas for each child from 1942 to 1953, 10,000 Pesetas from 1954 to 1960, and 25,000 Pesetas in 1961. We add back those deductions to our income estimates in order to estimate shares based on income before those deductions. In most years, those deductions are reported by brackets. When they are only reported in aggregate, we impute the deductions in each bracket using years when this information is provided. The average number of children is fairly stable overtime and across brackets so this approximation is acceptable.

Two important additional deductions are introduced in 1954. The first deduction is deductions for extraordinary expenses and charitable contributions. The law allowed for deductible expenses without bounds, which were declared at the discretion of the taxpayers: wedding expenses, pharmacy purchases, transfers to family members in state of necessity (where the term necessity was fuzzily defined). Individuals could also make donations without limits (many of which were suspected of being de facto self-donations for high income earners, when the individual himself managed the foundation, created with the sole purpose of attracting donations). The second deduction is a deduction for employment income equal to 33% of labor income up to a maximum deduction of 100,000 Pesetas. Those two deductions are reported by brackets for years 1958, 1959, and 1961, and are about 5% of reported incomes each within the top 0.1%. We assume that the level of deductions is the same as in 1958 in years 1954-1957 when the information on deductions is not reported separately.

The 1971 tax statistics are reported by size of gross income equal to the sum of each component (capital income, business income, labor income, etc.) before the extraordinary deductions and the deductions for dependent children. However, the deduction for labor income has been netted out of the labor income component. Because there is no information of labor income by brackets, we assume that the fraction of labor income within the top 0.1% is 20% (which was the corresponding number in 1961, the closest year where this information is available). The labor income deduction is also about 5% of total income in the top 0.1% in 1971.

Period 1981-2004

1. Exclusions from the income tax

Statistics are presented by brackets of income net of the labor income deduction and the pension deduction. The amount of those deductions is reported for each bracket in the tax statistics. Therefore, for each fractile, we compute the average amount of deductions and add those amounts to the raw estimates.

2. Series excluding capital gains

Second, since 1981, capital gains are included in taxable income (see Appendix 2.B above). For series excluding capital gains, we need to subtract the capital gains component from the raw series. The amount of capital gains is also reported by brackets in the tax statistics. In order to compute our series from the raw series, one could simply deduct for each group the share of capital gains estimated from composition tables. The problem is that ranking according to the income including capital gains and ranking according to income excluding capital gains might be different, especially at the very top. For example, in the extreme case where very top incomes of the income tax statistics distributions consist only of capital gains, then the deduction of capital gains would lead to the conclusion that the very top incomes of the income (excluding capital gains) distribution are equal to zero. Therefore, deducting the full amount of capital gains would provide an underestimate of the income shares we would like to estimate. In order to correct for this re-ranking bias, we therefore need to subtract less than 100% of capital gains.

Based on other studies such as Piketty and Saez (2003) for the United States and Saez and Veall (2005) for Canada, where not only similar tabulated tax statistics but also micro data are available, a good approximation is to subtract 80% of capital gains amounts instead of 100% to obtain shares of income excluding capital gains. This is therefore the rule we follow in the case of Spain. Using the 2002 large sample of micro-tax returns, we have verified that this rule gives very accurate results: the estimates based on micro-data excluding capital gains for 2002 are extremely close to the results we obtain from the tabulated statistics published by the tax administration.

3. Shift from family to individual taxation in 1988

Before 1988, taxation was based on the family unit (as in the United States today). Starting in 1989, individual taxation became possible and is actually an advantageous option when the secondary earner has positive income. As we have discussed above, our top groups are defined relative to the total adult population and our series measure individual income concentration. For the period 1988 to 2002, income tax statistics measure individual incomes as married couples where both spouses have positive incomes have an incentive to file separately in order to reduce their tax burden.

Before 1988, however, income tax statistics measure family income as the income of spouses are aggregated for income tax purposes. Therefore, our basic methodology overstates income concentration (as spousal income is added to the income of top earners). Indeed, uncorrected series display a clearly visible discontinuity from 1987 to 1988. We use the micro tax panel data to make the correction for the 1981-1987 period. Using the micro data for 1988, we can compute top income shares at the household level and at the individual level (as the micro-data allow to reconstitute families). We can then compute adjustment factors as the ratio of the individual shares to the household shares. We then apply those factors to all years from 1981 to 1987 to obtain corrected estimates. This correction reduces raw income shares by about 10%.

2.D.3. Top Wealth Shares Estimation

Top wealth shares for the period 1982-2002 are also estimated using the same Pareto interpolation technique. We do not make a correction for individual versus family filing because the wealth tax has always been assessed at the individual level (except for married couples with joint tenancy) and, in contrast to income share series, there are no discontinuity in the series from 1987 to 1988.

As in the case of the income tax, we add back exempted items such as exempted businesses (after the 1994 reform) or the standard exemption for the main residence (after 2000), which are fortunately reported by wealth brackets in the published statistics.

We estimate two top wealth shares series: series excluding real estate and series included market priced real estate. For series excluding real estates, we subtract the real estate (including the real estate exemption after 2000) from our raw estimates. For series including real estates, we inflate the value of real estate by a uniform multiplicative factor equal to total real estate from the Flow of Funds accounts divided by total cadastral value reported in aggregate real estate statistics, and we add back to our raw series the difference between the market price series and the cadastral value.

2.D.4. Estimation of Wealth and Income Composition Series

We have constructed income and wealth composition series for each of our top groups for the period 1981-2004 using tax statistics showing the breakdown of income and wealth into various components by income and wealth brackets.

The income composition series reported in Table 2.C indicate for each upper income group the fraction of total income (including capital gains) that comes from the various types of income. We consider four types of income: wage income; entrepreneurial income; capital income (excluding capital gains); and realized capital gains. Wage income includes wages and salaries (including the wage income deduction), as well as pensions. Entrepreneurial income includes self-employment income from professions such as doctors, lawyers, etc. Business income also includes income from sole proprietorships, partnership

income, and farm income. Capital income includes dividends, interest income, rents, and other investment income. Capital gains include both long-term and short-term capital gains reported on tax returns. We have excluded from these composition series the other income category which never make more than 5% of the total income as this simplifies the reading of our composition series (the other income category was taken into account when computing top income levels and top income shares in total income).

The wealth composition series reported in Table 2.E.2 indicate for each upper wealth group the fraction of total wealth (including the market value of real estate) that comes from the various types of assets. We consider six types of assets: real estate, business assets, fixed claim assets, stocks, other assets, and debts. Real estate includes the market value of real estate. It is estimated as reported real estate amount (including the deduction for primary residence since 2000) times the ratio of total market value of real estate in Spain divided by total cadastral value of real estate in Spain. Business assets include the value of unincorporated business assets. Fixed claim assets include cash, checking and savings accounts, annualized wealth, life insurance, public and corporate bonds. Stocks include publicly traded and closely held corporate stock either directly owned or owned through investment funds. Other includes household goods, jewels, vehicles, intellectual property rights, non-exempted works of arts and other assets. Debts include mortgage debts, consumer debts, and business debts.

The composition series are estimated from the published tables indicating for each income (or wealth) bracket not only the number of taxpayers and the total amount of their total income (or wealth) but also the separate amounts for each type of income (or wealth), as well as the deductions. The composition of income (or wealth) within each group was estimated from these tables using a simple linear interpolation method. Such a method is less satisfactory than the Pareto interpolation method used to estimate top income levels (no obvious law seems to fit composition patterns in a stable way). See Piketty and Saez (2007) for a more precise discussion of this method where it is systematically compared with direct estimates using micro data.

2.D.5. Estimating Top Shares from Personal Income Tax Panel

We also computed top shares with and without capital gains (Tables 2.B.5 and 2.B.6) using the microdata from the panel of income tax returns 1982-1998 (Instituto de Estudios Fiscales, Panel IRPF-AEAT) and the 2002 sample of income tax files (Instituto de Estudios Fiscales, Muestra de Declarantes de IRPF 2002). The panel is composed of approximately 2% of total returns (the number of observations ranges from 123,599 in 1982 to 308,558 in 1998), while the 2002 sample has information for 907,399 out of 15,481,382 files and oversamples high incomes. The definition of individual income follows the same rules as in the tabulated data case. Total reference income and population is also the same. As it was described above, before 1988 data available only identifies family income as the income of spouses is aggregated in the tax file due to mandatory joint filing. We used the micro tax panel for 1988 to adjust for this.

For 2002, the results from the sample are very close to the results from the tax tabulations. The 2002 sample perfectly matches aggregates. On the other side, the panel shares display an overall similar pattern when compared to shares based on grouped data, but differences are somewhat larger. This is mainly due to sample size issues and sampling strategy problems in the panel.

2.E. Computing Marginal Tax Rates

Marginal tax rates displayed in Table 2.B.4 were computed using the panel of individual income tax returns 1982-1998 and the 2002 sample of income tax files. For each individual we computed the taxable income following the tax code, as the sum of taxable sources excluding elements taxed by average or flat rates and not subject to the progressive tax scale (capital gains, irregular income and income adjustments from previous years). Then we applied the tax scale to identify the marginal rate that affects each individual.

We also computed total gross income as the sum of taxable sources, capital gains and irregular income (but excluding adjustments from previous years) plus labor income deductions. We ranked individuals by gross income (as done for our estimates based on grouped data) and computed the average marginal tax rates for top percentiles weighted by gross income. This procedure explains the fact that in some cases the marginal tax rate is lower for the top 0.01% than for the top 0.1%. The reason is the following: consider two individuals in the top 0.01%; the first one has no capital gains and no irregular income; consequently she is affected by the maximum marginal rate; the second individual only has capital gains; therefore she is affected by a zero marginal rate according to the progressive tax scale, while she still belongs to the top group. As the proportion of capital gains in total income increases with income (see Table 2.C), it is then possible to find more people at the top subject to relatively lower marginal rates.

2.F. Estimating Net Worth Shares and Composition from the Wealth Survey

In 2002 the Bank of Spain conducted a household wealth survey whose preliminary results are presented in Bover, 2004. We compare our results based on the tax statistics with the survey micro-data (Table 2.E.3).

To be consistent with our tax estimates we defined net financial wealth as the sum of: checking accounts, bank deposits, jewelry, antiques, artworks, life insurance, mutual funds, fixed income securities, business assets, and other household claims net of debts different from mortgage debts. Total net wealth is net financial wealth as described plus the declared price for the main residence plus other real estate minus mortgage debts. We do not consider pension funds, which are not taxed.

As the survey data are based on household information while our results refer to the individual distribution, we compute the top shares under two extreme scenarios. In the first one, we assume that all wealth belongs to the head of the household (panels C and D in Table 2.E.3). For the second scenario, we assume that every spouse owns 50% of the household wealth (panels E and F in Table 2.E.3). The reference total for the population is the number of adults aged 20 and over in all Spain, this time including País Vasco and Navarra.

2.G. Previous Work on Inequality in Spain

Until the beginning of the decade of 1970 the studies on inequality and income distribution in Spain are very scarce, due mainly to the lack of data. The Instituto de Estudios Agrosociales, 1958 ran a study on the distribution of expenditure in 1956, as an assignment for the FAO, while the Spanish statistics bureau (INE) conducted a households' consumption survey in 1958 (Infomación Comercial Española, 1962).

The first households' budget surveys (Encuesta de Presupuestos Familiares, EPF) were carried out in 1964/1965, 1966/1967, 1969/1970, 1973/1974 and 1980/1981. The results were somewhat deficient, and many ad-hoc assumptions were made for consistency with the national accounts, including corrections for under-reporting by income size and income source, as well as adjustments to a Pareto distribution. In fact, the ability of these surveys to approximate a comparable total personal income from National Accounts was extremely limited.[7] They generated the first distribution series to be comparable in time (Alcaide Inchausti 1967, 1974; Alcaide and Alcaide 1974, 1977, 1983). According to their estimates, the top 10% received 36.8%, 41.3%, 40.7%, 39.5% and 29.2% of income respectively, stressing a decrease in inequality levels from 1973/1974 to 1980/1981.[8]

In 1963 the INE launched the publication Salarios, based on an annual employer survey, referred to workers legally related to any firm employing at least 10 individuals. The survey covered most of the industrial sector, construction and some services, but excluded the agricultural sector, non-road transportation, leisure and civil service. Respondents were about 2,400 establishments that reported on the number of workers and their average salary by wage intervals. The survey had important methodological revisions in 1976 and 1981. Albi, 1975 computed Gini coefficients from this wage survey between 1963 and 1972, finding an increasing trend in earnings inequality; Cordero et al.,

---

[7] The differences between National Accounts and household surveys regarding income measurement have been analyzed in Deaton, 2005 and the Canberra Expert Group on Household Income Statistics, 2001.

[8] As an example, the magnitude of the corrections applied by these studies can be seen from the fact that, according to the 1980/1981 survey, the top 10% received 25.4% of income before any correction was made.

1988 compared the 1982 and 1986 wage surveys and also found a growing level of wage concentration.[9]

Between 1964 and 1980, the INE published an annual report on national income and distribution (Instituto Nacional de Estadística, 1965-1970 and 1971-1980), but the information was extremely limited and focused not on the personal but on the functional distribution of aggregate income from National Accounts; it also included a summary of the main results from the wage survey mentioned above.

Based on the 1980/1981 households' budget survey, Ruiz-Castillo (1987) studied inequality using the information about expenditure and not income. Bosch et al., 1989 applied the same methodology to compare the 1973/1974 and 1980/1981 surveys. A new comparison between the 1973/1974 and 1980/1981 surveys pertains to Ruiz-Castillo, 1998. Ruiz-Castillo and Sastre, 1999 added the comparison with the 1990/1991 survey. The authors find a considerable drop in inequality between 1973/1974 and 1980/1981; given the increase of per capita expenditure, they conclude that a rise in welfare took place. For the decade of 1980 they observe an increase in the average expenditure but a stop in the pattern of reduction in inequality that took place during the previous decade. These studies have been extended in Del Rio and Ruiz-Castillo, 2001a,b. Gradín, 2000, 2002 has used the EPFs to analyze polarization and inequality from 1973 to 1991.[10]

Notwithstanding the different levels reported in inequality indexes and the different variable analyzed (income, expenditure), the studies based on households' surveys show a decrease in inequality during the 1970s. Research has also been done on the basis of the European Community Household Panel (ECHP). See, for example, Pascual and Sarabia, 2004 for an analysis of the period 1993-2000 (they find a drop in inequality in 1993-1994, a sustained increase in 1994-1996, and a new decrease in 1997-2000; overall inequality measured by the Gini coefficient seems to display a small overall reduction), and Ayala and Sastre, 2005 for mobility issues between 1994 and 1998. Budría and Díaz-Giménez, 2006 analyze in detail the 1998 ECHP wave, as well as income mobility between 1994 and 1998.

Starting in 1985, the INE developed a continuous households' survey. Oliver et al., 2001 has used this source between 1985-1996 and documents an improvement in income distribution for the whole period according to several indicators; nevertheless, the reported Gini coefficient for 1996 is statistically equal to that of 1987.

More recently, researchers have used income tax data to assess inequality, providing a different picture when compared to results from households' surveys. Castañer, 1991 and Lasheras et al., 1993 analyze the redistributive power of the income tax; the authors show that several inequality indicators grew steadily between 1982 and 1990. Ayala and Onrubia, 2001 use the income

---

[9] See Cordero et al., 1988 for an account of the limitations of the wage survey since 1981.

[10] Other studies include Medel et al., 1988, Escribano, 1990, Ayala et al., 1993, Alvarez et al., 1996.

tax panel between 1982 and 1994 and income tax tabulations between 1995 and 1998 to compute Gini indexes. They do not consider capital gains. They observe an increasing inequality trend between 1982 and 1991, followed by a relative stability until 1994, and a new increasing trend after 1995, which the authors attribute to a growing inequality in the wage distribution. Rodríguez and Salas, 2006 use the income tax panel to analyze the redistributive consequences of the income tax reforms between 1982 and 1995.

Finally, both survey and tax sources have been used to study tax reforms, as in Díaz and Sebastián, 2004 and González-Torrabadella and Pijoan-Mas, 2006, among others.

2.H. *Grandes de España* with estates of more than 1000 Hectares appearing in Income Tax lists in 1933-1935

In 1932, the list of all the *Grandes de España* (who were part of the land reform expropriation) was published in the *Gaceta de Madrid* (12/16/1932). Carrión, 1973, provides details of the land area owned by the largest estate proprietors among them. By comparing these lists and the income tax lists that appeared in the *Gaceta de Madrid* between 1933 and 1935, it turns out that 100% of owners of more than 3,000 hectares (among the *Grandes*) were income taxpayers (36 people). If proprietors of more than 1,000 hectares are considered (65 people), 92% are present in the tax lists. We individualize below their names. It should be noted that the following list refers only to *Grandes* who were large proprietors: one tenth of all taxpayers in 1933-1935 were either *Grandes* or close relatives.

Proprietors of Estates of more than 3,000 Hectares
Duke of Medinaceli, Luis Fernández de Córdoba y Salabert
Duke of Peñaranda, Hernando Stuart y Falcó
Duke of Villahermosa, Antonio Azlor de Aragón y Hurtado
Duke of Alba de Tormes, Jacobo Fitz-James Stuart y Falcó
Marquis of La Romana, Pedro Caro y Martínez de Irujo
Marquis of Comillas, Juan Antonio Güel y López
Duke of Fernán Nuñez, Mariano Téllez de Girón y Fernández de Córdoba
Duke of Arión, Joaquín Fernández de Córdoba y Osma
Duke of Infantado, Joaquín Arteaga y Echagüe
Count of Romanones, Alvaro Figueroa y Torres
Count of Torres Arias, Ildefonso Pérez de Guzmán el Bueno
Count of Sástago, Luis Beltrán Escrivá de Romaní
Marquis of Mirabel, Agustín Carvajal y Quesada
Duke of Lerma, Fernando Fernández de Córdoba
Marquis of Riscal, José Hurtado de Amézaga y Zavala
Duke of Alburquerque, Miguel Osorio y Marcos
Count of Elda, José Falcó y Alvarez de Toledo
Duke of Tamames, José María Messía y Stuart
Marquis of Viana, F. Saavedra y Collado,

Count of Toreno, A. Queipo de Llano y Fernández de Córdoba
Marquis of Narros, Marcelino Azlor de Aragón y Hurtado de Zaldívar
Count of Mora, Fernando Messía y Stuart
Duke of Sotomayor, Pedro Martínez de Irujo y Caro
Duchess of Plasencia, María del Pilar Gayoso de los Cobos
Count of Real, Francisco Javier Azlor de Aragón y Hurtado de Zaldivar
Duke of Alcudia and Sueca, Carlos Luis Rúspoli y Alvarez de Toledo
Marquis of Arienzo, Fernando Soto y González de Aguilar
Count of Campo Alage, José Salamanca y Rodríguez de Haro
Marquis of Camarasa, Ignacio Fernández de Henestrosa y Gayoso de los Cobos
Marquis of Santa Cruz, Mariano Silva y Carvajal
Count of Los Andes, Francisco Moreno y Zulueta
Duke of San Fernández, Rafael Melgarejo y Tordesillas
Count of Floridablanca, José María Castillejo y Wall
Duchess of Monteleón de Castiblanco, María del Rosario Pérez de Barradas
Marquise of Argüeso, Mercedes Arteaga y Echagüe
Marquis of Hoyos, José María de Hoyos y Vinent

Proprietors of Estates of 1,000-3,000 Hectares
Duchess of San Carlos, María Luisa Carvajal y Dávalos
Duke of Almenara Alta, Francisco de Borja Martorell y Téllez Girón.
Marquise of Canillejas, María del Rosario B. y Armada
Duchess of Terranova, María Rafaela Osorio de Moscoso y López
Marquis of Gualdalcázar, Luis Salamanca y Ramírez de Haro, through daughter.
Duke of Béjar, Luis Roca de Togores y Téllez Girón
Marquis of Las Torres de la Presa, Andrés Lasso de la Vega y Quintanilla
Marquis of Castelar, Luis María Patiño
Marquise of Castellbell, María de los Dolores de Cárcer y de Ros.
Count of Villagonzalo, Fernando Maldonado y Salabert
Duchess of the Conquista, María de la Natividad Quindós y Villaroel
Duke of Castro Enríquez, José María Arróspide y Alvarez
Marquis of Bosch de Ares, Miguel Rojas y Moreno
Duke of Santo Mauro, Rafael Fernández de Henestrosa
Duke of Medina de las Torres, Fernando Ossorio y Moscoso y López
Duke of Aveyro, Luis Carvajal y Melgarejo
Marquis of Nervión, Francisco Armero y Castrillo
Duke of Híjar, Alvaro de Silva y Fernández de Córdoba
Duke of T'Serclaes, Juan Pérez de Guzmán y Boza
Duke of San Pedro de Calatín, Julio de Quesada Cañaveral
Duke of Valencia, José M. Narváez y Pérez de Guzmán
Duchess of Abrantes, María del Carmen Carvajal y de Alcázar
Duchess of Medina de Rioseco, Bernardina de Sena Téllez Girón
Marquis of Albudeyte, Juan Armer y Castrillo

References

Albi Ibáñez, E. (1975). 'La Distribución de la Renta Personal en España (1964-1967-1970)', *Hacienda Pública Española*, 32: 53-66.

Albi Ibáñez, E. (2006). *Sistema Fiscal Español*, 21a ed. Barcelona: Ariel.

Albiñana, C. (1969a). 'La Contribución General sobre la Renta en los años 1953-1954', *Revista Española de Economía Política*, 51-52: 7-58.

Albiñana, C. (1969b). 'Evolución histórico-normativa de la Contribución General sobre la Renta', *Revista Española de Economía Política*, 51-52: 327-372.

Albiñana, C; J. Cañada, J. Fernández, J. Martínez, E. Sanz and R. Villegas (1974). 'La Inspección del Impuesto sobre la Renta de las Personas Físicas, Hacienda Pública Española, 30: 269-289

Alcaide Inchausti, J. (1967). 'La Renta Nacional en España y su Distribución', *Revista Sindical de Estadística*, 68: 2-49.

Alcaide Inchausti, J. (1974). 'Así se distribuye la Riqueza y la Renta en la Sociedad Española', *Revista Sindical de Estadística*, 116, XXIX: 2-32.

Alcaide Inchausti J. (1999). 'Distribución Sectorial, Factorial y Personal de la Renta', in J.L. García Delgado (ed). *España, Economía: Ante el siglo XXI*. Madrid: Espasa, pp. 457-481.

Alcaide, A. and J. Alcaide (1974). 'Metodología para la Estimación de la Distribución Personal de la Renta en España en 1970, *Hacienda Pública Española,* 26: 55-63.

Alcaide A. and J. Alcaide (1977). 'Distribución Personal de la Renta en España y otros Países de la OECD', *Hacienda Pública Española*, 47: 17-57.

Alcaide, A. and J. Alcaide (1983). 'Distribución Personal de la Renta Española en 1980', *Hacienda Pública Española*, 85: 485-509.

Alvarez, C; L. Ayala, I. Oriondo, R. Martínez, R. Palacio y J. Ruiz-Huerta (1996). La Distribución Funcional y Personal de la Renta en España, Colección Estudios 30, Consejo Económico y Social, Madrid.

Alvarez Rey, L. (2007). 'Reforma y Contrareforma Agraria durante la Segunda República. Carmona 1931-1936'. *Carel, Revista de Estudios Locales*, 5(5): 194-245.

Atkinson, A. B. and T. Piketty (2007). *Top Incomes over the Twentieth Century: A Contrast Between European and English Speaking Countries*, Oxford: Oxford University Press.

Ayala, L. and J. Onrubia (2001). 'La Distribución de la Renta en España según Datos Fiscales', *Papeles de Economía Española*, 88: 89-125.

Ayala, L. and M. Sastre (2005). 'La Movilidad de Ingresos en España', *Revista de Economía Aplicada*, 38: 123-158.

Ayala, L., R. Martínez and J. Ruiz-Huerta (1993). 'La Distribución de la Renta en España en los años ochenta: una Perspectiva Comparada', in L. Gutiérrez and J. Almunia (eds.), *La Distribución de la Renta*, vol. 2. Madrid: Fundación Argentaria.

Bosch, A., C. Escribano and I. Sánchez (1989). *Evolución de la Desigualdad y la Pobreza en España. Estudio basado en las Encuestas de Presupuestos Familiares 1973/1974 y 1980/1981*, Madrid: INE.

Bover, O. (2004). 'Encuesta Financiera de las Familias Españolas (EFF): Descripción y Métodos de la Encuesta de 2002', Banco de España, Documentos Ocasionales n. 0409.

Breña Cruz, F., J. Cortés, R. Drake, J. Fernández, A. Gota and D. Sáenz (1974). 'La Administración del Impuesto General sobre la Renta', *Hacienda Pública Española*, 30: 231-267.

Budría, S. and J. Díaz-Giménez (2007). 'Economic Inequality in Spain: The European Community Household Panel Dataset', *Spanish Economic Review*, 1: 1-38.

Canberra Expert Group on Household Income Statistics (2001). *Final Report and Recommendations*, Ottawa.

Carrión, P. (1972). *Los Latifundios en España. Su Importancia. Origen. Consecuencias y Solución,* Barcelona: Ariel.

Carrión, P. (1973). *La Reforma Agraria de la Segunda República y la Situación Actual de la Agricultura Española*, Barcelona: Ariel.

Castañer, J. M. (1991). 'El Efecto Redistributivo del IRPF 1982-1988', *Hacienda Pública Española*, Monográfico n.2.

Castillo López, J. (1992). *El Fraude Fiscal en España*, Editorial Comares, Granada.

Comín, F. (1985). Fuentes Cuantitativas para el Estudio del Sector Público en España 1801-1980, Monografía n.40, Instituto de Estudios Fiscales.

Comín, F. (1994). 'El Fraude Fiscal en la Historia: Un Planteamiento de sus Fases,' in *Hacienda Pública Española*, Monografías 1/1994: 31-46, Madrid.

Comín, F. and J. Zafra Oteyza (1994). *El Fraude Fiscal en la Historia de España*, Instituto de Estudios Fiscales, Madrid.

Cordero, M., F. Melis, and J. Quesada (1988). 'La Distribución Personal de los Salarios en 1982 y 1986', *Boletín Trimestral de Coyuntura*, INE, 28: 51-68.

Deaton, A. (2005). 'Measuring Poverty in a Growing World (or Measuring Growth in a Poor World)', *Review of Economic and Statistics*, 87(1): 1-19.

Del Río, C. and J. Ruiz-Castillo (2001a). 'Intermediate Inequality and Welfare: The Case of Spain, 1980–81 to 1990–91', *Review of Income and Wealth,* 47(2): 221-238.

Del Río, C. and J. Ruiz-Castillo (2001b). 'Accounting for the Decline in Spanish Household Expenditures Inequality during the 1980s', *Spanish Review of Economics*, 3: 151-175.

Díaz, M. and M. Sebastián (2004). "Ideas para una reforma fiscal en España", in J. Perez, C. Sebastián and P. Tedde (eds.), *Políticas, Mercados e Instituciones Económicas. Estudios en Homenaje a Luis Angel Rojo*, Vol I. Madrid: Editorial Complutense.

Díaz Fuentes, D. (1994). 'Fraude y Amnistías Fiscales en la España Contemporánea, 1940-1990.' in Comín, F. and Zafra Oteyza, J. (eds.), op. cit.

Escribano, C. (1990). 'Evolución de la Pobreza y la desigualdad en España 1973-1987', *Información Comercial Española*, 686: 81-108.

Febrer, A. and J. Mora, (2005). 'Wage Distribution in Spain, 1994-1999. An Application of a Flexible Estimator of Conditional Distributions,' IVIE Working Papers, EC-2005-04.

Feenberg, D. and J. Poterba (1993). 'Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns', in J. Poterba (ed.) *Tax Policy and the Economy*, vol. 7, Cambridge: MIT Press, pp. 145-177.

Feldstein, M. (1999). "Tax Avoidance and the Deadweight Loss of the Income Tax", *Review of Economics and Statistics*, 81(4): 674-680.

Garde, J., J. Ruiz-Huerta, R. Martínez (1995). 'Los Estudios sobre Distribución de la Renta en España: Fuentes, Resultados, Perspectivas de Futuro,' Instituto de Estudios Fiscales, Papeles de Trabajo, n. 18.

Goerlich, F. and M. Mas (2001). 'Inequality in Spain 1973-91: Contribution to a regional Database', *Review of Income and Wealth*, 47(3): 361-378.

Goerlich, F.J. and M. Mas (2004). 'Distribución personal de la renta en España. 1973-2001'. *Papeles de Economía Española*,100: 50-58.

González-Torrabadella, M. and J. Pijoan-Mas (2006). 'Flat Tax Reforms: A General Equilibrium Evaluation for Spain'. *Investigaciones Económicas*, 30(2): 317-351.

Gordon, R. and J. Slemrod (2000). 'Are Real Responses to Taxes Simply Income Shifting Between Corporate and Personal Tax Bases?,' in Slemrod J. (ed.) *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, Cambridge: Cambridge University Press.

Gota Losada, A. (1966). 'La Política Fiscal y la Agilidad de Gestión en los Impuestos Generales sobre la Renta en España', Conferencia Pronunciada en la Asamblea Annual de la Mutualidad del Cuerpo de Inspectores Diplomados de los Tributos, Madrid.

Gota Losada, A. (1970). 'La Realidad de la Imposición Personal sobre la Renta', *Hacienda Pública Española*, 3: 17-42.

Gradín, C. (2000). 'Polarization by Sub-populations in Spain, 1973-91', *Review of Income and Wealth*, 46 (4): 457-474.

Gradín, C. (2002). 'Polarization and Inequality in Spain: 1973-91', *Journal of Income Distribution*, vol. 11 (1-2): 34-52.

Información Comercial Española (1962). Monográfico sobre la Distribución de la Renta en España, No. 352.

Instituto de Estudios Agro-Sociales (1958). *Proyecto de Fomento para la Región Mediterránea*, Ministerio de Agricultura, Madrid.

Instituto de Estudios Fiscales (1973). Informe sobre el Sistema Tributario Español, Madrid.

Instituto de Estudios Fiscales (1974). Estadística, *Hacienda Pública Española*, 30: 473-489.

Instituto de Estudios Fiscales, BADESPE: Base de Datos Económicos del Sector Público Español.

Instituto Nacional de Estadística (various years). La Renta Nacional y su Distribución, years 1971-1980, Madrid.

Instituto Nacional de Estadística (various years). Informe sobre la Distribución de las Rentas, years 1965-1970, Madrid.

Kuznets, S. (1953). *Shares of Upper Income Groups in Income and Savings*, NewYork: National Bureau of Economic Research.

Landais, C. (2007). 'Les Hauts Revenus en France (1998-2006): Une Explosion des Inegalités?', Paris School of Economics Working Paper, June.

Lasheras, M,. I. Rabadán and R. Salas (1993). 'Política Redistributiva en el IRPF entre 1982 y 1990', Actas del I Simposio sobre Igualdad y Distribución de la Renta y la Riqueza, vol. VIII, pp. 7-24, Madrid.

Maddison, A. (2001). *The World Economy. A Millennial Perspective.* Paris: OECD.

Maddison, A. (2003). *The World Economy. Historical Statistics.* Paris: OECD.

Malefakis, E. (1971). *Reforma Agraria y Revolución Campesina en la España del Siglo XX*, Barcelona: Ariel.

Martí Basterrechea, J. (1974). 'El Impuesto General sobre la Renta de las Personas Físicas', *Hacienda Pública Española*, 30: 75-89.

Martín-Guzmán, P., M. Toledo, N. Bellido, J. López and N. Jano (1996). Encuesta de Presupuestos Familiares, Desigualdad y Pobreza en España. Estudio basado en las Encuestas de Presupuestos Familiares de 1973-74, 1980-81 y 1990-91, Instituto Nacional de Estadística and Universidad Autónoma de Madrid.

Medel, B., A. Molina and J. Sánchez (1988). 'Los Efectos del Gasto Público en España', Documentos de Trabajo de la Fundación FIES, 28.

Moriguchi, C. and E. Saez (2007) 'The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics', forthcoming *Review of Economics and Statistics*.

Oliver I Alonso, J., X. Ramos Morilla and J. L. Raymond Bara (2001). 'Anatomía de la Distribución de la Renta en España, 1985-1996: La Continuidad de la Mejora', *Papeles de Economía Española*, 88: 67-87.

Park, T. S. (2000). 'Comparison of BEA Estimates of Personal Income and IRS Estimates of Adjusted Gross Income', *Survey of Current Business*, November, 7-13.

Pascual, M. and J. M. Sarabia (2004). 'Factores determinantes de la distribución personal de la renta: un estudio empírico a partir del PHOGHE', Instituto de Estudios Fiscales.

Piketty, T. (2001). *Les Hauts Revenus en France au 20eme Siècle – Inegalités et Redistributions, 1901-1998*, Paris: Editions Grasset.

Piketty, T. (2003). 'Income Inequality in France 1901-1998', *Journal of Political Economy*, 111 : 1-39.

Piketty, T., and E. Saez (2003), 'Income Inequality in the United States, 1913-1998', *Quarterly Journal of Economics*, 118(1): 1-39.

Piketty T. and E. Saez (2007). 'Income Inequality in the United States, 1913-2002', in Atkinson, A. B. and T. Piketty (eds.), op. cit.

Prados De La Escosura, L. (2003). *El Progreso Económico de España, 1850-2000*, Madrid: Fundación BBVA.

Prados De La Escosura, L. (2006a). 'Growth, Inequality, and Poverty in Spain, 1850-2000: Evidence and Speculation', Working Papers in Economic History wp 06-04, Universidad Carlos III.

Prados De La Escosura, L. (2006b). 'Growth And Structural Change In Spain, 1850-2000', Working Papers in Economic History wp 06-05, Universidad Carlos III.

Prados De La Escosura, L. (2007a). 'Growth and Structural Change in Spain, 1850-2000: A European Perspective'. *Revista de Historia Económica/Journal of Iberian and Latin American Economic History* 25(1): 147-181.

Prados De La Escosura, L. (2007b). 'Inequality, poverty, and the Kuznets curve In Spain, 1850-2000', Working Papers in Economic History wp07-13, Universidad Carlos III.

Rodríguez, J. G. and R. Salas (2006). 'The Spanish Progressive Income Taxation Evidence', Universidad Complutense de Madrid, mimeo.

Ruiz-Castillo, J. (1987). 'La medición de la pobreza y la desigualdad en España', Servicio de Estudios del Banco de España, *Estudios Económicos*, n.42, Madrid.

Ruiz-Castillo, J. (1998). "A Simplified Model for Social Welfare Analysis. An Application to Spain, 1973-74 to 1980-81", *Review of Income and Wealth*, (44): 123-141.

Ruiz-Castillo, J. and M. Sastre (1999). 'Desigualdad y bienestar en España en términos reales: 1973-74, 1980-81 y 1990-91', in *Dimensiones de la Desigualdad.*

Tercer Simposio sobre Igualdad y Distribución de la Renta y la Riqueza. vol. I. Madrid, Fundación Argentaria, Colección Igualdad, pp. 345-366.

Saez, E. (2004). 'Reported Incomes and Marginal Tax Rates, 1960-2000: Evidence and Policy Implications', in J. Poterba (ed.) *Tax Policy and the Economy*, 18, Cambridge: MIT Press.

Saez, E. and M. R. Veall (2005). 'The Evolution of Top Incomes in Northern America: Lessons from Canadian Evidence', *American Economic Review*, 95(3): 831-849.

Seligman, E. R. A. (1911). *The Income Tax*, New York: Macmillan.

Slemrod, J. (1995). 'Income Creation or Income Shifting? Behavioral Responses to the Tax Reform Act of 1986', *American Economic Review*, 85(2): 175-180.

Slemrod, J. (1996). 'High Income Families and the Tax Changes of the 1980s: the Anatomy of Behavioral Response', in M. Feldstein and J. Poterba (eds.) *Empirical Foundations of Household Taxation*, Chicago: University of Chicago Press.

Vallejo Pousada, R. (1995). 'El Impuesto sobre la Renta en España: Antecedentes y Evolución hasta 1978', in F. Comín (ed.), *La Práctica Fiscal en la España Contemporánea. Una Historia de la Administración Tributaria (1800-1990),* Madrid: Instituto de Estudios Fiscales.

TABLE 2.A.1. Reference Totals for Population, Income, and Inflation, 1981-2004

	Tax Units and Population			Total Income				Inflation	Taxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Adults	Number of tax returns	(2)/(1)	Total income 2000 Euros	Fraction income reported by tax filers (%)	Total income over GDP	Average income (2000 Euros)	CPI (2000 base)	Top Marginal Tax Rate
	('000s)	('000s)	(%)	(millions 2000 Euros)		(%)			(%)
1981	22,857	6,296	27.5	198,986	57.8	65.2	8,706	32.238	65.09
1982	23,242	6,262	26.9	194,719	56.7	65.3	8,378	36.818	68.47
1983	23,635	6,397	27.1	194,859	57.1	64.5	8,244	41.560	65
1984	24,036	6,544	27.2	194,172	57.6	63.7	8,078	45.911	66
1985	24,445	7,081	29.0	201,392	59.6	63.3	8,239	49.926	66
1986	24,760	7,896	31.9	211,410	63.1	65.0	8,538	54.289	66
1987	25,082	8,028	32.0	224,903	62.9	66.0	8,967	57.162	66
1988	25,410	8,954	35.2	241,032	63.2	66.5	9,486	60.119	56
1989	25,745	9,845	38.2	253,218	66.4	67.2	9,836	64.116	56
1990	26,087	10,965	42.0	274,393	69.1	66.6	10,518	68.359	56
1991	26,335	11,584	44.0	288,873	69.3	68.4	10,969	72.494	56
1992	26,673	12,341	46.3	291,862	71.3	69.3	10,942	76.647	56
1993	27,015	12,794	47.4	294,440	70.8	69.7	10,899	80.307	56
1994	27,360	13,578	49.6	286,709	74.6	69.8	10,479	84.021	56
1995	27,710	14,119	51.0	293,658	74.8	67.8	10,598	87.682	56
1996	28,114	14,620	52.0	299,045	75.2	66.8	10,637	90.825	56
1997	28,523	15,000	52.6	305,151	75.0	65.9	10,698	92.989	56
1998	28,938	15,424	53.3	320,948	75.5	64.8	11,091	94.485	56
1999	29,359	13,797	47.0	336,126	71.5	64.5	11,449	96.701	48
2000	29,785	14,123	47.4	349,707	72.5	64.7	11,741	100.000	48
2001	30,016	14,734	49.1	359,825	73.6	64.1	11,988	103.196	48
2002	30,249	15,410	50.9	368,802	73.9	63.5	12,192	106.598	48
2003	30,482	15,978	52.4	383,132	74.6	63.2	12,569	109.794	45
2004	30,718	16,465	53.6	397,268	74.9	63.2	12,933	113.299	45

Notes: Population and tax units estimates based on population census.

Tax units estimated as number of adults aged 20 and over in Spain (excluding Pais Vasco and Navarra).

Total income defined as wages and salaries from National Accounts (net of social contributions) plus 50% of social transfers plus 66.6% of unincorporated business income (excluding Navarra and Pais Vasco), plus all non-business, non labor income reported on tax returns.

Consumer Price Index is the official CPI index (see Appendix for details).

TABLE 2.A.2. Aggregate Net Worth and Composition, 1981-2004

	Wealth Tax Units and Population			Total Financial Wealth		Total Wealth		Wealth Composition						Inflation	Wealth Tax
	(1) Adults	(2) Number of wealth tax returns	(3) (2)/(1)	(4) Total Net Financial Wealth	(5) Average	(6) Total Net Wealth	(7) Average	(8) Real Estate	(9) Mortgage Debt	(10) Fixed Claim Assets	(11) Stocks	(12) Other	(13) Other Debts	(14) CPI	(15) Top Marginal Tax Rate
	('000s)	('000s)	(%)	(millions 2000 Euros)	(2000 Euros)	(millions 2000 Euros)	(2000 Euros)							(2000 base)	(%)
1981	22,857	509	2.2	303,847	13,293	1,011,740	44,264	78.8	-8.8	24.6	5.4	4.3	-4.3	32.238	2.5
1982	23,242	492	2.1	305,952	13,164	1,018,749	43,832	78.8	-8.8	24.6	5.4	4.3	-4.3	36.818	2.5
1983	23,635	541	2.3	308,664	13,060	1,027,782	43,486	78.8	-8.8	24.6	5.4	4.3	-4.3	41.560	2.5
1984	24,036	535	2.2	315,269	13,117	1,049,773	43,675	78.8	-8.8	24.6	5.4	4.3	-4.3	45.911	2.5
1985	24,445	675	2.8	322,142	13,178	1,072,658	43,880	78.8	-8.8	24.6	5.4	4.3	-4.3	49.926	2.5
1986	24,760	781	3.2	339,170	13,698	1,129,358	45,612	78.8	-8.8	24.6	5.4	4.3	-4.3	54.289	2.5
1987	25,082	887	3.5	385,176	15,357	1,224,357	48,814	77.2	-8.6	24.1	7.3	4.2	-4.3	57.162	2.5
1988	25,410	756	3.0	414,973	16,331	1,423,393	56,017	78.7	-7.9	22.0	7.2	3.9	-3.9	60.119	2.5
1989	25,745	855	3.3	446,285	17,335	1,633,730	63,458	79.9	-7.2	20.1	7.2	3.5	-3.6	64.116	2.5
1990	26,087	974	3.7	427,684	16,395	1,711,295	65,600	82.2	-7.1	20.4	4.8	3.5	-3.7	68.359	2.5
1991	26,335	1,033	3.9	455,006	17,278	1,916,839	72,787	83.0	-6.7	18.0	5.6	3.5	-3.4	72.494	2.5
1992	26,673	863	3.2	464,271	17,406	1,738,372	65,173	80.8	-7.5	20.0	6.6	4.0	-3.9	76.647	2.5
1993	27,015	928	3.4	507,817	18,798	1,754,037	64,928	78.5	-7.4	20.0	9.0	3.9	-3.9	80.307	2.5
1994	27,360	809	3.0	527,371	19,275	1,740,097	63,600	77.2	-7.5	20.2	9.6	4.3	-3.8	84.021	2.5
1995	27,710	783	2.8	577,725	20,849	1,791,832	64,664	75.2	-7.5	20.4	11.1	4.3	-3.6	87.682	2.5
1996	28,114	825	2.9	614,864	21,870	1,814,867	64,554	73.9	-7.8	19.6	13.4	4.3	-3.5	90.825	2.5
1997	28,523	892	3.1	688,512	24,139	1,892,367	66,345	72.0	-8.4	18.2	17.5	4.0	-3.3	92.989	2.5
1998	28,938	946	3.3	805,178	27,824	2,074,459	71,686	70.2	-9.0	16.8	20.9	4.1	-3.1	94.485	2.5
1999	29,359	981	3.3	867,394	29,544	2,284,269	77,805	71.6	-9.6	16.7	19.9	4.4	-3.0	96.701	2.5
2000	29,785	869	2.9	843,599	28,323	2,454,847	82,419	75.7	-10.1	16.6	16.0	4.6	-2.8	100.000	2.5
2001	30,016	874	2.9	866,099	28,855	2,718,915	90,582	78.1	-9.9	15.4	14.6	4.3	-2.5	103.196	2.5
2002	30,249	884	2.9	811,934	26,842	3,022,333	99,915	83.2	-10.0	14.3	10.7	4.2	-2.3	106.598	2.5
2003	30,482	896	2.9	911,035	29,888	3,527,016	115,708	84.1	-10.0	12.8	11.4	3.8	-2.1	109.794	2.5
2004	30,718	920	3.0	968,109	31,516	3,882,692	126,398	85.6	-10.5	12.2	11.0	3.6	-2.0	113.299	2.5

Notes: Population and tax units estimates based on population census

Tax units estimated as number of adults aged 20 and over in Spain (excluding Pais Vasco and Navarra).

Total Wealth from Flow of Funds accounts and other sources (see appendix).

Consumer Price Index is the official CPI index.

Table 2.B.1. Top Income Shares in Spain (including Capital Gains), 1981-2004

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1981	32.70	21.25	7.63	4.98	1.94	0.55	11.46	13.62	2.65	3.04	1.39	0.55
1982	33.11	21.70	7.95	5.27	2.15	0.66	11.41	13.75	2.69	3.11	1.50	0.66
1983	33.41	21.82	7.79	5.07	1.98	0.59	11.59	14.03	2.73	3.09	1.38	0.59
1984	33.71	21.99	7.81	5.07	1.99	0.62	11.72	14.18	2.74	3.08	1.37	0.62
1985	34.06	22.43	8.12	5.31	2.11	0.62	11.63	14.31	2.81	3.21	1.49	0.62
1986	35.15	23.45	8.88	5.97	2.59	0.93	11.70	14.57	2.91	3.38	1.67	0.93
1987	35.37	23.73	9.15	6.24	2.84	1.13	11.64	14.57	2.92	3.40	1.72	1.13
1988	35.68	23.91	9.19	6.24	2.81	1.08	11.77	14.72	2.95	3.43	1.73	1.08
1989	36.11	24.03	9.01	6.02	2.53	0.82	12.08	15.02	2.99	3.49	1.72	0.82
1990	35.71	23.61	8.80	5.85	2.42	0.73	12.10	14.81	2.96	3.43	1.69	0.73
1991	34.97	22.97	8.47	5.58	2.26	0.67	12.00	14.50	2.89	3.32	1.59	0.67
1992	34.15	22.50	8.42	5.54	2.20	0.62	11.65	14.08	2.89	3.34	1.58	0.62
1993	33.64	22.11	8.22	5.38	2.10	0.57	11.53	13.89	2.84	3.28	1.53	0.57
1994	34.00	22.30	8.27	5.41	2.12	0.58	11.70	14.03	2.86	3.30	1.54	0.58
1995	33.84	22.23	8.29	5.44	2.14	0.59	11.61	13.94	2.85	3.30	1.55	0.59
1996	33.87	22.27	8.32	5.49	2.18	0.60	11.60	13.95	2.83	3.32	1.58	0.60
1997	33.86	22.42	8.55	5.70	2.33	0.67	11.45	13.87	2.85	3.36	1.66	0.67
1998	34.24	22.86	8.94	6.04	2.56	0.81	11.37	13.92	2.90	3.48	1.75	0.81
1999	34.78	23.39	9.47	6.55	2.97	1.05	11.39	13.92	2.92	3.57	1.93	1.05
2000	35.25	23.90	9.95	7.00	3.32	1.25	11.35	13.94	2.95	3.68	2.07	1.25
2001	34.92	23.63	9.82	6.91	3.26	1.21	11.29	13.81	2.92	3.64	2.05	1.21
2002	34.23	23.08	9.46	6.59	3.01	1.01	11.15	13.63	2.87	3.58	2.00	1.01
2003	34.47	23.45	9.96	7.09	3.43	1.24	11.02	13.49	2.87	3.67	2.19	1.24
2004	34.39	23.55	10.20	7.33	3.61	1.30	10.84	13.35	2.87	3.73	2.31	1.30

Notes: Computations by authors on tax return statistics. Taxpayers are ranked by gross income (including capital gains). The Table reports the percentage of total income accruing to each of the top groups. Top 10% denotes top decile, top 10-5% denotes the bottom half of the top decile, etc.

Table 2.B.2. Top Income Shares in Spain (excluding Capital Gains) 1981-2004

	Top 10%	Top 5%	Top 1%	Top .5%	Top .1%	Top .01%	Top 10-5%	Top 5-1%	Top 1-.5%	Top .5-.1%	Top .1-.01%	Top .01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1981	32.61	21.12	7.50	4.87	1.87	0.52	11.48	13.62	2.63	3.01	1.35	0.52
1982	32.96	21.50	7.75	5.08	2.00	0.58	11.46	13.75	2.67	3.07	1.42	0.58
1983	33.29	21.67	7.65	4.94	1.88	0.55	11.62	14.02	2.71	3.06	1.33	0.55
1984	33.56	21.80	7.61	4.89	1.85	0.54	11.76	14.19	2.73	3.04	1.31	0.54
1985	33.72	22.03	7.75	4.99	1.90	0.53	11.69	14.28	2.76	3.09	1.37	0.53
1986	34.66	22.82	8.21	5.36	2.16	0.68	11.84	14.61	2.85	3.20	1.48	0.68
1987	34.85	23.05	8.40	5.52	2.26	0.77	11.80	14.65	2.88	3.26	1.48	0.77
1988	35.05	23.14	8.36	5.46	2.17	0.69	11.91	14.78	2.91	3.28	1.48	0.69
1989	35.67	23.49	8.47	5.52	2.19	0.65	12.18	15.02	2.95	3.33	1.53	0.65
1990	35.35	23.17	8.37	5.45	2.14	0.62	12.19	14.80	2.92	3.31	1.53	0.62
1991	34.58	22.53	8.08	5.23	2.03	0.57	12.06	14.45	2.84	3.20	1.46	0.57
1992	33.93	22.25	8.21	5.34	2.06	0.56	11.68	14.05	2.86	3.28	1.50	0.56
1993	33.19	21.61	7.83	5.06	1.92	0.51	11.58	13.78	2.77	3.14	1.41	0.51
1994	33.55	21.82	7.89	5.10	1.95	0.51	11.73	13.92	2.79	3.15	1.44	0.51
1995	33.38	21.71	7.89	5.12	1.96	0.51	11.66	13.83	2.77	3.16	1.45	0.51
1996	33.45	21.79	7.93	5.16	1.98	0.51	11.66	13.86	2.77	3.18	1.47	0.51
1997	33.29	21.77	8.03	5.25	2.07	0.55	11.52	13.75	2.77	3.19	1.52	0.55
1998	33.36	21.90	8.17	5.39	2.17	0.61	11.47	13.72	2.78	3.22	1.56	0.61
1999	33.95	22.45	8.62	5.78	2.41	0.74	11.50	13.83	2.84	3.37	1.68	0.74
2000	34.19	22.69	8.84	6.00	2.57	0.84	11.50	13.85	2.84	3.43	1.73	0.84
2001	34.03	22.60	8.80	5.95	2.51	0.81	11.44	13.80	2.84	3.44	1.70	0.81
2002	33.41	22.13	8.54	5.75	2.39	0.69	11.28	13.59	2.80	3.36	1.70	0.69
2003	33.30	22.07	8.59	5.82	2.45	0.73	11.22	13.48	2.77	3.37	1.72	0.73
2004	33.03	21.97	8.62	5.87	2.49	0.75	11.07	13.34	2.75	3.39	1.73	0.75

Notes: Computations by authors on tax return statistics. Taxpayers are ranked by gross income (excluding capital gains).
The Table reports the percentage of total income accruing to each of the top groups. Top 10% denotes top decile,
top 10-5% denotes the bottom half of the top decile, etc.

Table 2.B.3. Top Income Shares in Spain from Older Income Tax Statistics 1933-1971

	Total number of tax units ('000s)	Tax returns	Fraction filing (%) (2)/(1)	Total income (mns of 2000 Euros)	Fraction of income reported on tax returns (%)	CPI (base 2000)	Top 0.1%	Top 0.05%	Top 0.01%	Top 0.1-0.05%	Top 0.05-0.01%	Top 0.01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1933	14,488	1,446	0.010	33,232	1.412	66.231			1.41			1.41
1934	14,652	1,792	0.012	35,624	1.539	68.081			1.40			1.40
1935	14,818	2,465	0.017	36,674	1.984	68.345			1.53			1.53
1940	15,677	3,222	0.021	28,532	1.823	118.359			1.31			1.31
1941	15,892	5,231	0.033	23,580	2.371	158.265			1.38			1.38
1942	16,110	5,123	0.032	25,878	2.013	169.203			1.21			1.21
1943	16,331	5,538	0.034	28,019	2.086	168.222			1.16			1.16
1944	16,555	5,849	0.035	30,984	1.943	175.690			1.06			1.06
1945	16,782	6,629	0.040	28,742	2.194	187.911			1.12			1.12
1946	17,012	8,223	0.048	27,708	2.233	246.600			1.04			1.04
1947	17,245	7,983	0.046	27,359	1.805	290.202			0.86			0.86
1948	17,481	9,067	0.052	27,668	1.864	309.740		1.83	0.82		1.01	0.82
1949	17,721	10,111	0.057	28,138	1.930	326.487		1.82	0.81		1.01	0.81
1950	17,964	12,419	0.069	31,320	1.886	361.941		1.63	0.70		0.93	0.70
1951	18,134	13,597	0.075	36,433	1.690	396.038		1.42	0.62		0.80	0.62
1952	18,307	15,427	0.084	40,870	1.820	388.193		1.45	0.64		0.81	0.64
1953	18,481	16,545	0.090	43,475	1.833	394.454		1.43	0.63		0.80	0.63
1954	18,657	21,332	0.114	49,673	2.812	399.358	2.63	1.82	0.73	0.81	1.09	0.73
1955	18,834	26,716	0.142	51,583	3.308	415.426	2.77	1.90	0.74	0.87	1.16	0.74
1957	19,194	41,637	0.217	63,511	3.460	487.165	2.27	1.53	0.60	0.73	0.94	0.60
1958	19,377	48,921	0.252	66,635	3.490	551.512	2.13	1.45	0.56	0.68	0.89	0.56
1959	19,561	54,143	0.277	65,012	3.805	592.247	2.23	1.52	0.60	0.71	0.92	0.60
1961	19,950	38,520	0.193	75,007	2.617	613.747	1.88	1.29	0.52	0.59	0.77	0.52
1971	22,129	338,989	1.532	148,219	7.200	1,193.09	1.86	1.24	0.51	0.62	0.73	0.51

Source: Income tax statistics published by the fiscal administration for years 1933 to 1971.

Total number of tax units defined as the number of adults aged 20 and over.

CPI index: 100 Euros in 2000 are equivalent to 66.231 Ptas in 1933, ..., 1193.09 Ptas in 1971.

Total income is defined as 66% of GDP (expressed in millions of 2000 Euros). Navarra is excluded since 1937. Alava is excluded since 1943.

Table 2.B.4. Marginal Tax Rates by Income Groups, 1982-2002

	Top 10%	Top 5%	Top 1%	Top .5%	Top .1%	Top .01%	Top 10-5%	Top 5-1%	Top 1-.5%	Top .5-.1%	Top .1-.01%	Top .01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1982	26.38	29.21	38.04	42.96	56.29	65.74	21.01	24.34	29.25	35.12	52.75	65.74
1983	27.94	31.01	40.20	44.99	56.66	63.68	22.15	26.07	32.00	38.52	54.39	63.68
1984	30.03	33.50	43.52	48.63	60.41	65.39	23.46	28.12	34.70	41.83	58.51	65.39
1985	31.00	34.67	45.27	50.49	61.35	63.03	23.95	28.98	36.32	44.33	60.65	63.03
1986	33.14	37.38	49.02	54.32	63.48	64.72	24.87	30.94	39.75	49.01	63.00	64.72
1987	34.36	38.84	51.00	56.35	63.60	65.25	25.45	31.87	41.19	51.79	62.92	65.25
1988	34.88	38.41	48.24	52.11	54.84	55.67	28.13	32.84	40.94	50.30	54.52	55.67
1989	35.93	39.65	49.38	52.60	54.51	53.73	28.80	34.10	43.18	51.80	54.80	53.73
1990	37.07	41.03	51.19	54.27	55.45	55.95	29.69	35.29	45.36	53.48	55.23	55.95
1991	37.58	41.56	51.71	54.49	55.19	55.76	30.30	35.99	46.68	54.07	54.99	55.76
1992	36.80	40.95	50.80	53.86	54.93	55.23	29.23	35.38	45.18	53.20	54.82	55.23
1993	37.80	41.89	51.67	54.33	55.45	55.91	30.35	36.33	46.72	53.61	55.25	55.91
1994	38.06	42.13	51.83	54.33	55.33	55.66	30.65	36.59	47.11	53.69	55.19	55.66
1995	38.20	42.26	51.83	54.29	55.14	55.47	30.77	36.77	47.24	53.73	55.00	55.47
1996	37.95	42.08	51.57	54.17	55.09	55.03	30.27	36.52	46.50	53.53	55.12	55.03
1997	37.64	41.88	51.68	54.08	54.85	54.87	29.63	36.01	46.95	53.54	54.85	54.87
1998	38.84	42.91	52.08	53.69	54.00	53.75	30.92	37.18	48.72	53.46	54.12	53.75
2002	37.39	41.36	45.59	45.89	45.24	44.72	29.15	38.41	44.89	46.44	45.51	44.72

Source: Computations based on income tax panel (IEF, Panel IRPF IEF-AEAT 1982-1998) and income tax survey (IEF, Muestra de Declarantes IRPF 2002). Individuals are ranked according to gross income. The average marginal tax rate is weighted by gross income. See appendix for details.

Table 2.B.5. Top Income Shares in Spain (including Capital Gains) from income tax panel 1982-1998 and survey 2002

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1982	32.37	20.38	7.03	4.53	1.72	0.46	11.98	13.35	2.50	2.81	1.26	0.46
1983	32.50	20.44	6.96	4.42	1.61	0.38	12.05	13.48	2.54	2.80	1.23	0.38
1984	32.38	20.78	7.09	4.52	1.69	0.46	11.60	13.68	2.58	2.82	1.24	0.46
1985	32.13	20.70	7.06	4.48	1.66	0.47	11.42	13.64	2.58	2.82	1.19	0.47
1986	32.69	21.21	7.38	4.72	1.77	0.48	11.48	13.83	2.66	2.94	1.29	0.48
1987	33.23	21.69	7.72	5.02	1.99	0.57	11.54	13.97	2.70	3.03	1.42	0.57
1988	34.58	22.76	8.29	5.43	2.18	0.60	11.82	14.47	2.85	3.25	1.58	0.60
1989	35.16	23.13	8.47	5.59	2.32	0.76	12.03	14.66	2.88	3.27	1.56	0.76
1990	34.97	22.82	8.28	5.44	2.21	0.68	12.15	14.53	2.85	3.23	1.53	0.68
1991	34.43	22.32	7.95	5.13	1.95	0.52	12.11	14.37	2.82	3.18	1.43	0.52
1992	33.58	21.93	8.05	5.23	2.00	0.52	11.65	13.88	2.81	3.23	1.48	0.52
1993	33.24	21.70	7.99	5.21	2.05	0.64	11.54	13.71	2.78	3.17	1.41	0.64
1994	33.87	22.11	8.17	5.36	2.12	0.64	11.77	13.94	2.81	3.24	1.47	0.64
1995	33.53	21.89	8.10	5.30	2.09	0.64	11.64	13.79	2.80	3.21	1.45	0.64
1996	33.09	21.74	8.16	5.42	2.23	0.78	11.35	13.58	2.74	3.18	1.46	0.78
1997	33.33	22.01	8.36	5.58	2.29	0.71	11.32	13.65	2.79	3.28	1.58	0.71
1998	33.88	22.60	8.82	5.98	2.57	0.82	11.28	13.78	2.84	3.40	1.75	0.82
2002	34.32	23.16	9.51	6.64	3.05	1.04	11.17	13.64	2.88	3.59	2.01	1.04

Source: Computations based on income tax panel (IEF, Panel IRPF IEF-AEAT 1982-1998) and income tax survey (IEF, Muestra de Declarantes IRPF 2002)

Table 2.B.6. Top Income Shares in Spain (excluding Capital Gains) from income tax panel 1982-1998 and survey 2002

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1982	32.18	20.19	6.86	4.39	1.63	0.43	11.99	13.33	2.47	2.75	1.21	0.43
1983	32.34	20.28	6.83	4.31	1.56	0.38	12.06	13.45	2.52	2.75	1.17	0.38
1984	32.15	20.54	6.91	4.35	1.59	0.41	11.60	13.64	2.55	2.77	1.18	0.41
1985	31.90	20.48	6.88	4.32	1.56	0.41	11.43	13.60	2.55	2.76	1.15	0.41
1986	32.30	20.81	7.06	4.46	1.61	0.41	11.49	13.75	2.61	2.84	1.21	0.41
1987	32.79	21.25	7.36	4.71	1.78	0.48	11.55	13.89	2.65	2.93	1.30	0.48
1988	33.67	22.20	7.86	5.07	1.96	0.52	11.48	14.34	2.78	3.11	1.44	0.52
1989	34.11	22.58	7.96	5.14	1.99	0.54	11.53	14.61	2.82	3.15	1.45	0.54
1990	34.00	22.33	7.83	5.02	1.89	0.49	11.67	14.50	2.81	3.13	1.40	0.49
1991	33.65	21.94	7.66	4.89	1.80	0.46	11.70	14.28	2.77	3.10	1.34	0.46
1992	32.76	21.49	7.76	5.01	1.88	0.49	11.27	13.73	2.75	3.13	1.40	0.49
1993	32.36	21.25	7.71	5.00	1.93	0.59	11.10	13.54	2.71	3.07	1.34	0.59
1994	32.80	21.59	7.80	5.05	1.91	0.52	11.21	13.79	2.75	3.14	1.39	0.52
1995	32.49	21.41	7.80	5.06	1.96	0.57	11.08	13.62	2.73	3.10	1.39	0.57
1996	32.05	21.19	7.75	5.07	1.99	0.60	10.86	13.43	2.69	3.08	1.38	0.60
1997	32.02	21.39	7.94	5.23	2.10	0.64	10.64	13.45	2.71	3.13	1.46	0.64
1998	31.79	21.61	8.13	5.40	2.20	0.65	10.18	13.48	2.73	3.20	1.56	0.65
2002	33.25	22.03	8.53	5.75	2.41	0.73	11.23	13.50	2.78	3.34	1.69	0.73

Source: Computations based on income tax panel (IEF, Panel IRPF IEF-AEAT 1982-1998) and income tax survey (IEF, Muestra de Declarantes IRPF 2002)

Table 2.C. Income Composition in Top Income Groups, 1981-2004

	Top 10%				Top 5%				Top 1%				Top 0.5%				Top 0.1%				Top 0.01%			
	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains
1981	80.5	8.6	10.2	0.7	76.1	10.8	12.2	1.0	59.3	18.5	20.0	2.3	50.3	22.4	24.3	3.0	30.0	30.2	34.8	5.0	16.8	32.9	41.9	8.5
1982	79.7	9.8	9.6	0.9	74.9	12.1	11.6	1.5	57.3	20.5	18.6	3.5	47.7	25.1	22.4	4.9	26.6	34.6	29.9	8.9	15.1	37.1	33.5	14.3
1983	80.5	9.3	9.6	0.6	76.1	11.4	11.6	1.0	60.2	18.6	18.7	2.4	51.5	22.3	22.8	3.3	31.6	29.3	32.8	6.3	18.2	30.3	41.2	10.3
1984	79.0	10.9	9.1	1.0	75.0	12.7	10.8	1.6	59.9	19.5	17.0	3.6	51.5	22.9	20.6	5.0	32.2	28.8	29.6	9.4	18.2	27.8	36.5	17.5
1985	77.0	11.6	8.9	2.5	72.3	13.9	10.4	3.4	55.9	21.3	15.9	6.9	47.3	24.9	19.1	8.8	28.9	31.6	26.1	13.4	17.3	33.2	31.9	17.6
1986	73.5	13.5	9.1	3.9	68.0	15.8	10.7	5.5	49.2	23.0	16.4	11.4	39.8	26.2	19.1	14.8	22.4	30.7	23.9	23.0	13.3	26.8	24.6	35.3
1987	72.9	14.0	8.9	4.2	67.2	16.2	10.7	5.9	48.3	22.5	16.8	12.4	38.9	24.7	19.9	16.5	20.8	26.0	25.5	27.6	11.4	21.9	26.1	40.6
1988	72.6	14.3	8.6	4.5	66.9	16.9	10.0	6.3	47.0	24.4	15.2	13.4	37.9	26.7	17.7	17.7	21.8	26.6	21.4	30.2	11.8	21.3	20.7	46.2
1989	73.5	13.9	9.1	3.5	68.1	16.4	10.7	4.8	49.6	24.0	16.9	9.5	41.4	26.4	20.1	12.2	26.6	28.2	26.4	18.9	18.0	26.0	29.6	26.5
1990	73.6	13.2	10.3	3.0	68.4	15.6	12.0	4.0	51.2	22.5	18.4	7.9	43.7	24.5	21.7	10.1	29.5	26.7	28.1	15.7	21.5	26.5	31.1	20.9
1991	74.1	12.8	10.3	2.9	69.0	15.3	11.8	3.9	52.8	22.4	17.5	7.3	45.4	24.9	20.5	9.2	31.9	28.3	25.8	13.9	23.0	29.9	28.6	18.5
1992	73.1	14.3	10.5	2.1	68.4	16.7	12.3	2.7	56.6	22.7	16.3	4.5	50.7	25.3	18.4	5.7	38.7	30.0	22.5	8.9	29.0	33.6	25.1	12.3
1993	73.2	13.2	10.4	3.3	68.6	15.2	11.8	4.4	56.8	20.9	14.9	7.5	51.0	23.5	16.5	9.0	39.5	28.4	19.7	12.4	30.8	31.6	21.9	15.8
1994	74.8	13.3	8.4	3.5	70.2	15.6	9.6	4.5	58.2	22.4	11.9	7.5	52.4	25.6	13.2	8.9	40.7	32.2	15.5	11.6	25.6	39.6	18.6	16.3
1995	75.3	12.7	8.5	3.6	70.5	14.7	10.0	4.8	58.0	20.7	13.5	7.9	52.0	23.3	15.4	9.3	40.3	28.1	19.5	12.1	26.4	30.8	25.6	17.2
1996	76.3	11.8	8.5	3.4	71.7	13.8	10.0	4.5	59.0	20.0	13.3	7.7	52.9	22.6	15.1	9.4	40.4	27.7	18.7	13.3	25.8	30.9	22.8	20.5
1997	76.5	12.1	6.9	4.6	71.5	14.2	8.3	6.0	58.3	20.2	11.5	10.0	52.2	22.6	13.2	12.0	39.3	27.7	16.4	16.6	25.2	31.3	18.2	25.3
1998	74.6	12.0	6.2	7.2	69.0	14.1	7.6	9.3	54.8	19.7	10.9	14.6	48.6	21.7	12.4	17.3	36.0	26.1	14.8	23.1	27.5	22.7	15.3	34.6
1999	73.6	12.1	7.4	6.9	68.5	14.0	8.8	8.8	54.7	18.7	11.8	14.8	48.7	20.1	13.1	18.1	36.4	21.9	15.0	26.8	28.3	17.4	14.7	39.6
2000	73.0	11.2	7.7	8.2	67.6	12.8	9.0	10.6	53.5	16.5	11.9	18.1	48.0	17.2	12.9	21.9	36.8	17.5	13.7	32.0	29.7	13.5	12.8	44.0
2001	74.1	11.1	8.2	6.6	68.9	12.7	9.6	8.9	55.2	16.1	12.4	16.3	49.6	16.8	13.3	20.4	37.3	17.1	13.9	31.7	30.3	13.3	13.1	43.3
2002	74.6	11.2	8.1	6.1	69.4	13.0	9.4	8.2	55.7	17.0	12.3	15.0	49.8	18.2	13.3	18.7	38.0	19.4	14.2	28.4	29.7	16.0	13.1	42.1
2003	74.1	10.5	7.2	8.3	68.1	12.3	8.4	11.3	51.9	16.3	11.0	20.8	44.8	17.3	12.0	25.9	30.9	18.0	12.5	38.6	19.9	15.6	10.7	53.9
2004	72.8	10.4	7.5	9.4	66.4	12.1	8.7	12.8	49.2	16.0	11.5	23.3	42.0	17.0	12.4	28.6	27.5	17.8	12.7	42.1	17.9	16.7	10.4	55.0

Notes: Fractiles defined by size of total income. For each fractile, the first four columns (summing to 100%) give the percentage of wage income (wages and salaries, pensions, other employment income), entrepreneurial income (self-employment income, farm income, and small business income), and capital income (dividends, interest, rents, foreign and other investment income), and capital gains in total income

Details on methodology are presented in Appendix.

Source: Computations based on tax return statistics

Table 2.C (continued). Income Composition in Top Income Groups, 1981-2004

	Top 10-5%				Top 5-1%				Top 1-0.5%				Top 0.5-0.1%				Top 0.1-0.01%				Top 0.01%			
	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains	Wage	Entrep.	Capital	K gains
1981	89.3	4.3	6.5	-0.1	86.0	6.2	7.5	0.2	76.2	11.0	11.8	1.0	63.4	17.3	17.6	1.8	35.5	29.1	31.8	3.6	16.8	32.9	41.9	8.5
1982	89.5	5.2	5.6	-0.3	85.6	6.9	7.3	0.3	76.2	11.5	11.3	0.9	62.4	18.5	17.1	2.0	31.8	33.5	28.3	6.4	15.1	37.1	33.5	14.3
1983	89.3	5.3	5.7	-0.2	85.3	7.1	7.4	0.2	76.6	11.6	11.1	0.8	64.4	17.8	16.4	1.4	37.6	28.9	28.9	4.5	18.2	30.3	41.2	10.3
1984	87.1	7.2	5.7	0.0	83.7	8.8	7.1	0.3	75.6	13.2	10.2	1.1	64.0	19.1	14.8	2.2	38.9	29.3	26.2	5.6	18.2	27.8	36.5	17.5
1985	86.7	7.1	5.8	0.5	82.1	9.4	7.1	1.4	72.5	14.3	9.9	3.3	59.4	20.5	14.4	5.7	33.9	30.9	23.6	11.6	17.3	33.2	31.9	17.6
1986	85.3	8.7	5.5	0.6	80.0	11.2	7.1	1.7	68.7	16.4	10.6	4.2	53.4	22.7	15.5	8.5	27.7	33.0	23.5	15.8	13.3	26.8	24.6	35.3
1987	85.2	9.1	5.1	0.6	79.7	12.1	6.6	1.6	68.5	17.8	10.1	3.7	54.3	23.5	15.2	7.0	27.3	28.9	25.1	18.7	11.4	21.9	26.1	40.6
1988	84.3	9.1	5.7	0.9	79.3	12.2	6.7	1.8	66.4	19.7	9.9	4.1	51.1	26.8	14.6	7.6	28.1	29.9	21.8	20.2	11.8	21.3	20.7	46.2
1989	84.2	8.8	6.1	1.0	79.2	11.8	7.0	2.0	66.2	19.4	10.4	4.0	52.1	25.1	15.5	7.4	30.7	29.2	24.9	15.2	18.0	26.0	29.6	26.5
1990	83.7	8.4	7.1	0.9	78.5	11.6	8.2	1.8	66.2	18.4	11.9	3.5	53.7	23.1	17.1	6.2	33.0	26.7	26.8	13.5	21.5	26.5	31.1	20.9
1991	83.8	7.9	7.4	0.9	78.5	11.1	8.5	2.0	67.0	17.6	11.9	3.5	54.6	22.5	16.9	6.0	35.7	27.7	24.7	12.0	23.0	29.9	28.6	18.5
1992	81.8	10.0	7.2	1.1	75.3	13.2	9.9	1.6	67.6	17.7	12.3	2.4	58.3	22.3	15.8	3.6	42.5	28.5	21.4	7.6	29.0	33.6	25.1	12.3
1993	82.1	9.3	7.5	1.0	75.5	11.8	10.1	2.6	67.6	15.8	11.8	4.7	58.4	20.4	14.4	6.8	42.8	27.2	18.9	11.1	30.8	31.6	21.9	15.8
1994	83.5	8.9	6.1	1.5	77.3	11.7	8.3	2.8	69.3	16.3	9.7	4.8	59.9	21.3	11.6	7.2	46.3	29.5	14.4	9.9	25.6	39.6	18.6	16.3
1995	84.3	8.7	5.6	1.4	78.0	11.1	7.9	2.9	69.3	15.6	9.8	5.3	59.6	20.2	12.7	7.5	45.5	27.0	17.3	10.2	26.4	30.8	25.6	17.2
1996	85.1	7.8	5.8	1.3	79.3	10.1	8.0	2.6	70.9	14.8	9.9	4.4	61.1	19.3	12.7	6.9	46.0	26.5	17.1	10.5	25.8	30.9	22.8	20.5
1997	86.2	7.9	4.1	1.8	79.7	10.5	6.2	3.6	70.4	15.3	8.3	6.1	61.2	19.0	10.9	8.9	45.0	26.3	15.7	13.0	25.2	31.3	18.2	25.3
1998	85.9	7.6	3.4	3.1	78.2	10.5	5.5	5.9	67.7	15.6	7.7	9.1	57.8	18.6	10.6	13.0	40.4	28.0	14.7	17.0	27.5	22.7	15.3	34.6
1999	84.2	8.2	4.7	2.9	77.8	10.8	6.7	4.8	68.2	15.4	9.0	7.5	59.0	18.6	11.5	10.9	40.8	24.3	15.2	19.8	28.3	17.4	14.7	39.6
2000	84.6	7.7	4.8	2.9	77.6	10.2	6.9	5.3	66.7	14.7	9.7	9.0	58.1	17.0	12.1	12.8	40.9	20.1	14.4	24.6	29.7	13.5	12.8	44.0
2001	84.9	7.7	5.4	1.9	78.5	10.3	7.6	3.6	68.6	14.5	10.3	6.7	60.6	16.5	12.7	10.2	41.4	19.5	14.6	24.5	30.3	13.3	13.1	43.3
2002	85.2	7.7	5.4	1.8	78.9	10.2	7.4	3.5	69.3	14.3	10.0	6.4	59.7	17.1	12.6	10.6	42.2	21.1	15.3	21.5	29.7	16.0	12.2	42.1
2003	86.8	6.7	4.6	1.9	80.1	9.3	6.4	4.2	69.4	13.7	8.7	8.2	57.8	16.8	11.5	14.0	37.2	19.3	13.6	30.0	19.9	15.6	10.7	53.9
2004	86.7	6.5	4.7	2.1	79.5	9.2	6.6	4.7	67.8	13.5	9.2	9.5	55.9	16.3	12.2	15.6	32.9	18.4	13.9	34.8	17.9	16.7	10.4	55.0

Notes: Fractiles defined by size of total income. For each fractile, the first four columns (summing to 100%) give the percentage of
wage income (wages and salaries, pensions, other employment income), entrepreneurial income (self-employment income, farm
income, and small business income), and capital income (dividends, interest, rents, foreign and other investment income), and capital gains in total income
Details on methodology are presented in Appendix.
Source: Computations based on tax return statistics

Table 2.D. Top Wage Income Shares in Spain from panel of tax returns 1982-2002

	Total number of employees ('000s)	Total income (millions of 2000 Euros)	CPI (base 2000)	Top 10%	Top 5%	Top 1%	Top 0.5%	Top 0.1%	Top 10-5%	Top 5-1%	Top 1-0.5%	Top 0.5-0.1%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(11)
1982	8,614	130,566	36.818	22.47	13.58	4.08	2.45	0.78	8.88	9.51	1.63	1.67
1983	8,558	129,996	41.560	22.63	13.70	4.06	2.41	0.75	8.93	9.64	1.65	1.66
1984	8,305	125,575	45.911	22.96	13.91	4.12	2.46	0.78	9.06	9.78	1.66	1.68
1985	8,370	127,945	49.926	23.00	13.92	4.11	2.45	0.79	9.08	9.81	1.66	1.67
1986	8,645	132,199	54.289	23.52	14.26	4.24	2.53	0.79	9.27	10.02	1.71	1.74
1987	9,060	140,830	57.162	24.29	14.81	4.46	2.69	0.87	9.48	10.34	1.77	1.82
1988	9,440	151,014	60.119	25.26	15.44	4.73	2.86	0.96	9.83	10.71	1.86	1.90
1989	9,964	159,103	64.116	26.41	16.16	4.99	3.02	1.01	10.26	11.17	1.97	2.01
1990	10,441	171,909	68.359	26.94	16.51	5.17	3.18	1.07	10.43	11.34	2.00	2.11
1991	10,653	180,661	72.494	26.82	16.46	5.18	3.20	1.09	10.37	11.28	1.98	2.11
1992	10,425	182,197	76.647	25.76	16.06	5.29	3.32	1.19	9.70	10.77	1.98	2.13
1993	10,138	179,779	80.307	25.67	16.06	5.40	3.44	1.35	9.61	10.66	1.96	2.09
1994	10,102	175,524	84.021	25.92	16.13	5.35	3.38	1.23	9.79	10.78	1.98	2.14
1995	10,346	179,861	87.682	25.91	16.14	5.36	3.39	1.24	9.77	10.77	1.97	2.15
1996	10,480	182,682	90.825	25.92	16.16	5.43	3.45	1.31	9.76	10.74	1.97	2.14
1997	10,889	190,323	92.989	26.11	16.35	5.51	3.55	1.34	9.76	10.84	1.96	2.20
1998	11,348	201,283	94.485	26.25	16.48	5.59	3.60	1.37	9.77	10.89	1.99	2.23
2002	12,998	230,840	106.598	27.33	17.54	6.41	4.25	1.73	9.79	11.13	2.16	2.52

Source: Computations based on income tax panel (IEF, Panel IRPF IEF-AEAT 1982-1998) and income tax survey (IEF, Muestra de Declarantes IRPF 2002).
See Appendix for details.

Table 2.E.1. Top Wealth Shares in Spain, 1982-2004

	Top 1% (1)	Top .5% (2)	Top .1% (3)	Top .01% (4)	Top 1-.5% (5)	Top .5-.1% (6)	Top .1-.01% (7)	Top .01% (8)
A. Top Wealth Shares Including Real Estate								
1982	19.81	15.50	7.83	2.58	4.31	7.66	5.25	2.58
1983	19.41	15.08	7.74	2.68	4.33	7.35	5.05	2.68
1984	18.85	14.61	7.40	2.46	4.24	7.20	4.94	2.46
1985	19.11	14.64	7.27	2.37	4.46	7.37	4.90	2.37
1986	19.52	14.92	7.43	2.55	4.60	7.49	4.88	2.55
1987	19.04	14.44	7.03	2.31	4.60	7.41	4.72	2.31
1988	17.28	12.98	6.36	2.04	4.30	6.62	4.32	2.04
1989	16.88	12.62	6.04	1.92	4.26	6.58	4.11	1.92
1990	16.82	12.38	5.79	1.78	4.44	6.60	4.01	1.78
1991	16.12	11.73	5.39	1.59	4.39	6.34	3.79	1.59
1992	16.02	11.63	5.32	1.60	4.39	6.32	3.72	1.60
1993	16.62	11.84	5.46	1.66	4.78	6.38	3.80	1.66
1994	16.33	11.50	5.18	1.53	4.83	6.32	3.66	1.53
1995	15.93	11.20	5.00	1.47	4.73	6.20	3.52	1.47
1996	16.62	11.75	5.25	1.56	4.88	6.50	3.69	1.56
1997	17.39	12.17	5.39	1.59	5.23	6.78	3.81	1.59
1998	17.22	12.03	5.36	1.61	5.19	6.67	3.74	1.61
1999	17.17	12.26	5.31	1.58	4.92	6.95	3.73	1.58
2000	17.30	12.42	5.39	1.58	4.88	7.03	3.81	1.58
2001	17.16	12.28	5.32	1.60	4.88	6.95	3.72	1.60
2002	18.27	13.10	5.60	1.57	5.18	7.49	4.03	1.57
2003	17.59	12.38	5.17	1.44	5.21	7.22	3.73	1.44
2004	17.61	12.37	5.17	1.44	5.24	7.21	3.73	1.44
B. Top Financial Wealth Shares (excluding real estate)								
1982	24.85	21.36	13.16	5.46	3.49	8.20	7.70	5.46
1983	25.22	21.36	13.34	5.99	3.87	8.02	7.35	5.99
1984	23.40	19.72	12.20	5.32	3.68	7.51	6.89	5.32
1985	23.73	19.75	11.97	5.09	3.98	7.78	6.88	5.09
1986	25.41	21.06	12.82	5.61	4.35	8.24	7.21	5.61
1987	24.77	20.47	12.48	5.32	4.30	7.99	7.16	5.32
1988	24.68	20.06	11.64	4.93	4.62	8.43	6.71	4.93
1989	24.76	20.24	11.66	5.01	4.52	8.58	6.64	5.01
1990	25.78	20.92	11.77	4.91	4.86	9.15	6.85	4.91
1991	24.74	19.98	11.09	4.54	4.76	8.89	6.55	4.54
1992	23.35	18.72	10.19	4.15	4.64	8.53	6.04	4.15
1993	23.25	18.18	9.97	4.05	5.07	8.21	5.92	4.05
1994	22.08	17.03	9.02	3.52	5.06	8.01	5.50	3.52
1995	20.77	15.85	8.37	3.25	4.92	7.48	5.12	3.25
1996	21.28	16.16	8.59	3.32	5.12	7.57	5.28	3.32
1997	21.94	16.32	8.63	3.20	5.62	7.69	5.42	3.20
1998	21.17	15.64	8.39	3.15	5.53	7.25	5.24	3.15
1999	22.04	17.27	9.07	3.41	4.78	8.20	5.66	3.41
2000	24.34	19.06	10.02	3.74	5.28	9.03	6.29	3.74
2001	24.79	19.44	10.36	4.04	5.35	9.08	6.32	4.04
2002	26.19	20.58	10.90	4.13	5.61	9.68	6.77	4.13
2003	25.13	19.77	10.43	3.98	5.36	9.34	6.45	3.98
2004	25.61	20.21	10.76	4.22	5.40	9.44	6.55	4.22

Notes: Computations by authors on wealth tax return statistics.
See details in Appendix.

Table 2.E2. Composition in Top Wealth Groups, 1982-2002

	Top 1-0.5%						Top 0.5-0.1%						Top 0.1-0.01%						Top 0.01%					
	Real estate	Busi-ness	Fixed claim	Stock	Other	Debts	Real estate	Busi-ness	Fixed claim	Stock	Other	Debts	Real estate	Busi-ness	Fixed claim	Stock	Other	Debts	Real estate	Busi-ness	Fixed claim	Stock	Other	Debts
1982	75.3	4.9	13.6	6.5	3.6	-3.9	67.6	5.6	12.7	12.2	4.5	-2.6	55.8	5.2	11.3	24.7	5.6	-2.5	36.8	2.9	10.7	46.2	5.6	-2.2
1983	73.2	5.1	14.5	7.0	3.6	-3.4	67.2	5.4	12.9	12.8	4.6	-2.9	56.3	4.8	11.6	23.8	5.7	-2.2	33.0	2.5	12.8	39.6	13.3	-1.1
1984	73.9	4.6	14.0	7.1	3.5	-3.1	68.7	4.8	12.2	12.5	4.6	-2.7	58.2	4.1	11.0	23.3	5.6	-2.1	35.0	2.3	11.2	45.4	7.1	-1.1
1985	73.2	4.3	14.2	7.7	3.7	-3.2	68.3	4.4	12.2	13.2	4.6	-2.7	57.9	3.7	11.0	24.1	5.5	-2.1	35.5	2.2	10.6	46.0	6.8	-1.1
1986	71.6	4.2	14.0	9.5	3.9	-3.2	66.9	4.1	12.1	15.0	4.8	-2.8	55.7	3.3	10.8	27.1	5.7	-2.5	33.9	2.0	14.6	46.2	5.6	-2.3
1987	70.6	4.1	13.9	10.7	4.2	-3.5	66.1	3.9	12.3	15.9	4.9	-3.1	52.3	2.9	11.1	30.4	6.0	-2.8	27.5	1.8	11.5	55.2	6.6	-2.6
1988	68.7	3.3	13.3	12.9	4.7	-2.8	62.9	2.7	12.3	19.2	5.5	-2.6	54.8	2.3	12.0	27.2	6.3	-2.5	29.7	1.4	12.3	50.9	8.7	-3.0
1989	71.0	2.9	12.9	11.8	4.2	-2.8	64.4	2.4	11.7	19.1	5.1	-2.6	55.9	1.9	11.4	27.4	5.9	-2.5	28.8	1.1	12.0	53.3	7.5	-2.7
1990	72.6	2.6	13.9	9.5	4.0	-2.7	65.3	2.3	12.4	17.6	5.0	-2.5	57.3	1.9	12.1	25.6	5.8	-2.5	31.0	1.2	11.2	52.1	7.3	-2.8
1991	74.3	2.3	12.8	9.8	3.4	-2.6	67.9	2.0	10.8	18.8	3.1	-2.5	60.4	1.8	10.3	27.0	3.2	-2.6	33.6	1.1	9.4	55.3	3.5	-3.1
1992	71.9	2.9	15.1	10.8	2.1	-2.8	63.9	2.6	11.4	21.9	2.9	-2.7	56.7	2.2	10.7	29.9	3.3	-2.7	30.6	1.4	8.5	58.6	4.0	-3.0
1993	69.4	2.7	14.1	14.3	2.2	-2.7	62.7	2.5	10.7	23.8	2.8	-2.6	54.9	2.1	9.7	32.9	3.1	-2.7	29.5	1.2	7.4	61.5	3.4	-3.3
1994	68.7	2.4	14.1	15.4	2.1	-2.7	62.3	2.2	10.9	24.4	2.8	-2.6	55.5	1.9	9.9	32.6	3.0	-2.8	30.9	1.1	7.9	59.9	3.4	-3.1
1995	66.8	2.2	14.6	16.8	2.1	-2.6	61.6	2.2	11.5	24.6	2.7	-2.5	54.4	1.9	10.2	33.4	2.9	-2.8	30.2	1.1	7.9	60.7	3.3	-3.1
1996	64.7	2.1	12.8	20.6	2.2	-2.3	60.8	2.0	10.5	26.2	2.5	-2.1	52.0	1.8	9.0	36.1	2.9	-1.8	28.5	1.2	6.8	60.6	3.9	-1.0
1997	60.9	2.1	10.4	26.8	2.2	-2.3	58.7	2.1	9.4	29.7	2.4	-2.2	48.2	1.7	8.2	41.4	2.7	-2.3	26.7	1.0	6.5	64.9	3.5	-2.7
1998	58.6	1.9	9.2	30.3	2.3	-2.3	57.8	1.9	8.9	31.3	2.3	-2.2	45.7	1.5	7.9	44.4	2.8	-2.3	24.2	1.0	6.9	67.1	3.5	-2.7
1999	63.1	1.8	10.5	25.0	1.9	-2.3	55.2	1.7	8.9	33.9	2.4	-2.1	42.4	1.4	8.0	47.5	3.0	-2.3	18.3	0.8	7.8	71.4	4.4	-2.6
2000	62.8	1.7	11.5	24.1	1.9	-1.9	55.8	1.6	9.7	32.3	2.5	-2.0	43.3	1.3	8.7	45.6	3.3	-2.2	18.9	0.8	8.7	69.5	5.0	-2.9
2001	65.1	1.6	11.4	22.0	1.8	-1.8	58.4	1.7	9.7	29.7	2.3	-1.9	45.9	1.4	8.7	43.0	3.1	-2.1	19.9	0.7	7.5	70.0	4.5	-2.5
2002	70.8	1.5	10.1	17.8	1.5	-1.7	65.3	1.4	8.4	24.5	2.0	-1.7	54.9	1.2	7.4	35.5	2.7	-1.7	29.3	0.7	6.6	61.8	3.8	-2.1
2003	73.4	1.3	8.7	16.9	1.3	-1.6	66.6	1.3	7.7	24.3	1.9	-1.6	55.4	1.3	7.0	35.5	2.6	-1.8	28.3	0.7	5.8	63.4	3.8	-1.9
2004	74.2	1.2	8.2	16.7	1.3	-1.6	67.3	1.2	7.4	24.0	1.8	-1.7	56.1	1.1	6.9	35.2	2.6	-1.9	27.0	0.6	5.9	64.8	3.8	-2.0

Notes: Fractiles defined by size of total wealth. For each fractile, the six columns (summing to 100%) give the percentage of
real estate, business assets, fixed claim assets (cash, deposits, bonds), stock (publicly traded and closely held), other (insurance, annuities, and other small items) in total wealth.
Details on methodology are presented in Appendix.
Source: Computations based on wealth tax return statistics

Table 2.E.3. Aggregate Net Worth and Composition, Households Wealth Survey 2002 vs. Tax Statistics

	Units	Total Financial Wealth		Total Wealth		top shares	Wealth Composition					
	Adults	Total Net Financial Wealth (millions 2000 Euros)	Average (2000 Euros)	Total Net Wealth (millions 2000 Euros)	Average (2000 Euros)	(%)	Real Estate (%)	Fixed Claim Assets (%)	Stocks (%)	Business (%)	Other (%)	Debts (%)
	('000s)											
Total from tax stats.	30,249	811,933	26,842	3,022,332	99,915							
Total from survey	32,339	387,417	11,980	1,977,929	61,163		88.07	6.60	5.39	8.52	0.96	-9.55
A. Including real estate. Individual distribution from tax returns												
top 1%	302			552,180	1,825,449	18.27	61.48	8.52	28.25	1.31	2.17	-1.72
top 0.5%	151			395,774	2,616,777	13.10	57.79	7.90	32.37	1.26	2.43	-1.74
top 0.1%	30			169,311	5,597,244	5.60	47.74	7.18	42.87	1.07	2.99	-1.84
top 1-0.5%				156,406		5.18						
top 0.5-0.1%				226,463		7.49						
top 0.1%				169,311		5.60						
B. Excluding real estate. Individual distribution from tax returns												
top 1%	302	197,592	653,218			24.34						
top 0.5%	151	154,722	1,022,989			19.06						
top 0.1%	30	81,372	2,690,070			10.02						
top 1-0.5%		42,870				5.28						
top 0.5-0.1%		73,350				9.03						
top 0.1%		81,372				10.02						
C. Including real estate. Individual distribution from the survey assuming that all wealth belongs to the head of household												
top 10%	3,234	324,673	100,398	1,252,960	387,450	63.35	78.06	6.03	7.67	11.96	1.14	-4.86
top 5%	1,617	278,134	172,013	902,939	558,428	45.65	72.93	5.65	9.80	14.69	1.42	-4.49
top 1%	323	176,129	544,639	401,837	1,242,592	20.32	58.55	4.76	16.80	20.62	2.22	-2.94
top 0.5%	162	144,511	893,734	292,866	1,811,243	14.81	52.70	4.59	20.29	22.33	2.62	-2.53
top 0.1%	32	90,772	2,806,910	137,602	4,255,030	6.96	35.19	3.40	30.65	31.18	1.02	-1.44
top 10-5%		46,540		350,020		17.70						
top 5-1%		102,005		501,102		25.33						
top 1-0.5%		31,618		108,971		5.51						
top 0.5-0.1%		53,739		155,264		7.85						
top 0.1%		90,772		137,602		6.96						
D. Excluding real estate. Individual distribution from the survey assuming that all wealth belongs to the head of household												
top 10%	3,234	369,197	114,166			95.30						
top 5%	1,617	323,762	200,232			83.57						
top 1%	323	208,686	645,316			53.87						
top 0.5%	162	165,658	1,024,520			42.76						
top 0.1%	32	102,122	3,157,898			26.36						
top 10-5%		45,436				11.73						
top 5-1%		115,075				29.70						
top 1-0.5%		43,029				11.11						
top 0.5-0.1%		63,536				16.40						
top 0.1%		102,122				26.36						
E. Including real estate. Individual distribution based on the survey assuming that wealth is divided e												
top 10%	3,234	292,241	90,369	1,006,744	311,313	50.90	74.88	5.96	8.91	13.66	1.39	-4.79
top 5%	1,617	244,438	151,174	716,443	443,088	36.22	69.26	5.70	11.33	16.19	1.55	-4.03
top 1%	323	151,786	469,365	328,579	1,016,058	16.61	56.70	4.52	18.15	21.23	2.74	-3.35
top 0.5%	162	130,652	808,025	234,869	1,452,558	11.87	46.75	4.29	22.99	25.65	3.12	-2.80
top 0.1%	32	80,162	2,478,835	109,222	3,377,463	5.52	27.86	3.04	32.87	36.65	1.11	-1.53
top 10-5%		47,803		290,301		14.68						
top 5-1%		92,651		387,864		19.61						
top 1-0.5%		21,134		93,710		4.74						
top 0.5-0.1%		50,490		125,646		6.35						
top 0.1%		80,162		109,222		5.52						
F. Excluding real estate. Individual distribution based on the survey assuming that wealth is divided e												
top 10%	3,234	339,119	104,865			87.53						
top 5%	1,617	288,455	178,396			74.46						
top 1%	323	178,137	550,848			45.98						
top 0.5%	162	143,099	885,002			36.94						
top 0.1%	32	86,684	2,680,503			22.37						
top 10-5%		50,664				13.08						
top 5-1%		110,318				28.48						
top 1-0.5%		35,038				9.04						
top 0.5-0.1%		56,415				14.56						
top 0.1%		86,684				22.37						

Source: Computations based on tax returns and Bank of Spain, Encuesta Financiera de las Familias 2002.
Notes: The number of total adults for the tax-based statistics (30,249 million) is smaller than the
number of total adults for the survey-based statistics (32,339 million) because the former excl

TABLE 2.F.1. Income Tax Rates 1933-1973

Income level (pesetas)		Tax Rate
from	to	(%)
1933-1935		
100,001	120,000	1.00
120,001	150,000	1.43
150,001	200,000	2.00
200,001	250,000	2.78
250,001	300,000	3.42
300,001	400,000	3.97
400,001	500,000	4.86
500,001	750,000	5.57
750,001	1,000,000	6.84
If rent exceeds 1,000,000:		
first 1,000,000		7.70
excess		11.00
1936-1940		
80,001	100,000	1.00
100,001	120,000	1.50
120,001	150,000	1.93
150,001	200,000	2.50
200,001	250,000	3.28
250,001	300,000	3.92
300,001	400,000	4.47
400,001	500,000	5.36
500,001	750,000	6.07
750,001	1,000,000	7.34
If rent exceeds 1,000,000:		
first 1,000,000		8.20
excess		11.00
1941		
70,001	100,000	7.50
100,001	250,000	18.00
250,001	500,000	25.00
500,001	1,000,000	30.00
over 1,000,000		40.00
1942-1953		
60,001	100,000	7.50
100,001	150,000	18.00
150,001	250,000	20.00
250,001	500,000	27.00
500,001	1,000,000	33.00
over 1,000,000		44.00
1954-1956		
100,001	125,000	2.50
125,001	150,000	2.90
150,001	175,000	3.85
175,001	200,000	4.60
200,001	250,000	5.90
250,001	300,000	7.55
300,001	400,000	10.05
400,001	500,000	13.35
500,001	600,000	16.65
600,001	700,000	20.00
700,001	800,000	23.30
800,001	900,000	26.65
900,001	1,000,000	29.85
over 1,000,000		33.00
1957-1965		
100,001	125,000	2.50
125,001	175,000	3.85
175,001	200,000	4.60
200,001	250,000	5.90
250,001	300,000	7.55
300,001	400,000	10.05
400,001	500,000	13.35
500,001	600,000	16.65
600,001	700,000	20.00
700,001	800,000	23.30
800,001	900,000	26.65
900,001	1,000,000	29.85
1,000,001	2,000,000	33.00
2,000,001	3,000,000	35.65
3,000,001	4,000,000	37.75
4,000,001	5,000,000	39.30
5,000,001	6,000,000	42.00
over 6,000,000		44.00
1966-1973		
0	100,000	15.00
100,001	200,000	18.20
200,001	300,000	26.60
300,001	400,000	23.00
400,001	500,000	25.40
500,001	600,000	27.80
600,001	700,000	30.50
700,001	800,000	33.40
800,001	900,000	36.30
900,001	1,000,000	39.20
1,000,001	1,100,000	42.10
1,100,001	1,300,000	47.20
1,300,001	1,600,000	56.10
over 1,600,000		61.40

Table 2.F.2. Total Number of Tax Returns and Inspections: 1933-1974

	# Tax returns	# Tax returns with positive taxable income	# Inspected Files
	(1)	(2)	(3)
1933	1,446	1,446	
1934	1,792	1,792	
1935	2,880	2,880	
1936	3,507	3,507	
1937	1,542	1,542	
1938	1,978	1,978	
1939	2,289	2,289	
1940	3,840	3,840	
1941	4,495	4,495	
1942	5,123	5,123	
1943	5,538	5,538	
1944	12,312	5,849	1,147
1945	11,817	6,629	1,140
1946	13,189	8,223	2,096
1947	17,897	7,983	1,964
1948	16,649	9,067	2,933
1949	19,755	10,111	3,294
1950	22,930	12,419	3,403
1951	23,887	13,597	3,524
1952	26,373	15,427	2,772
1953	27,653	16,545	1,118
1954	89,460	21,332	2,638
1955	98,604	26,716	1,915
1956	109,026		1,074
1957	119,618	38,493	1,306
1958	175,172	35,581	1,794
1959	190,791	42,246	
1960	197,842		
1961	222,593	26,623	
1962	240,179		
1963	296,701		3,183
1964	323,223		3,231
1965	347,434		2,947
1966			2,536
1967			4,612
1968	199,592	5,777	6,595
1969	228,132	13,709	8,979
1970	263,181	20,072	7,813
1971	338,989	22,556	4,045
1972	350,761	29,329	
1973	498,663	36,663	
1974	1,318,313	28,236	

Sources: Income tax statistics published by the fiscal administration for years 1933 to 1971;

Gota Losada (1966); Instituto de Estudios Fiscales (1973); Martí Basterrechea (1974).

Table 2.F.3. Number of Tax Inspections: 1986-2002

	Income Tax		Wealth Tax	
	# Tax Returns ('000s)	# Inspected Files ('000s)	# Tax Returns ('000s)	# Inspected Files ('000s)
1986	7,896	34.90	781	n/a
1987	8,028	33.75	887	9.34
1988	8,954	25.04	756	6.97
1989	9,845	16.45	855	5.40
1990	10,965	28.05	974	9.58
1991	11,584	21.31	1,033	7.04
1992	12,341	33.39	863	9.61
1993	12,794	31.93	928	7.46
1994	13,578	25.77	809	4.89
1995	14,119	21.28	783	3.26
1996	14,620	18.97	825	2.23
1997	15,000	15.34	892	1.73
1998	15,424	10.06	946	1.21
1999	13,797	10.90	981	1.14
2000	14,123	9.67	869	1.07
2001	14,734	8.34	874	0.99
2002	15,410	8.25	884	0.92

Source: Agencia Tributaria, Memoria de Actividades, various years.

TABLE 2.G. Structure of Tax Revenues. Spain 1930-1979

National Government Tax Receipts as % of GDP

	Direct Taxes								Indirect Taxes					Total Taxes
	Rents (1)	Entrepreneurial Income (2)	Capital Income (3)	Wage Income (4)	Personal Income (5)	Corporate Tax (6)	Gifts and Estate (7)	Total (1)-(7) (8)	Customs (9)	Tax Stamp (10)	Consumption (11)	Luxury (12)	Total (9)-(12) (13)	Direct plus Indirect Taxes (14)
1930	1.08	0.60	0.58	0.39		0.36	0.62	3.63	1.70	1.04	0.98		3.72	7.35
1931	1.12	0.60	0.62	0.40		0.40	0.64	3.77	1.51	0.99	1.03		3.53	7.30
1932	1.21	0.66	0.60	0.41		0.32	0.59	3.80	1.66	1.08	1.16		3.91	7.70
1933	1.31	0.69	0.65	0.43	0.03	0.37	0.64	4.12	1.50	1.19	1.08		3.76	7.88
1934	1.20	0.62	0.63	0.44	0.04	0.27	0.63	3.82	1.37	1.04	0.94		3.36	7.18
1935	1.22	0.61	0.63	0.47	0.04	0.31	0.62	3.91	1.32	1.11	0.94		3.37	7.28
1936														
1937														
1938														
1939														
1940	0.99	0.51	0.44	0.52	0.04	0.19	1.28	3.95	0.47	0.85	0.97		2.29	6.24
1941	1.12	0.82	0.50	0.62	0.06	0.61	0.98	4.71	0.48	0.93	1.44	0.79	3.64	8.34
1942	1.25	0.74	0.52	0.66	0.15	0.71	0.89	4.92	0.71	0.51	1.64	0.71	3.57	8.49
1943	1.19	0.71	0.46	0.75	0.17	0.75	0.88	4.91	1.01	0.94	2.10	0.81	4.85	9.76
1944	1.07	0.63	0.39	0.72	0.18	0.71	0.71	4.41	0.81	0.85	1.96	0.81	4.44	8.85
1945	1.15	0.67	0.47	0.81	0.19	0.85	0.79	4.92	0.53	0.83	1.82	0.88	4.06	8.98
1946	0.81	0.43	0.36	0.73	0.18	0.74	0.67	3.92	0.62	0.84	1.67	0.49	3.63	7.55
1947	0.86	0.44	0.44	0.77	0.17	0.80	0.78	4.26	0.68	0.91	1.76	0.43	3.77	8.04
1948	0.83	0.42	0.38	0.81	0.18	0.87	0.78	4.28	0.69	0.88	2.02	0.42	4.00	8.28
1949	0.81	0.40	0.60	0.86	0.19	1.01	0.67	4.53	0.54	0.89	2.73	0.41	4.56	9.09
1950	0.79	0.30	0.34	0.78	0.17	0.97	0.61	3.96	0.46	0.79	2.10	0.42	3.77	7.73
1951	0.65	0.34	0.34	0.73	0.13	0.88	0.59	3.67	0.37	0.72	1.89	0.41	3.39	7.06
1952	0.64	0.34	0.35	0.75	0.15	1.12	0.63	3.98	0.43	0.79	2.26	0.41	3.88	7.87
1953	0.68	0.35	0.36	0.87	0.18	1.34	0.61	4.38	0.45	0.79	2.30	0.44	3.98	8.36
1954	0.68	0.30	0.35	0.81	0.17	1.14	0.58	4.03	0.42	0.57	2.10	0.44	3.54	7.57
1955	0.72	0.30	0.42	0.71	0.10	1.21	0.63	4.10	0.44	0.59	2.20	0.49	3.72	7.81
1956	0.62	0.24	0.49	0.67	0.11	1.18	0.58	3.90	0.57	0.59	2.02	0.48	3.67	7.56
1957	0.54	0.22	0.50	0.78	0.13	1.20	0.59	3.95	0.35	0.71	2.09	0.46	3.60	7.55
1958	0.48	0.32	0.48	0.74	0.13	1.15	0.63	3.94	0.48	0.68	1.81	0.73	3.70	7.64
1959	0.44	0.40	0.37	0.76	0.17	1.24	0.67	4.06	0.51	0.72	1.84	0.93	4.00	8.05
1960	0.50	0.42	0.41	0.87	0.18	1.20	0.68	4.26	1.09	0.73	2.02	1.05	4.88	9.14
1961	0.42	0.39	0.39	0.82	0.16	1.15	0.66	3.99	1.64	0.71	1.80	1.03	5.18	9.17
1962	0.40	0.49	0.38	0.80	0.16	1.12	0.66	4.02	1.87	0.69	1.66	1.03	5.25	9.27
1963	0.35	0.46	0.32	0.76	0.16	0.97	0.66	3.67	1.89	0.71	1.54	1.04	5.18	8.85
1964	0.33	0.46	0.31	0.73	0.16	0.88	0.65	3.52	2.08	0.87	1.37	1.17	5.50	9.02
1965	0.31	0.47	0.38	0.66	0.15	0.92	0.55	3.43	2.26	1.18	0.91	1.29	5.64	9.08
1966	0.25	0.45	0.32	0.80	0.14	0.96	0.56	3.50	2.53	1.32	0.77	1.34	5.96	9.45
1967	0.25	0.47	0.33	0.83	0.15	0.98	0.60	3.59	2.19	1.41	0.88	1.43	5.91	9.50
1968	0.22	0.48	0.34	0.74	0.16	0.92	0.60	3.46	1.96	1.44	0.85	1.43	5.67	9.13
1969	0.23	0.45	0.34	0.79	0.15	1.05	0.64	3.67	2.07	1.53	0.86	1.55	6.01	9.67
1970	0.26	0.46	0.36	0.89	0.14	1.02	0.66	3.78	2.05	0.44	0.89	1.57	4.95	8.74
1971	0.28	0.47	0.39	1.01	0.17	1.05	0.70	4.07	1.83	1.66	0.91	0.56	4.96	9.03
1972	0.29	0.43	0.38	1.09	0.16	1.05	0.75	4.15	2.08	1.64	0.84	1.55	6.12	10.26
1973	0.28	0.39	0.38	1.28	0.17	1.06	0.84	4.41	2.16	1.68	0.76	1.61	6.21	10.62
1974	0.30	0.38	0.33	1.41	0.13	1.05	0.85	4.45	2.00	1.73	0.64	1.42	5.79	10.24
1975	0.28	0.42	0.45	1.60	0.14	1.10	0.79	4.78	1.96	1.47	0.54	1.39	5.36	10.13
1976	0.25	0.37	0.68	1.78	0.15	1.12	0.74	5.08	1.71	1.33	0.45	1.39	4.88	9.96
1977	0.23	0.36	0.68	2.09	0.13	1.05	0.72	5.26	1.82	1.31	0.38	1.43	4.94	10.20
1978	0.22	0.32	0.73	2.73	0.22	0.92	0.74	5.87	1.45	1.29	0.45	1.46	4.64	10.51
1979	0.03	0.20	0.31	1.14	2.52	1.16	0.73	6.08	1.41	1.37	0.37	1.55	4.70	10.78

Source: Comín, F. (1985)

Notes

1930-1957:

Tax on Rents: Contribución Rústica y Pecuaria, Contribución Urbana. Tax on Entrepreneurial Income: Contribución Industrial y de Comercio. Tax on Capital Income: Contribución sobre las Utilidades Procedentes del Capital. Tax on Wage Income: Contribución sobre las Utilidades del Trabajo Personal. Corporate Tax: Contribución sobre las Utilidades del Trabajo y del Capital. Personal Income Tax: Contribución General sobre la Renta (since 1932). Gift and Estate Tax: Contribución sobre Derechos Reales y Transmisión de Bienes

1958-1979:

Tax on Rents: Contribución Rústica, Contribución Urbana. Tax on Entrepreneurial Income: Licencia Fiscal, Cuota de Beneficios. Tax on Capital Income: Impuesto sobre las Rentas del Capital. Tax on Wage Income: Impuesto sobre los Rendimientos del Trabajo Personal. Corporate Tax: Impuesto sobre las Sociedades; since 1975: Cuota sobre la Renta Global de las Sociedades. Personal Income Tax: Impuesto General sobre la Renta. Gift and Estate Tax: Contribución sobre Derechos Reales y Transmisión de Bienes

TABLE 2.G (continued). Structure of Tax Revenues. Spain 1980-2005

National Government Tax Receipts as % of GDP

	Direct Taxes						Indirect Taxes					Total Taxes
	Personal Income (1)	Wealth Tax (2)	Corporate Tax (3)	Gifts and Estate (4)	Other Taxes (5)	Total (1)-(5) (6)	Customs (7)	VAT (8)	Other Taxes on Consumption (9)	Other Taxes (10)	Total (7)-(10) (11)	Direct plus Indirect Taxes (12)
1980	4.07	0.11	1.14	0.09	0.23	5.64	1.00	1.28	1.28	2.83	6.39	12.03
1981	4.34	0.08	1.12	0.11	0.17	5.82	1.00	1.61	1.61	3.11	7.33	13.15
1982	4.24	0.07	1.09	0.08	0.11	5.58	1.10	1.18	1.18	2.86	6.32	11.90
1983	4.56	0.06	1.24	0.09	0.11	6.06	1.16	1.27	1.27	3.51	7.22	13.28
1984	4.84	0.03	1.25	0.03	0.09	6.25	1.11	1.59	1.59	3.21	7.51	13.75
1985	4.98	0.03	1.37	0.02	0.09	6.49	1.22	1.52	1.52	3.52	7.78	14.27
1986	4.67	0.03	1.57	0.02	0.07	6.36	0.79	4.17	1.38	2.07	8.41	14.77
1987	6.43	0.03	1.77	0.02	0.05	8.31	0.94	4.81	1.91	0.88	8.54	16.85
1988	6.25	0.04	1.95	0.00	0.05	8.29	0.92	4.93	1.86	0.82	8.53	16.82
1989	7.07	0.03	2.71	0.04	0.00	9.85	0.81	5.00	1.82	0.49	8.12	17.97
1990	6.67	0.04	2.76	0.03	0.00	9.48	0.65	4.79	1.90	0.45	7.79	17.27
1991	7.18	0.04	2.40	-0.02	0.00	9.60	0.51	4.70	2.19	0.14	7.54	17.14
1992	7.54	0.04	2.05	0.00	0.00	9.62	0.34	5.07	2.35	0.22	7.98	17.60
1993	7.48	0.04	1.78	0.00	0.00	9.31	0.14	4.36	2.50	0.16	7.17	16.47
1994	7.25	0.04	1.61	0.00	0.00	8.91	0.14	4.73	2.68	0.15	7.70	16.61
1995	7.03	0.04	1.70	0.00	0.00	8.76	0.16	4.55	2.58	0.18	7.47	16.24
1996	6.68	0.04	1.75	0.00	0.00	8.47	0.13	4.60	2.62	0.14	7.48	15.95
1997	6.62	0.04	2.51	0.00	0.13	9.29	0.13	4.79	2.48	0.19	7.60	16.89
1998	5.57	0.04	2.59	0.00	0.00	8.21	0.15	4.86	2.67	0.24	7.93	16.13
1999	5.42	0.05	2.52	0.00	0.00	7.99	0.15	5.30	2.67	0.23	8.34	16.34
2000	5.27	0.05	2.73	0.00	0.00	8.05	0.15	5.30	2.56	0.23	8.24	16.29
2001	5.44	0.05	2.53	0.00	0.00	8.02	0.14	5.09	2.44	0.29	7.96	15.98
2002	4.57	0.00	2.94	0.00	0.00	7.51	0.13	4.76	2.22	0.24	7.35	14.87
2003	4.32	0.00	2.80	0.00	0.00	7.12	0.13	4.68	2.16	0.23	7.19	14.32
2004	3.79	0.00	3.10	0.00	0.00	6.89	0.15	4.68	2.09	0.22	7.14	14.03
2005	4.12	0.00	3.59	0.00	0.00	7.72	0.16	4.77	1.99	0.23	7.16	14.87

Source: Instituto de Estudios Fiscales, BADESPE-Base de Datos Económicos del Sector Público Español
Note: Total tax receipts reduction in 2002 due to partial transfers of tax collections to Autonomous Regions.

Table 2.H. Composition of Top Incomes under Old Income Tax

		Composition					
Year	Top income group fractile	Returns on real estate	Returns on financial assets	Business income (excluding farm)	Farm income	Employment income	Other
1941	Top 0.03%	19.92	35.81	26.43	4.43	12.54	0.87
1942	Top 0.03%	19.58	38.89	15.63	5.32	18.77	1.81
1943	Top 0.03%	19.96	37.79	10.95	6.88	21.77	2.66
1944	Top 0.04%	19.37	38.34	12.66	6.69	20.13	2.80
1945	Top 0.04%	19.34	36.60	12.87	7.51	19.21	4.47
1946	Top 0.05%	16.90	34.52	11.74	13.35	17.62	5.86
1947	Top 0.05%	17.96	32.14	12.14	13.42	19.04	5.30
1948	Top 0.05%	19.29	32.74	9.22	14.18	19.14	5.43
1949	Top 0.06%	19.45	32.94	8.08	13.44	19.90	6.18
1950	Top 0.07%	18.11	28.25	9.27	20.14	18.75	5.48
1951	Top 0.07%	17.34	28.26	9.18	20.48	19.29	5.45
1952	Top 0.08%	17.19	28.43	10.05	21.35	18.30	4.68
1953	Top 0.09%	17.43	28.88	9.20	20.24	18.41	5.84
1958	Top 0.05%	11.48	32.89	11.31	19.04	22.50	2.79
1959	Top 0.05%	11.65	33.26	9.51	18.71	24.10	2.76
1961	Top 0.05%	13.05	30.09	8.38	25.99	17.00	5.50
1981	Top 0.05%	5.00	34.70	34.30	0.40	25.60	

Source: official income tax statistics. For years 1941-1953, the composition statistics are only available in aggregate.
As a result, the size of the corresponding top group varies across those years.
For 1958, 1959, 1961 and 1981, the composition data are available by brackets and are reported in the Table for the top 0.05%.

Table 2.I.1. Top fractiles income levels (including capital gains) in Spain, 1981-2004

(fractiles are defined by total income including capital gains) (incomes are expressed in Euros 2000)

	P90-100 (1)	P95-100 (2)	P99-100 (3)	P99.5-100 (4)	P99.9-100 (5)	P99.99-100 (6)	P90-95 (7)	P95-99 (8)	P99-99.5 (9)	P99.5-99.9 (10)	P99.9-99.99 (11)	P90 (12)	P95 (13)	P99 (14)	P99.5 (15)	P99.9 (16)	P99.99 (17)
1981	28,468	36,987	66,424	86,782	169,146	482,681	19,948	29,642	46,066	66,182	134,303	17,040	23,136	42,040	52,815	94,836	257,103
1982	27,734	36,370	66,634	88,230	180,183	548,808	19,115	28,795	45,038	65,246	139,226	16,389	22,429	41,103	51,763	94,793	285,570
1983	27,534	35,980	64,237	83,529	162,979	489,761	19,103	28,923	44,946	63,673	126,667	16,110	22,386	41,200	51,352	89,790	247,534
1984	27,229	35,528	63,110	81,948	160,610	502,919	18,929	28,642	44,273	62,286	122,568	15,931	22,149	40,686	50,425	87,237	237,911
1985	28,061	36,957	66,895	87,565	173,769	507,054	19,165	29,469	46,226	66,017	136,728	16,227	22,583	42,326	52,955	94,089	273,721
1986	30,012	40,042	75,811	101,993	221,266	790,180	19,982	31,097	49,618	72,180	158,054	16,838	23,724	45,179	57,157	105,867	327,178
1987	31,711	42,551	82,073	111,828	254,705	1,009,536	20,881	32,667	52,318	76,101	170,834	17,548	24,803	47,640	60,236	111,976	377,647
1988	33,840	45,356	87,144	118,374	266,580	1,023,523	22,323	34,910	55,913	81,326	182,475	19,004	26,802	49,945	64,021	121,004	404,139
1989	35,517	47,272	88,620	118,345	248,969	801,650	23,753	36,933	58,896	85,686	187,552	20,182	28,506	52,643	67,454	126,865	390,045
1990	37,559	49,666	92,588	123,009	254,141	768,437	25,453	38,940	62,177	90,223	196,993	21,769	30,306	55,600	71,066	133,647	400,879
1991	38,360	50,390	92,912	122,459	247,579	729,697	26,322	39,761	63,364	91,179	194,006	22,691	31,139	56,740	72,277	133,908	386,503
1992	37,364	49,243	92,151	121,132	240,351	676,782	25,484	38,509	63,177	91,328	191,861	22,285	29,726	56,497	72,218	134,321	372,077
1993	36,664	48,196	89,582	117,265	228,903	624,061	25,131	37,854	61,899	89,350	185,002	21,928	29,277	55,358	70,738	130,834	351,991
1994	35,629	46,731	86,667	113,412	221,724	605,057	24,528	36,745	59,921	86,330	179,134	21,466	28,505	53,627	68,476	125,808	355,730
1995	35,856	47,111	87,833	115,375	226,678	619,576	24,601	36,925	60,292	87,545	183,021	21,523	28,597	53,917	69,045	128,275	356,824
1996	36,024	47,373	88,526	116,861	231,571	640,332	24,676	37,083	60,184	88,182	186,157	21,519	28,745	53,984	69,177	129,798	366,093
1997	36,227	47,958	91,456	121,852	249,444	717,477	24,496	37,086	61,059	89,956	197,441	21,355	28,555	54,427	70,217	133,732	413,179
1998	37,968	50,709	99,129	133,910	283,481	896,260	25,227	38,604	64,347	96,521	215,393	21,958	29,483	57,159	74,365	145,767	446,886
1999	39,822	53,554	108,358	149,905	340,450	1,199,735	26,091	39,853	66,809	102,270	244,975	22,444	30,407	59,367	77,504	157,656	545,498
2000	41,385	56,115	116,859	164,475	389,902	1,466,670	26,655	40,929	69,244	108,117	270,262	22,953	31,136	61,194	81,110	169,649	621,812
2001	41,858	56,660	117,754	165,551	391,061	1,450,918	27,056	41,386	69,956	109,174	273,299	23,379	31,540	61,843	81,897	171,488	624,384
2002	41,735	56,290	115,329	160,632	366,816	1,235,928	27,181	41,531	70,026	109,086	270,248	23,536	31,690	61,896	81,816	171,450	603,805
2003	43,326	58,947	125,208	178,289	430,554	1,558,060	27,705	42,381	72,128	115,223	305,276	24,316	32,393	63,143	84,931	187,069	711,425
2004	44,475	60,911	131,893	189,676	466,461	1,675,556	28,039	43,166	74,109	120,479	332,118	24,616	32,846	64,722	87,686	199,401	770,957

Source: Authors' computations based on tax statistics.

Notes: P99 denotes the income threshold required to belong to the top 1% of tax units; P99-100 is the average income of the top 1%;

P99-99.5 denotes the average income in the bottom half of the top percentile.

Table 2.I.2. Top fractiles income levels (excluding capital gains) in Spain, 1981-2004

(fractiles are defined by total income excluding capital gains) (incomes are expressed in Euros 2000)

	P90-100	P95-100	P99-100	P99.5-100	P99.9-100	P99.99-100	P90-95	P95-99	P99-99.5	P99.5-99.9	P99.9-99.99	P90	P95	P99	P99.5	P99.9	P99.99
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1981	28,337	36,708	65,194	84,694	162,397	449,907	19,948	29,586	45,712	65,268	130,444	17,040	23,117	41,834	52,256	92,823	244,668
1982	27,555	35,945	64,773	84,851	167,450	485,945	19,148	28,730	44,711	64,185	132,060	16,422	22,429	40,908	51,159	91,593	261,867
1983	27,419	35,705	63,008	81,345	154,837	449,356	19,132	28,879	44,671	62,965	122,111	16,139	22,401	41,041	50,918	87,664	232,871
1984	27,019	35,109	61,291	78,701	148,658	432,674	18,929	28,564	43,893	61,212	117,110	15,931	22,123	40,463	49,784	84,540	215,984
1985	27,519	35,958	63,236	81,461	155,255	435,705	19,092	29,132	45,010	63,019	124,100	16,167	22,415	41,531	51,053	87,601	241,820
1986	29,104	38,337	68,991	90,025	181,003	567,220	19,883	30,665	47,946	67,287	138,094	16,750	23,503	44,105	54,257	95,583	260,356
1987	30,701	40,606	74,020	97,256	198,949	681,642	20,786	32,257	50,783	71,822	145,326	17,464	24,593	46,630	57,649	100,463	288,119
1988	32,630	43,087	77,837	101,580	202,289	645,476	22,163	34,400	54,094	76,397	153,044	18,874	26,512	48,775	61,042	107,578	296,911
1989	34,505	45,454	81,909	106,805	211,417	632,021	23,566	36,333	57,021	80,643	164,689	20,022	28,159	51,378	64,398	115,401	325,000
1990	36,671	48,066	86,768	113,074	222,235	640,144	25,277	38,395	60,454	85,783	175,796	21,619	29,989	54,449	68,331	123,167	345,850
1991	37,473	48,814	87,506	113,422	220,055	621,937	26,123	39,148	61,590	86,768	175,402	22,517	30,774	55,505	69,524	124,250	339,430
1992	36,721	48,169	88,795	115,604	223,281	610,398	25,272	38,015	61,978	88,685	180,271	22,097	29,405	55,595	70,485	128,323	342,594
1993	35,706	46,498	84,186	108,816	206,204	545,278	24,921	37,075	59,557	84,471	168,530	21,748	28,858	53,742	67,467	121,434	314,100
1994	34,635	45,043	81,481	105,343	201,123	526,302	24,227	35,930	57,618	81,395	164,986	21,202	28,011	52,003	65,200	117,239	318,541
1995	34,814	45,301	82,261	106,786	204,730	534,375	24,333	36,061	57,728	82,302	168,106	21,290	28,103	52,135	65,508	119,199	317,746
1996	35,045	45,659	83,053	108,033	207,028	535,369	24,424	36,316	58,066	83,285	170,547	21,301	28,295	52,468	66,040	120,752	320,738
1997	34,889	45,644	84,120	110,141	216,423	572,201	24,140	36,020	58,099	83,570	176,894	21,051	27,934	52,327	66,022	122,027	349,845
1998	35,780	46,969	87,647	115,629	232,345	648,248	24,598	36,798	59,665	86,451	186,133	21,411	28,427	53,743	67,776	128,262	354,704
1999	37,626	49,766	95,515	128,207	267,537	819,371	25,487	38,328	62,823	93,376	206,210	21,925	29,474	56,461	71,821	138,327	415,866
2000	38,690	51,349	100,001	135,732	290,467	950,519	26,030	39,187	64,269	97,046	217,139	22,415	30,109	57,694	74,044	144,290	451,287
2001	39,644	52,644	102,483	138,730	292,554	948,203	26,643	40,185	66,234	100,273	219,711	23,021	30,841	59,300	76,380	147,686	455,001
2002	39,692	52,588	101,509	136,589	283,499	820,062	26,795	40,358	66,429	99,861	223,873	23,203	31,018	59,433	76,256	149,491	450,415
2003	40,459	53,642	104,396	141,395	297,533	886,848	27,277	40,954	67,396	102,364	232,059	23,940	31,597	60,008	77,406	154,197	472,870
2004	41,131	54,699	107,361	146,234	309,558	938,982	27,563	41,533	68,489	105,405	239,630	24,199	31,946	61,043	78,875	159,161	494,154

Source: Authors' computations based on tax statistics.

Notes: P99 denotes the income threshold required to belong to the top 1% of tax units; P99-100 is the average income of the top 1%;

P99-99.5 denotes the average income in the bottom half of the top percentile.

CHAPTER 3

ARGENTINA 1932-2004

Abstract
This chapter presents series of top income shares in Argentina between 1932 and 2004. The use of long-run statistical information from the Argentine personal income tax, never exploited before, allows us to cover a long time span and fill a gap in the analysis of the long run dynamics of income concentration. We find an increase in top income shares after the Great Depression, with maxima in 1943-1944, and a substantial decline during the Peronist years. However, the limits of the Peronist redistributive policy are marked by the fact that in 1956, if lower than in 1945, the top shares were still above the ones observed in the developed world; they were higher than in the United States, France and even Spain. Since then, top income shares seem to have described the U-shape pattern found in the developed English-speaking economies.

JEL classification: D3, H2, N3, O1

3.1.Introduction

This chapter presents series of top income shares in Argentina between 1932 and 2004. The use of long-run statistical information from the Argentine personal income tax, never exploited before, allows us to cover a long time span and fill a gap in the analysis of the long run dynamics of income concentration. We find an increase in top income shares after the Great Depression, with maxima in 1942-1944, and a substantial decline during the Peronist years. However, the limits of the Peronist redistributive policy are marked by the fact that in 1956, if lower than in 1945, the top shares were still above the ones observed in the developed world; they were higher than in the United States, France and even Spain. Since then, top income shares seem to have described the U-shape pattern found in the developed English-speaking economies.

The case of Argentina is unique and consequently worth studying on several grounds.

1. So far, Banerjee and Piketty, 2005 on India, Piketty and Qian, 2006 on China, Leigh and van der Eng, 2007 on Indonesia, and this paper on Argentina are the only works providing evidence for –currently– developing countries. Argentina is the first case to be analyzed in Latin America. To our knowledge, the statistical information on which these studies are built upon is not available in any other Latin American country over such a long period. Only recently the tax agencies of Brazil, Chile and Ecuador have accepted to produce (not always public) tabulations for a very limited number of years.[1] This reinforces the interest in looking at the Argentine experience.

2. Secondly, Argentina was once a relatively rich country that has consistently diverged from the industrial economies in the last fifty years; today it is indistinguishably a middle income emerging economy. The deterioration of

---

[1] The study of top incomes and income taxation in several Latin American countries during recent years is part of one of an ongoing research project. The OECD is providing the institutional support to obtain the data.

the country's position is one of the puzzling cases in the economics of development.

Between 1880 and 1930, the economy displayed a growth process that changed its marginal position in the world and made many think that the country would play in South America the role the United States stood for in the north.[2] It enjoyed its own Belle Époque between 1900 and 1913. The formula of success has been widely analyzed: a relatively literate and skilled population of immigrants, a seamless integration of domestic and world economies in trade through rail and shipping connections on land and sea financed with foreign investment, a large stock of fertile agricultural land, a considerable increase in the world demand of raw materials which translated into favorable terms of trade. In 1870, per capita income was only 60 percent of the average per capita income of the world top ten economies.[3] During the fifty years following 1880, GDP grew at an average rate of 5.5 percent (2.3 percent in per capita terms); total population increased from 2.5 millions to 11.9 millions fostered by several immigration waves. Not only was per capita income high, but the growth rate was one of the highest in the world.[4] In 1913, Argentina's per capita income level ($4,519) was inferior to those of Great Britain ($5,855), the United States ($6,308), Canada ($5,290), Australia ($6,800), New Zealand ($6,130), Switzerland ($5,076), Belgium ($5,021), but it surpassed the levels of other European economies, such as Germany, ($4,341), France ($4,147), Austria ($4,123), Denmark ($4,479), Finland ($2,512), Sweden ($3,684), Italy ($3,050) and Spain ($2,682).[5] These figures place Argentina's 1913 income level among or near the world's top ten. It was not a smooth process and the model had its own limitations: high dependency rates, the need on external funding, a large but

---

2 To make reference to one of the multiple examples of this optimism, both the First Bank of Boston and the City of New York Bank (Citibank) opened their two major overseas branches in Buenos Aires as early as the 1910s.

3 We refer to the world top ten economies in terms of per capita income in 1870: Austria, Belgium, Denmark, France, Holland, Switzerland, the United Kingdom, Australia, New Zealand and the United States, according to Maddison, 1995.

4 See Diaz Alejandro, 1970.

5 Comparative data from Maddison, 1995 expressed in 2000 US Dollars.

limited land stock.[6] Nevertheless, the circumstances helped create an atmosphere of unlimited growth possibilities, which was mutually shared by the ruling class, the people and the immigrants.

In contrast, the last fifty years are much more difficult to summarize. Political turmoil, institutional instability, macroeconomic volatility, income stagnation, high inflation and two hyperinflations dominated the scenario. Cycles of poor economic performance and continuous political upheavals were associated with the integration and final acceptance of the working classes into the social and political system. Between 1956 and 2004 per capita GDP only grew at an annual rate of less than 1 percent; if we consider the figures after the 2001 crisis, the average income did not virtually grow in the last three decades while inequality has constantly increased (see Figures 3.1 and 3.10). By the end of 2002, in the aftermath of the last macroeconomic crisis, the unemployment rate was well above 20 percent; GDP sunk by 20 percent and poverty skyrocketed, but recovery resumed rapidly, and the economy has been growing at annual rates of 9 percent since then.

3. Thirdly, although this analysis concerns only the very rich, little is known about the long run evolution of the distribution of income in Argentina. The first study about inequality dates back to the research program jointly conducted by the Economic Commission for Latin America and the Caribbean (ECLAC) and the National Development Council (CONADE) published in 1965.[7] This study attempted to measure, for the whole economy, the distribution of income in 1953, 1959 and 1961 using a variety of sources, including national accounts, banking sector balance sheets, the 1963 income and expenditure survey and tax statistics. It was not until 1972 that the national bureau of statistics began to conduct biannual household surveys. Before 1974, the survey was restricted to Greater Buenos Aires and it covered approximately 33 percent of the population. Since then, other urban centers have progressively been

---

6 For a detailed analysis of these limitations, see Taylor, 1992.
7 Consejo Nacional de Desarrollo y Comisión Económica para América Latina y el Caribe, 1965.

incorporated so that today the fraction of represented households exceeds 60 percent (70 percent of urban population). Yet, micro-data displaying personal incomes are only available for 1980-1982 and 1984-2006 with varying degree of detail. As a result, most studies about inequality and distribution are based on this source, constrained to the analysis of the last twenty-five years and never focused on the top of the distribution.[8] In any case survey micro-data do not offer valuable information when targeting the top, as the rich are missing either for sampling reasons, low response rates or ex-post elimination of extreme values. Therefore, this study is also the first in looking at the upper part of the distribution in Argentina.

4. Argentina has traditionally been identified as one of the economies with one of the lowest relative inequality in Latin America despite the recurrent macroeconomic crisis. It is indeed more egalitarian than Chile, Mexico and Brazil.[9] A word of caution is in order, though. On the one side, Latin America is an area characterized by very high inequality levels when compared to Europe and Asia. On the other, during the last fifteen years, the increase in inequality in Argentina has outpaced Latin American averages. Finally, the periods of negative growth strongly hit the poor.[10] Notwithstanding this trend, Argentina's human development index has remained top in Latin America since its publication in 1975.

Income tax data suffer from serious drawbacks. The definitions of taxable income and tax unit tend to change through time according to the tax laws. While there is a predisposition to under-reporting certain types of income, taxpayers also undertake a variety of avoidance responses, including planning, renaming and retiming of activities to legally reduce the tax liability. These elements, which are common to all countries, become critical in developing countries. However, alternative sources such as household surveys are not free of problems regarding under reporting, differential non-responses, unit design

---

8 Survey data sets for 1972-1973 and 1975-1979 are not available.
9 See Gasparini, 2004 for an account of inequality levels in Latin America.
10 See Gasparini et al., 2007.

and information at the top of the distribution. Therefore, even if results based on income tax statistics must be read with caution, especially in the case of developing economies, they can still be informative and remain a unique source to study the dynamics of income concentration during the first half of the twentieth century.

The chapter is organized as follows: Section 2 describes the data and methodology. Section 3 presents the main findings. The last section is devoted to conclusions. Details about data sources, methods and adjustments are presented in the Appendix to this chapter.

3.2. Data, Methodological Issues and Context

3.2.1. Data and Series Construction

At the start of the interwar period, customs on imports constituted the largest fraction of government revenue in Argentina. As public income depended heavily on international trade, it was cyclically correlated with trade conditions. The consequences of the Great Depression exposed the country to the commodity lottery and the worsening of the terms of trade. In order to moderate the adverse effects of the crisis on public finances, the government followed a conservative fiscal policy and sought orthodox budget balance by replacing the lost customs revenues with a dramatic increase in direct taxes on income and wealth. As part of this process, the first personal income tax was enforced in 1932 in Argentina as a policy response to the negative outcome that the world crisis had on the public budget. The legal evolution of the tax is described briefly in the appendix to this chapter.

Tables 3.1 displays the composition of tax receipts between 1932 and 2004, while Table 3.2 shows tax collections as percentage of GDP. The growing importance of the personal income tax until 1943 (it moved from 6 percent of the national government revenues in 1932 to 19 percent in 1944) mirrored the

decline of international trade-based taxes (which went down from 40 percent in 1932 to 7 percent in 1945).[11] Both facts, the creation of the personal income tax in 1932 (initially established as an emergency and temporary tax for only two years) and its declining importance during the second half of the century, shape the availability of data.

The tabulations of income tax returns published by the Argentine tax administration constitute the primary data source for this study. The data cover the years 1932 to 1954, 1956, 1958, 1970 to 1973 and 1997 to 2004.[12] Unfortunately, the continuity of the publication was lost since 1960, altered by increasing macroeconomic volatility, growing inflation and political instability. The tabulations report, by ranges of income, the number of taxpayers, total reported income, taxable income, tax paid and personal deductions.

As the right tail of the income distribution is well approximated by Pareto distributions, we use simple parametric interpolations methods to estimate the thresholds and average income levels for several fractiles. This method follows the classical study by Kuznets, 1953 and has been used here as well as in all the top income studies presented in Atkinson and Piketty, 2007.

The Argentine income tax is individually based. Consequently, the number of tax units (the number of individuals had everybody been required to file) is approximated by the number of persons in the population aged 20 and over from the national census. Throughout the chapter, 'tax units' always refer to individuals. Thus, our top groups are expressed in relation to the total number of adults.

We define income as gross income before all deductions and including all income items reported on personal tax returns: salaries and pensions, self-employment and unincorporated business net income, dividends, interest, other investment income and other smaller income items. Realized capital gains are

---

11 Table 3.1.A and Table 3.1.B consider all legislated taxes. It is worth stressing the importance that the inflation tax had in the public revenue in Argentina during the second half of the century (see Ahumada et al., 2000).
12 Tabulations also exist for 1959, but they display inconsistencies which made them non usable.

excluded. Our income definition is before personal income taxes and personal payroll taxes but after employers' payroll taxes and corporate income taxes. The appendix completes the information about data sources.

Table 3.3 displays the reference totals for population and income. The number of tax filers has always been rather small, ranging from 1.7-2.1 percent of tax units in 1932-1935, 5.1-5.3 percent in 1953-1958, 3.3-4.1 percent in 1970-1973 and 2.9-5.6 percent in 1997-1998 (Column 4). While the growing inflation (Column 8) happening during the second half of the century could have implied a rise in the obligation to file (by reducing the significance of the minimum threshold), minimum non-taxable income and personal allowances were regularly updated so that exemption levels remained high. By necessity our analysis focuses on the very top of the distribution.

Table 3.A gives thresholds and average incomes for top fractiles in 2000. There were 23,8 million tax units, with an average income of $7,871. Column 2 reports the income thresholds corresponding to each of the percentiles in column 1. For example, an annual income of at least $200,274 was required to belong to the top 0.1% while the average income above the top 0.01% was $1,547,033. Table 3.6 presents the top income shares between 1932 and 2004.

3.2.2. The Issue of Tax Evasion

In the developing world there is a generalized idea regarding the presence of important levels of tax evasion (fraudulent under-reporting or non reporting) and tax elusion (the use of legal means to reduce tax liability through planning, renaming or retiming of activities) that affect mainly the income and wealth taxes. On the one hand, legal responses to taxation cannot be neglected in either the developed or developing world. Slemrod, 1992, 1995 and Auerbach and Slemrod, 1997 have provided empirical evidence indicating the significance of

avoidance responses to the major US tax changes of the 1980s and 1990s.[13] On the other hand, the tendency to hide certain types of income to evade taxes is a standard feature in developing countries, where a non-trivial fraction of transactions is carried out in the informal sector. In this sense how much to tax the rich has always been a critical matter, as one would like to limit their incentives both to pursue less socially productive activities (Slemrod, 2000) and to carry out business in the shadow economy in order to avoid taxes.[14]

We are particularly concerned about tax evasion in Argentina. Because tax evasion means that we cannot observe the data, any quantitative assessment of its magnitude might be regarded as very speculative. In any case we provide some elements for the analysis.

Firstly, the official publications of the tax authority between 1932 and 1950 describe a rather extensive fiscal control; for instance, in 1939, 29,000 individuals were inspected over a total of 144,923 files. This information, if relevant, is inconclusive as soon as one accepts that the number of tax files is endogenous and that the probability of being audited is the fraction of inspected individuals over the total number of potential (and not the observed) tax reporters. Notwithstanding this fact, an audit rate of 20% is much higher than the ones observed today in countries such as Spain, as we have seen in Chapter 2. It is likely that audit rates were even higher for top taxpayers.

The government seemed worried about the quantitative scope of evasion and elusion in the income tax by the end of the decade of 1950. Advice was requested to foreign experts (see Surrey and Oldman, 1960, 1961). The Central Bank published a first report on the issue in 1962 (Banco Central de la República Argentina, 1962). Nevertheless, a serious quantitative assessment of income tax evasion is missing in those publications.

---

13 For an analysis of the legal responses to taxation, from real substitution responses to avoidance responses, see Slemrod, 2001 and Slemrod and Yitzhaki, 2002.
14 In the developing world, the changes in personal income tax rates and corporation income tax rates may generate a shifting of income both between the personal tax base and the corporate tax base (as described in Gordon and Slemrod, 2000), and between the formal and informal sectors of the economy.

Secondly, existent measures of the size of the underground economy in Argentina show that the level of unreported activities might have increased during the second half of the XXth century.[15] These studies indicate that there is a positive relationship between tax burden, state regulations and the incentive to hide transactions. In the first half of the century the tax rates (mainly the top marginal rates) were by far lower than those in European and North American countries, and slightly lower than in neighboring countries such as Chile or Brazil. Finally, tax evasion is well connected with the environment of macroeconomic volatility and inflation distinctive of the post-1950 period. High inflation also provides strong incentives to postpone income reporting; even when this behavioral response is not strictly evasion, it can erode tax collections at a great extent.

A first comparison can be made between the results for 1953 from income tax data and those from a different data source. We have already mentioned that the first study about inequality dates back to the research program jointly conducted by ECLAC/CONADE published in 1965.[16] This study is certainly not the absolute truth (in fact it contains many ad-hoc and hidden adjustments) but it provides some elements for judgment. Our estimates for the top shares in 1953 based on tax data are indeed slightly higher than those obtained in the cited study.

Using information from a tax amnesty, the authorities estimated evasion in 1959. Results (very limited) are displayed in Table 3.4. The last column reports the percentage of hidden income as a percentage of declared income. Un-reporting, with values between 27% and 40%, described an inverse U pattern, with maxima for the brackets in the middle of the scale. This suggests that evasion, if important across all income levels, shows a lower impact at the bottom (where income from wage sources dominates) and at the top of the tax scale (where inspections from the tax administration agency might be more

---

15 See Ahumada et al., 2003.
16 Consejo Nacional de Desarrollo and Comisión Económica para América Latina y el Caribe, 1965.

frequent and enforcement through other taxes higher). However, these figures might exaggerate true evasion. On the one hand, it is not possible to know exactly how the authorities arrived to these numbers: no data are available to reproduce the computations. On the other hand, the notion of 'potential tax collection' (meaning the tax collection had all income been taxed) used by the tax agency contaminates the interpretation.

A new amnesty followed in 1970, for the tax evaded between 1964 and 1969.[17] Unfortunately, the tax authorities did not publish the results in detail either. Over a total of 589 thousand taxpayers, 300 thousand individuals declared 65% of unreported income (with respect to reported income). If we assume that those who did not make recourse to the fiscal facility had nothing to declare, then the average unreported income was 33% (0.65x300/589).[18]

It is difficult to provide better evidence for Argentina. However, it is unlikely that such high percentages of evasion represent the situation among top income earners. As we already discussed in Chapter 2 (we go back to the issue in Chapter 4) the rich are very visible for tax authorities.

3.3. The Dynamics of Top Incomes

The years 1932-1945

Figures 3.2 to 3.5 and Table 3.6 present the main findings. It is not the aim of this paper to provide a detailed account of more than seventy years of economic history and policy. Nevertheless, to understand the evolution of the top incomes shares, some historical landmarks are worth mentioning.

The fifty years between 1880 and 1930 were the golden period of the development process of the country. Falling transportation costs and the

---

17 The amnesty served primarily to close a temporary fiscal imbalance. This time, declaring net assets placed in foreign countries was not mandatory (Law 18529 of 12/31/1969). For a theoretical analysis of the efficiency and equity consequences of permanent and non-permanent tax amnesties, see Andreoni, 1991.

18 Ministerio de Economía, 1973.

expansion of world trade made it possible for land-abundant countries to benefit from their strong comparative advantage in rural activities. Argentina was one of the prototypical examples. Together with the extension of the railway, all factors contributed to a striking increase in land prices so that many fortunes were made overnight.[19] The economy flourished, based on the exports of raw materials, mainly grains and chilled beef, but also wool, wood, and their derivatives, and the imports of manufactures from Europe (mainly from the UK) and the United States. The wealthy owners of the large *estancias* of the *Pampas* built urban palaces in Buenos Aires in the image and likeness of those they saw in Europe during their long-lasting trips. Many independent observers have extensively commented about the extreme wealth of the wealthy Argentineans of the beginning of the century.[20]

Nevertheless, the source of the concentration of wealth has to be sought not only in the land ownership structure in the *Pampas* combined with the favorable and successful pattern of international insertion.[21] It was also the result of the not-so-peaceful construction process of the nation. By 1880, the political organization and the occupation of the territory had been achieved on the grounds of an alliance between the Buenos Aires elite and the provincial oligarchies: the *Pampas*-driven export-oriented economy granted, for the powerful regional groups, the protection of specific local products for domestic consumption. Thus, a rich sector devoted to the production of sugar cane developed in the northwest, a cotton-oriented sector in the northeast and a vine area in the center-west. Consequently, all competition against them, either

---

19 See Sokoloff and Zolt, 2007 for a discussion on inequality and taxes in the Americas. Johnson and Frank, 2004 analyze wealth inequality in Buenos Aires and Rio de Janeiro before 1860.

20 For an account of the social life and customs of the wealthy Argentinean families in the beginning of the century, see Ocampo, 2005, Luna, 1958, Sebrelli, 1985, Jauretche, 1966.

21 The occupation of the territory to the south, accomplished in 1880, was financed mainly by wealthy families, who eventually came into possession of large estates in the newly incorporated areas. For instance, General Roca, in charge of the expedition, received as compensation a 100-km-long property, which he named "La Larga," "The Long One"; see Luna, 1989 These methods of land occupation and distribution were not new: Rosas' Campaign to the Desert fifty years before had followed the same lines.

through imports or through production in Buenos Aires, was systematically blocked.[22]

By 1910, per capita income was among the world's top ten, the country attracted immigrants by the millions, and an atmosphere of unlimited growth possibilities was mutually shared by the ruling class, the people and the immigrants. The pre First World War migration waves responded elastically to the wage gap between the country and Europe. At the same time, Argentina was highly dependent on external finance. When British lending collapsed between 1914 and 1919, investment and capital formation rates declined markedly. It is likely that before 1930 the share of top incomes had been higher than the level of 1932 (18.7% for the top 1%) and probably even higher than the global maximum of 25.9% in 1943. By 1935, top shares were comparable to those found for the United States during the 1920s (Piketty and Saez, 2003) and higher than those in France (Piketty, 2001).

In 1929, the Argentinean elite was suddenly shocked by the Great Depression and the dramatic downturn of conditions in the international sphere. The democratic government could not cope with the crisis, and was deposed by the first coup d'état that ended sixty-eight years of constitutional order. The inability of the elite to understand and adapt to the new situation within the constitution, the fear of anarchism and socialism and the necessity to regain political control shaped the following thirteen years, 1930-1943, known as the Conservative Restoration and the Infamous Decade. It was a period of electoral fraud, union conflicts and the increasing importance of the army in political affairs.

Great Britain, the principal destination for exports, abandoned free trade practices and made preferential agreements with the ex-colonies during the Imperial Economic Conference celebrated in Ottawa in 1932 to promote trade within the limits of the empire. Argentina was set aside. The rich landowners

---

22 For detailed studies about the economic development of Argentina in this period, see Diaz Alejandro, 1970, Cortés Conde and Gallo, 1972, Cortés Conde, 1970, Della Paolera and Taylor, 2001, Rappoport, 1980. For a sketch of the evolution of wealth concentration in Buenos Aires during the first half of the 19th century, see Johnson and Frank, 2004.

pressured for a rapid accord with London to secure the exports to the United Kingdom. The result was the Roca-Runciman agreement, signed between the Argentinean vice president and the British minister of trade, which guaranteed Argentina a fixed share in the British meat market and eliminated tariffs on Argentine cereals. In return, Argentina agreed to restrictions with regard to trade and currency exchange, and preserved Britain's commercial interests in the country. From the macroeconomic point of view, the nature and consequences of this agreement and the true impact on the economic performance are still controversial. There are those who see the treaty as a sellout to Britain, while others stress that the United Kingdom, by according privileges not given to any other country outside the empire, helped revert the recessionary situation. From the microeconomic side, it was undoubtedly a successful mechanism to preserve the elite's (but also the state) sources of revenue. In any case, the Roca-Runcimann agreement remains a historical landmark and the dynamics of top incomes reinforces the idea of the elite's favorable situation between 1933 and 1943.

Recovery began in 1933 after several years of negative growth.[23] By 1935, output had regained the 1928 level. The results of the current study strikingly coincide with the political and economic phase. The positive slope displayed by top income shares between 1933 and 1943 is consistent with the marked recuperation of the economy after the Great Depression. The top percentile increased from 17% in 1933 to 25% percent in 1943.[24] Figure 3.5 displays the top 0.01% income shares in Argentina, France, Spain and the United States. Two facts can be noticed. Firstly, the level of top shares in Argentina in 1942 (4.2%) is not very far from the one observed in the United States in 1916 (4.4%). Secondly, the dynamics in Argentina between 1932 and 1951 seem to reproduce the shape of US top income shares between 1922 and 1940 but at

---

23 The 1929-1932 crisis was, until 2002, the longest contraction experienced by the economy, while the deepest contraction occurred in 1914 as a result of both external and internal shocks (bad crops, capital outflows and the beginning of the First World War).
24 The tax office estimated that in 1940 the top 3.4 percent of individuals received 37.9 percent of income (Preamble to Decree 18229 of 12/31/1943).

higher levels, as if the Argentine cycle lagged around 10-13 years with respect to the US. This reinforces the idea that the pre-1930 figures in Argentina could reasonably be much higher than the observed in 1932, in parallel with the evolution in the US, where the top 0.01% participation declined from 4.4% in 1916 to 1.69% in 1921.[25] It is also possible that the higher top shares in Argentina as compared to the U.S. correspond to lower marginal tax rates.

Consequently, while top shares started a sustained decrease by the beginning of the Second World War in the central economies, they kept growing in Argentina, favored by the export demand from Europe. The country was officially neutral during most of the war for several reasons. On the one hand, a relevant sector of the army showed a clear preference for the Axis. On the other, the British interests in Argentina encouraged neutrality, as it ensured the continuation of normal trade with Europe and mainly with the United Kingdom. Great Britain opposed all US proposals of economic sanctions against Argentina, based on the fact that Argentina's neutrality was crucial for ensuring the safe arrival of shipments to British ports.[26] In any case, the elite had been successful again: during the war, 40% of the British meat and grain markets were supplied by Argentina (Rapoport, 1980).

The strong connection between the relatively favorable world market conditions and the evolution of top incomes over this period can be seen from Figure 3.6, which displays the total real income reported by the top 1% and top 0.1% income earners along with total agricultural and livestock exports on a logarithmic scale from 1932 to 1956. The two series are highly correlated and show that when exports increased, high incomes got a disproportionately share of national income, explaining why top incomes followed exports cycles over this period.

The drop in income concentration between 1914 and 1945 in the central economies was primary due to the fall in top capital incomes, as capital owners

---

25 The results for the United States are taken from Piketty and Saez, 2003.
26 For a detailed study on the conflict of interests in the triangular relationship between Argentina, the United Kingdom and the United States, see Rapoport, 1980.

incurred severe shocks from destruction of infrastructure, inflation, bankruptcies and fiscal policy for financing war debts. For most of the period, the data do not include tabulations reporting the composition of income (wages, salaries, business income, dividends, rents, etc.) by income brackets. This is unfortunate, as economic mechanisms can be very different for the distribution of income from labor, capital, business and rents. Figure 3.7 displays the evolution of the components of total reported income. For 1932-1949, this covers the top 1.7%-2.6% of tax units, as shown in Table 3.2, column [4]. In Argentina, the shares of wages, self-employment income and capital income remained stable throughout this period, while the increase in business income (including agricultural activities), which moved from 30% in 1932 to 60% in 1949, was made at the expense of rural and urban rents.

Due in part to immigration, but also because of strong economic interests in the country, there was a substantial presence of foreign citizens among the top income earners. Table 3.7 shows the distribution of tax filers by country of origin between 1932 and 1946. On average, 40%-45% of individuals and reported income corresponded to foreigners. We can also get a rough idea of the relative distribution across nationalities within the top brackets. In 1932, 2.25% of tax filers were French and 1.61% were British, while they both received income proportionally higher than their participation in the number of files (3.12 % of declared income each). In contrast, Spanish and Italian citizens represented 28.19% of filers, with 22.38% of declared income.

The years 1946-1955

The Perón years (1946-1955) coincide with a clear decline in the share of the top percentile, which moved down to 15.3% in 1953. Mainly at the expense of rural rents and favored by the accumulation of foreign reserves and the advantageous terms of trade in the world markets after the Second World War and the War of Korea, the Peronist government deepened the industrialization process that had begun many years before, fostered by the impossibility of

getting necessary imports from Europe during the war.[27] A deliberate inward-looking policy to finance industrialization and social improvements with rural rents was also to modify the structure of the wealthy sector. New industrial families appeared, but also the old names, traditionally attached to land wealth, diversified to industrial production. One important instrument of the peronist policy was the IAPI, Institute for the Promotion of Trade, which established a state monopoly on exports and limited the gains of large estates proprietors.

Here it is worth noticing a striking contrast between Argentina and Australia, two countries that are the subject of permanent comparisons among scholars. As Atkinson and Leigh, 2007a have described, the effect of the commodity price boom after the Second World War directly affected top shares in Australia, generating a clear spike in 1950, mainly due to the peak of wool prices which sheep farmers received in that year. The state management of exports in Argentina seems to have been a powerful tool in extracting a fraction of the surplus from exporters. The IAPI was disbanded as soon as Perón was deposed in 1955.

The government embarked upon a large redistributive policy during the three-year period between 1946 and 1949 and set the grounds for the welfare state and the development of the powerful middle class that characterized the country by the end of decade of 1960. It is this period that remained in the 'collective memory' as the clearest expression of the economic policies of Peronism. After the frantic expansion of the economy during the first three years (see Figure 3.1), a crisis in the external sector in 1949 forced major changes in the economic policy; initially the expansion of the public sector was held back while attempts were made to retain the policy of increasing wages. A new crisis took place in 1952 (negative trade balance, recession and demonetization). The

---

27 The true situation of Argentina's economy after 1945 should not be overstated. During the war the country was under a United States blockade and cut off from continental Europe, while the United Kingdom had to devote all its resources to the war effort and could afford to sell very little industrial goods to Argentina. The trade surplus and the accumulation of foreign reserves achieved during World War II were not due to the growth of exports but the result of a low level of exports and an even lower level of imports. As a result of the impossibility of purchasing new equipment, large amounts of international reserves reflected, then, an aging capital stock.

sharp reduction in agricultural and livestock exports is clearly depicted in Figure 3.6. Thereafter, redistribution and credit policies became more prudent and incentives were introduced to favor the agricultural sector (which would always be the main export sector and, as such, the main provider of foreign reserves). These factors coexist with a small recovery of top shares, which seems to have started before the end of Perón's government.

The development of a progressive personal taxation system played a secondary role, the redistribution being achieved by direct public assistance, subsidized interest rate in the credit market, price controls, minimum wage policy, and the state management of exports.[28] Even if income tax rates steadily increased, the number of taxpayers was kept low. On the eve of Perón's presidency, the top marginal rate doubled, jumping from 12% to 25% between 1942 and 1943 and to 27% in 1946 (similar to the levels found in Chile and Brazil). At the time of the reform, in 1943, the authorities explicitly recognized that the top marginal rate and the tax scale as a whole were among the lowest in the world (see Figure 3.8).[29] From 1952 to 1954, the highest incomes were affected by a top marginal rate of 32%, this rate being 40% at the end of Perón's rule, in 1955.

Along with many other transformations, social and labor rights were enforced, unions gained in power, and the first national pension system was organized. The Peronist redistributive policy was successful and visible among the working class; this is a widely acknowledged phenomenon. The use of the income tax statistics let us numerically assess the magnitude of the losses experienced by the richest during the Peronist phase. The top percentile share moved down from 25.9% in 1943 to 15.3% in 1953. The most affected seem to have been the richest among the rich: the top 0.1% decreased from 11.6% to

---

28 Notwithstanding the secondary role in terms of redistribution, many changes were accomplished in the tax policy arena: (i) the organization of a centralized tax agency (the Dirección General de Impuestos a los Réditos and the Administración General de Impuestos Internos became the Dirección General Impositiva); (ii) the creation of a new tax on profits (*'beneficios extraordinarios'*), aimed at tapping the increase in profits after the WWII; (iii) the enforcement of a proportional tax on capital gains in 1946 (*Impuesto a las Ganancias Eventuales*).
29 Preamble to Decree 18.229 of 12/31/1943.

5.1% and the top 0.01% declined from 4.1% to 1.4% in the same period. The reduction in income concentration was far from trivial. What is also new is the evidence showing the limited effect on the upper part of the distribution compared to international standards: by 1954 the top percentile shares were still higher than those found in the United States, France or Spain.

Even if our data do not allow to go beyond searching for a detailed explanation of what was happening below the top 1%, the drop in the top shares that took place until the middle of the decade of 1950 coincided with a general improvement in terms of income distribution, as indicated by the fact that the participation of wages in total income in national accounts increased 8% between 1945 and 1954 (Altimir and Beccaria, 1999). The ratio of wages to GDP reached a historical maximum of 50.8% in 1954, one year before the military coup that deposed Perón (see Figure 3.9).[30]

The years 1956-2004

After 1955, the intrinsic limits of the import-substitution industrialization strategy (which began to become apparent by the end of Perón's period) resulted in a sequence of oscillating economic policies with deep social and political implications during the following twenty years.[31] It seemed evident that neither the pro-industrialization sector nor the agricultural-based exporter sector (whose interests did not coincide) was powerful enough to permanently dominate the other. Repeated cycles of short expansions and contractions, increasing inflation and institutional weakness dominated the period.

The agrarian activities were responsible of generating the surpluses to foster industry and finance the imports of inputs and capital goods demanded by the expanding manufacturing sector. The exchange rate was usually fixed, to

---

30 In recent years, an increasing share of wages in aggregated income per se has ceased to be an indicator of diminishing income concentration, since the rise of top shares in English-speaking economies has been the result of sharp increases in top wages.

31 Between 1955 and 1976 the country underwent three democratic governments (none of them completed the constitutional period), one military-controlled civilian government and three military regimes.

help maintain low levels of inflation and high stability of import prices (denominated in local currency). At the same time, extensive and deliberate foreign trade protection secured the industry from external competition even in the face of the appreciation of the exchange rate. As exports were mainly based on food products, any devaluation implied a real loss for wage earners. Consequently, a fixed exchange rate, with a tendency to appreciation, favored both workers and industrialists (protected from external competition) while it acted as a clear disincentive to agriculture. The economic tensions translated to the political arena.

Under this scheme, any acceleration of the economy led to fewer exports (more exportable goods were demanded internally) and more imports of inputs and capital goods. Consuming more tradable goods, together with the discouragement of agriculture, generated recurrent balance of payment crises and output contractions. Sometimes the endogenous limits in this development strategy were reinforced by the international conditions (drop in world prices of commodities) so that crises also occurred even if the economy was not growing rapidly. The way out of the crisis always implied a tightening of fiscal and monetary policies together with large devaluations that corrected the distortion in prices. This process favored land-based activities again, drastically reduced the real value of wages, increased exports and let the government regain foreign reserves. Then the process could restart.

The "stop-and-go" nature of economic policy, which eventually ended by the middle of the 1970s (to inaugurate a decade of stagnation and very high inflation), expressed therefore the limits to industrialization.[32] It was, nevertheless, a period of reasonable income growth (see Figure 3.1) vis-à-vis the poor performance that the economy displayed between 1981 and 1991.[33] The sudden movements of the nominal exchange rate ultimately led to violent

---

32 For an analytic approach to the "stop-and-go" model, see Braun and Joy, 1967.
33 For an analysis of the political economy and the economic policy during the period, see Diaz Alejandro, 1970, Mallon and Sourrouille, 1975, Di Tella and Dornbusch, 1983, Di Tella and Zymelman, 1967, 1973.

redistributions between workers, the manufacturing sector and the export-oriented agricultural sector.[34]

We only have observations for 1958, 1959, 1961 and 1970-1973, a period in which top shares declined.[35] We cannot precisely assess which fraction of such a reduction is due to the increase in marginal rates, in tax evasion or to other factors. This is a serious limitation and the results for this period must be read with caution.

There was a marked increase in the shares at the top 0.1% and top 0.01% when 1973 and 2004 are compared. Between 1953 and 2004, the share of the top 0.01% has more than doubled. As it is not possible to fill the gap between 1973 and 1997 with a continuous series coming from income tax tabulations, we would like to read our results in perspective of the distribution based on household surveys, keeping in mind all the aforementioned warnings about the use of survey-based data to study top incomes. The area of the Greater Buenos Aires is the only one that has been regularly covered by a survey since 1972. It has served as basis for multiple studies on inequality and, due to the geographical distribution of the population (highly concentrated in Buenos Aires) it has reflected well the dynamics of income distribution in the whole country.[36] Figure 3.10 depicts the evolution of the Gini coefficient between 1980 and 2004. Available statistical evidence shows a relative stability during the decade of 1960 and the first half of the decade of 1970, when per capita GDP growth exceeded 3% per year.[37] On the contrary, between 1975 and 1980 income inequality experienced a sharp raise, and the trend of growing inequality continued until the maximum in 1989 (hyperinflationary crisis). In terms of growth, the 1980s were the 'lost decade.'

---

34 The determination of the nominal exchange rate began to play a key and privileged role in all spheres of the economy. Di Tella, 1987 has characterized the styled fact of the policy: a "repressed stage," when key prices were controlled to tame inflation, and a "loosening state" when controls collapsed and inflation jumped.

35 We remind the reader that the top income shares for 1961 are estimated from ECLAC/CONADE, and not from tax statistics; they should be compared to the estimates for 1953 and 1959 from the same source.

36 See Gasparini, Marchionnini and Sosa Escudero, 2001, 2004, Lugo, 2006, Altimir, 1986, Altimir and Beccaria, 1999, González Rozada and Menéndez, 2006.

37 See Altimir and Beccaria, 1999.

With a half-century of inflationary experience, the country reached the highest inflation rates in the 1980s together with two hyperinflationary episodes in 1989 and 1990. Regrettably, available data do not allow us to examine the interesting potential effects of very high inflation on top incomes.[38] In 1991, Argentina put its money supply under a dollar exchange standard, adopting a fixed exchange rate between the local currency and the United States dollar, and restricting the issue of money by the Central Bank. This rigorous monetary policy, together with a series of structural reforms (mass privatization of public services, trade openness, attempts to create a domestic capital market) started a decade of price stability and rapid growth until 1998-1999. This policy was not neutral in terms of income distribution. Growth and stabilization only implied a temporary and mild improvement in inequality after 1990, and by 1995 the Gini coefficient was 10% higher than in 1985. Overall inequality steadily grew in the last years, together with unemployment and poverty levels. The macroeconomic crisis of 2001-2002 pushed those indicators to unprecedented levels.

Table 3.8 shows the top 10%, top 1% and top 0.1% income shares based on household surveys. The figures should be read with caution, though; the limited number of observations in the survey introduces large sample variability when focusing on the very top.

The factors behind the constant increase in inequality during the last two decades have been broadly analyzed and they include both macroeconomic and microeconomic explanations. Firstly, unemployment rates skyrocketed in the decade of 1990, and have remained very high since then. Although there is a widespread belief that changes in labor market participation have been one of the main causes of the strong increase in inequality, Gasparini, Marchionnini and Sosa Escudero, 2004 suggest that these ideas should be scaled down. Even if the unemployment rate has been augmenting since 1992, the employment rate did not change much, so that there was a minor change in the number of individuals without earnings. Changes in the hours of work seem to have had more

---

38 Ahumada, Alvaredo and Canavese, 2000, analyzed the redistributive effects of the inflationary tax in Argentina in the 1980s using survey data.

significant unequalizing effects, while the effect of unemployment translated into more inequality through the fall in the relative wages of the poorest. Secondly, changes in the returns to education and experience, the transformation of the educational structure of the population and the fall in work hours among the low-income groups have all had important roles. Also relevant, an observed decrease in the wage gap between genders, a potential force for reducing inequality, has not induced any important change. Thirdly, the two dramatic crises of 1989 and 2002 cannot be neglected. As a result, inequality has been rising during positive growth years, and increasing even more during recessions.

Table 3.9 presents the composition of income by top groups between 2001 and 2004. Income is divided into rents (urban and rural), capital income, business income and wages. Between 1997 and 2004, top incomes again show an increasing trend with a drop in 2001 mainly due the reduction of capital and business income following the 2001-2002 crash. However, with the rapid recovery of the economy since 2003, the top shares have soon regained and surpassed the pre-crisis levels, the top fractiles within the top 1% being the most favored by the process. While top 1% passed from 12.4% in 1997 to 16.8% in 2003, the top 0.01% share doubled, going from 1.4% to 2.8%. It is not surprising that here again all sectors connected with exports have seen their relative income increase as long as the nominal exchange rate tripled during the crisis but the inflation rate between 2000 and 2004 remained below 50%. The crisis generated a massive redistribution in favor of the very rich, who have a significant portion of their income denominated in foreign currency due to the involvement in international trade.

3.4. Conclusions

This paper has attempted to analyze the evolution of top shares from a long-run perspective and to fill the gap in the analysis of the dynamics of

income concentration in Argentina since 1932. So far, the only available source of information about distributive issues came from observations for 1953, 1959, 1961, and from the population surveys started in 1972. Until 1974 the survey was restricted to the Greater Buenos Aires area. Other urban centers have progressively been incorporated, so that today the fraction of represented individuals exceeds 70% of the urban population (60% of total population). Yet, microdata showing personal income with some detail are only available for 1980-1982 and 1984-2006. Despite the existence of survey data for recent years, they do not offer valuable information as the rich are missing either for sampling reasons, low response rates or ex-post elimination of 'extreme' values. Therefore, this study is the first in covering such a long span of years and in focusing on the upper part of the distribution. Since income tax statistics are the primary data source, the dynamic analysis has had to be restricted to the top 1%.

From the quantitative point of view, even if the number of well-off individuals may be regarded as very small when considering the whole economy, they cannot be neglected. If an infinitesimal (in term of members) richest group owns a finite share S of total income, then the Gini coefficient turns out to be close to $G \approx S + (1-S) G^*$, where G^* is the Gini for the rest of the population. Let's assume that $G^*=0.30$; then a rise of 5% in the top share (as the one experienced by the top 0.1% in Argentina between 1933 and 1943) translates into a rise of 0.035 in the Gini of the whole population.[39] This means that when the participation of the rich in total income is important, changes in their income shares turn out to be potentially relevant in explaining changes in overall distribution.

The results suggest that income concentration was higher during the 1930s and first half of the 1940s than it is today. The recovery of the economy after the Great Depression and the visible effects of the Peronist policy between 1945 and 1955 generated an inverted U shape in the dynamics of top shares. Since then top shares seem to have followed a U-shape pattern, although several

---

39 We borrow this explanation from Atkinson, 2007. The percentage of total income accruing to the top 0.1% moved up from 6.8% in 1933 to 11.6% in 1943.

gaps in the data put a limit on the interpretation of such movements. Quite interestingly, the share of the top 1% in 1954 was very similar to the level found in 2004, although they reflect two very different moments in history. The first belongs to a period when the economy was on a path of improvement of social conditions and inequality, while the general belief that dominates the second is of a clear regression in these areas.

TABLE 3.A.

Thresholds and Average Incomes in Top Income Groups in 2000

Percentile threshold (1)	Income threshold (2)	Income Groups (3)	Number of adults (aged 20+) (4)	Average income in each group (5)
		Full Adult Population	23,833,000	$7,871
Top 1%	$41,115	Top 1-0.5%	119,165	$52,078
Top 0.5%	$70,855	Top 0.5-0.1%	95,332	$105,314
Top 0.1%	$200,274	Top 0.1-0.01%	21,450	$324,660
Top 0.01%	$779,223	Top 0.01%	2,383	$1,547,033

Notes: Computations based on income tax return statistics.

Amounts are expressed in 2000 US Dollars.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example,

an annual income of at least $200,274 is required to belong to the top 0.1% tax units, etc.
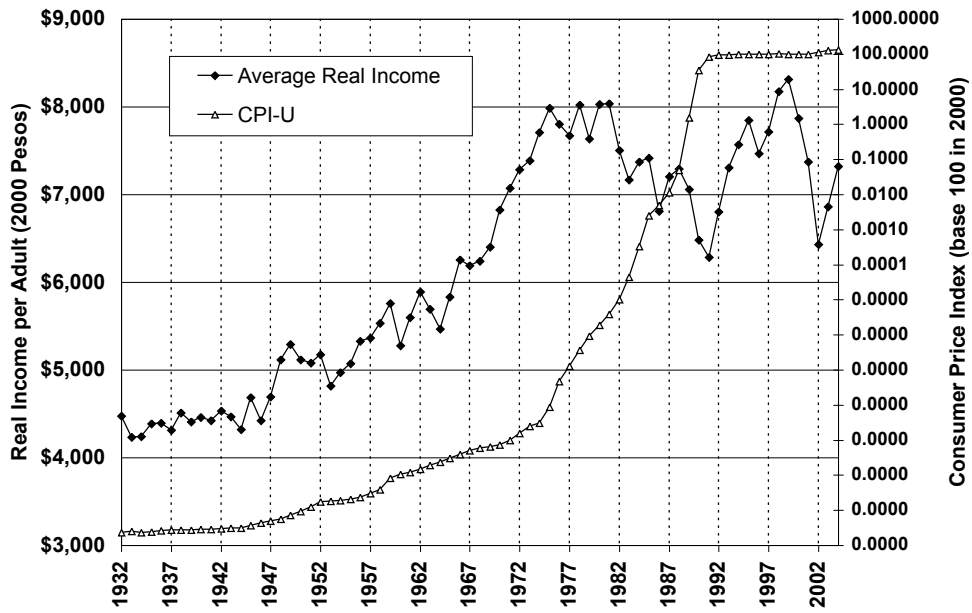
FIGURE 3.1.
Average Real Income and Consumer Price Index in Argentina, 1932-2004

Figure reports the average real income per adult (aged 20 and above), expressed in 2000 Pesos.
CPI index is equal to 100 in 2000 (logarithmic scale).
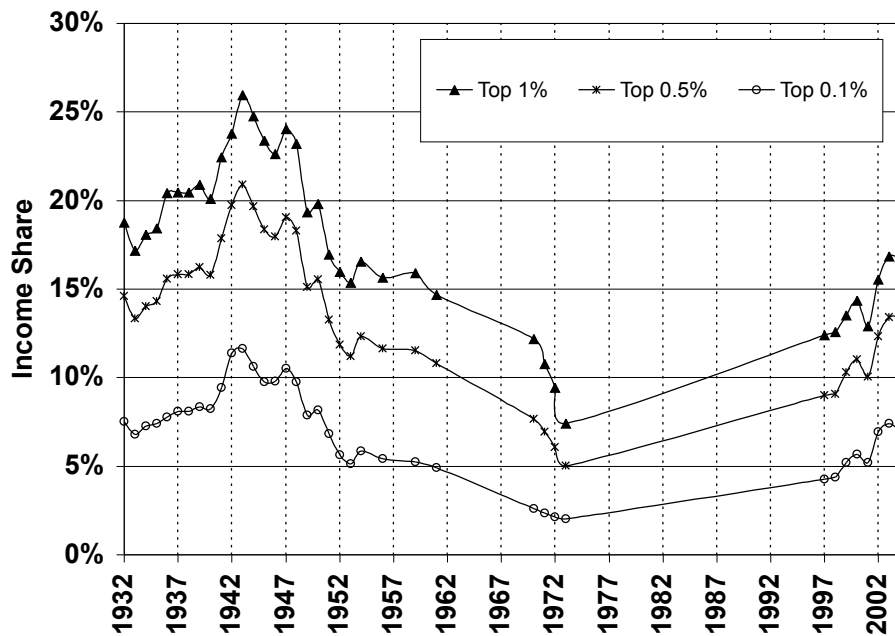
FIGURE 3.2
The Top 1% ,Top 0.5% and Top 0.1% Income Shares in Argentina, 1932-2004
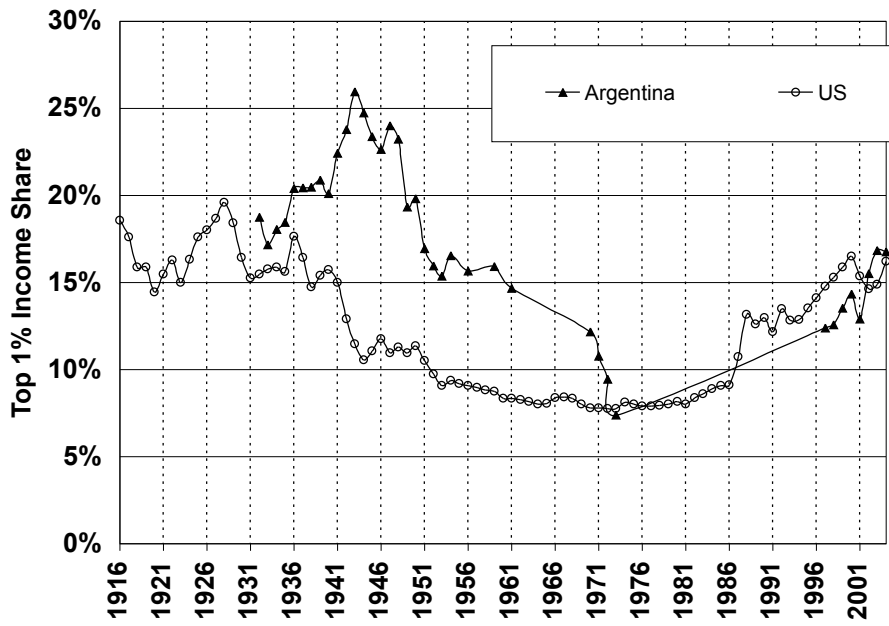
FIGURE 3.3

The Top 1% Income Shares in Argentina and the United States

Source: Argentina: author's calculations. US: Piketty and Saez (2003)
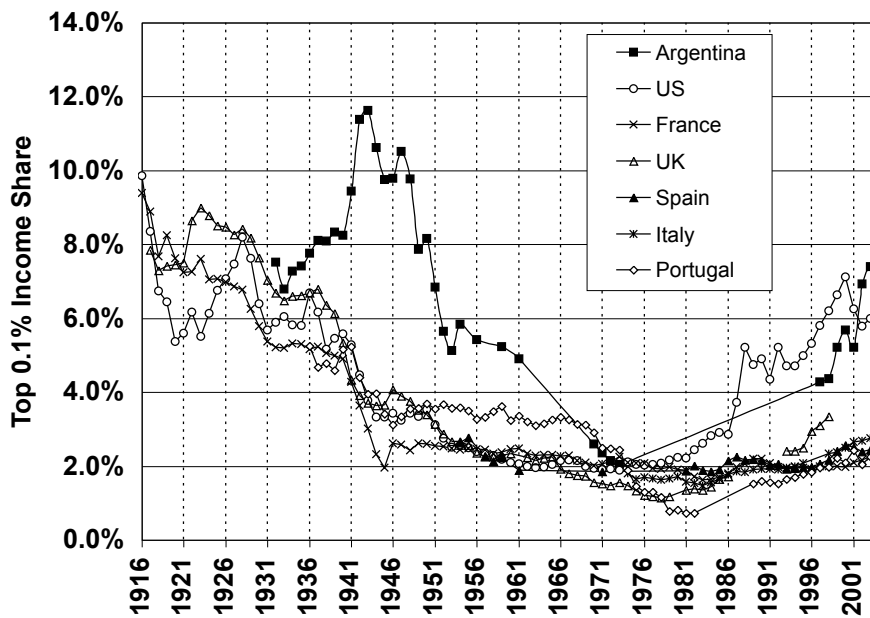
FIGURE 3.4

The Top 0.1% Income Shares in Argentina, the United States
France, Spain, Italy, Portugal and UK

Source: Argentina: author's calculations. US: Piketty and Saez (2003)
France: Piketty (2001) and Landais (2007); UK: Atkinson (2005);
Italy: Chapter 4; Portugal: Chapter 5; Spain: Alvaredo and Saez (2007) and Chapter 2.
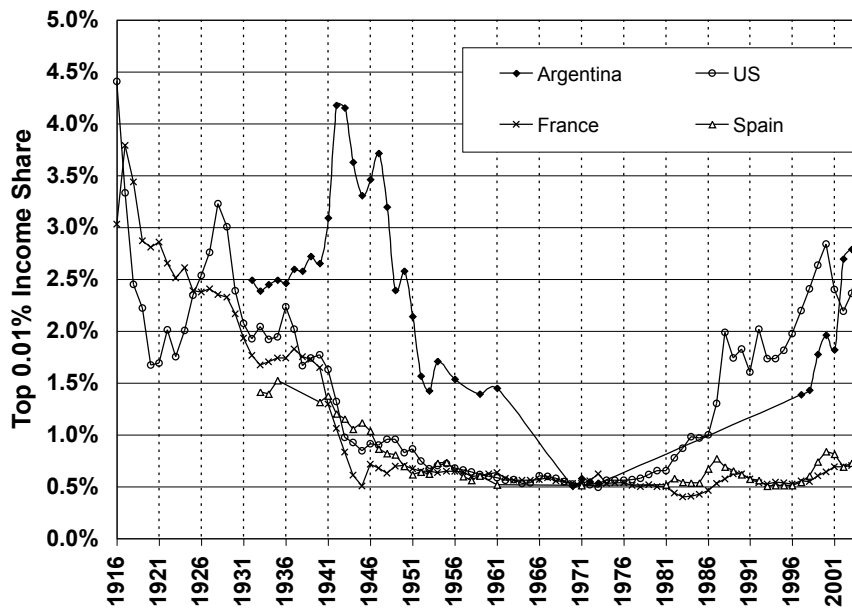
FIGURE 3.5
The Top 0.01% Income Shares in Argentina and the United States

Sources: Argentina: author's calculations; US: Piketty and Saez (2003)
France: Piketty (2001) and Landais (2007); Spain: Alvaredo and Saez (2007) and Chapter 2.
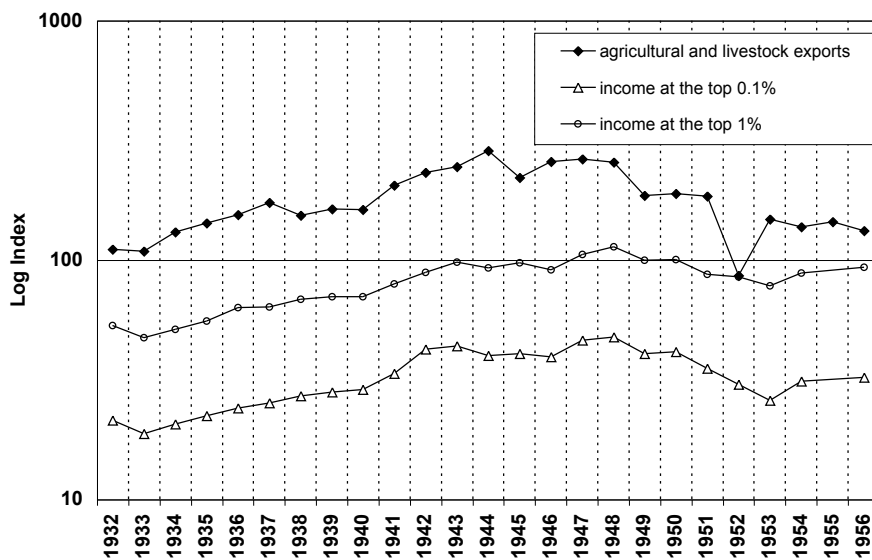
FIGURE 3.6
Agricultural and Livestock Exports and Income at the Top, 1932-1956

Source: Table 2 and Table 6 for income and Vazquez Presedo (1988) for exports.
Income at the top 1% and 0.1% is the real amount of income reported by the top 1% and 0.1% income earners
The vertical axis measures the logarithm of exports and the logarithm of
the top 1% and the top 0.1% income.
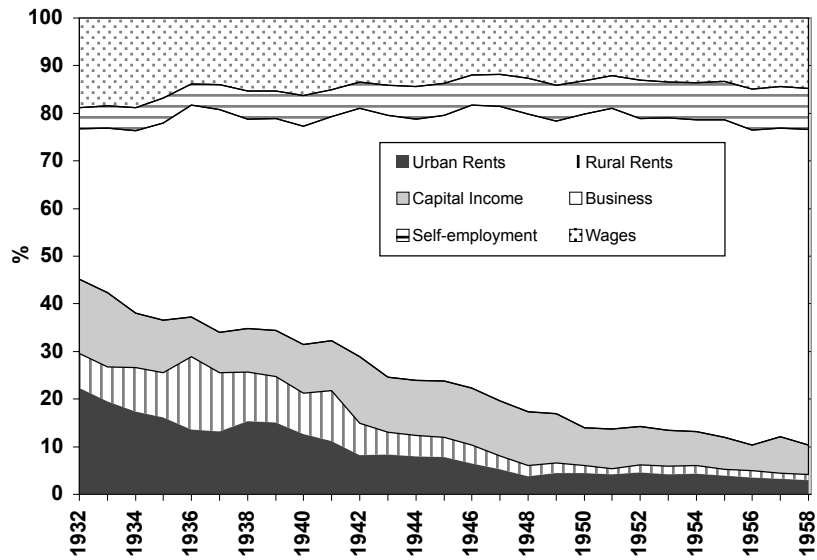
FIGURE 3.7
Composition of Reported Income in Argentina, 1932-1958
Notes: It covers 1.7%-2.6% of top income earners between 1932 and 1949,
and 3.7%-5.2% between 1950 and 1958. See Table 3.2, column 4.
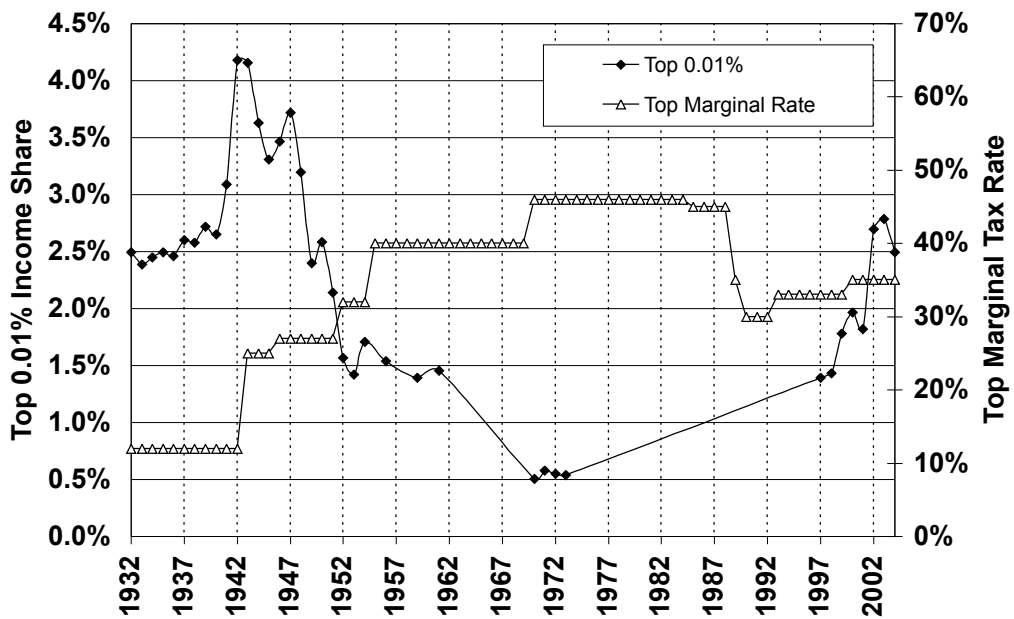
FIGURE 3.8
The Top 0.01% Income Share in Argentina and Statutory Top Marginal Rates, 1932-2004

Source: Top 0.01% income share from Table 3.6.
Top Marginal tax rate is from Table 3.2, Column 9.
Top 0.01% income share excludes realized capital gains.
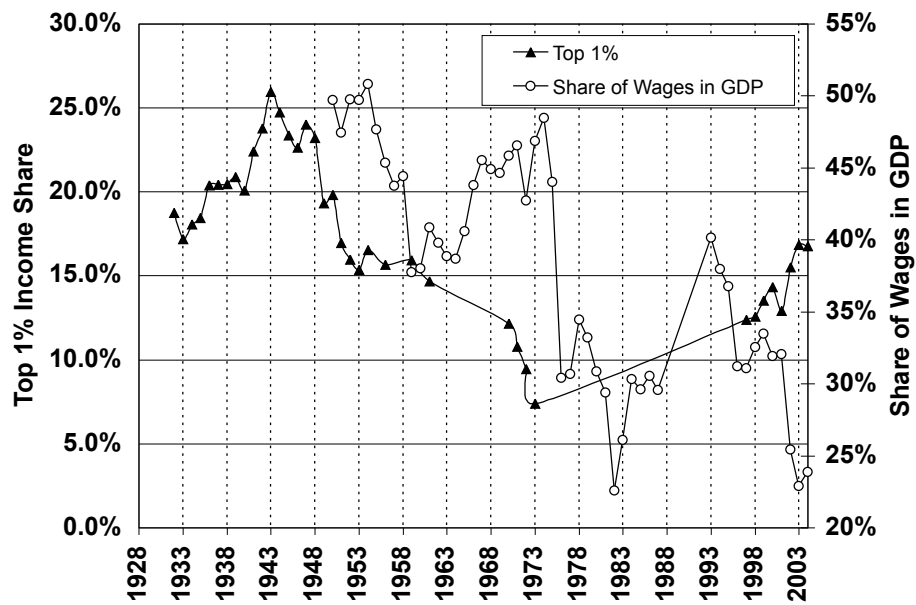
FIGURE 3.9

The Top 1% Income Share in Argentina and share of Wages in GDP, 1932-2004

Source: Top 1% income share from Table 3.6.
Share of Wages on GDP from Lindemboin et al (2005)
Income does not include realized capital gains.
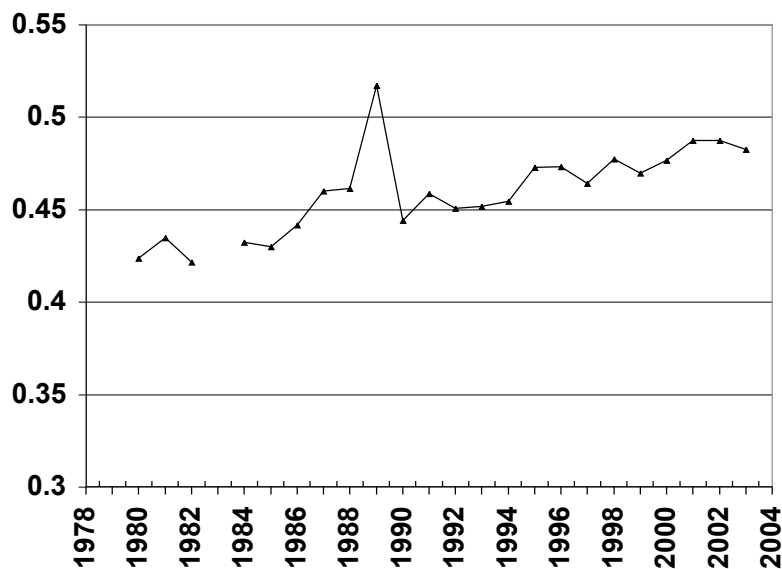
FIGURE 3.10

Gini Coefficient 1980-2004 Greater Buenos Aires

Notes: The triangle denotes the Gini coefficient in the Greater Buenos Aires, own calculations
based on household surveys. Database for 1983 is missing. All results correspond to
October surveys, except for 2003 (May).
Only perceptors with positive income were considered and no further adjustments were applied.

APPENDIX TO CHAPTER 3

3.A. The Income Tax

At the start of the interwar period import customs constituted a large share of government revenues, as is typical in developing countries. The Great Depression forced fundamental changes both in the economic policy and in the successful model of international insertion that Argentina had displayed between 1880 and 1930. As tax collections were cyclically correlated with trade conditions (mainly through taxes on imports), the world crisis exposed the country to the commodity lottery and the worsening of the terms of trade. By December 1929, the current account imbalance was severe and the exchange rate was left to float after a two-year resumption of the gold standard. High public expenditures in 1928-1930 were drastically reduced between 1931-1933. The government followed a conservative fiscal policy and sought orthodox budget balance by replacing the lost customs revenues with a dramatic increase in direct taxes on income and wealth.

In this context, the first personal income tax (*Impuesto de Emergencia a los Réditos*) was established in 1932 (Law 1/19/1932) during the presidency of José E. Uriburu, who had deposed President Yrigoyen two years before in the first military coup d'état against the constitutional order started in 1862.[1]

Taxed income was classified in four categories. The first category referred to rents and income obtained from agricultural and other rural activities when performed by the owner of the land. Total revenue from this source could not be lower than 5% of the cadastral value established for local taxes. The second category included royalties, fixed claim asset income, dividends, annuities and subsidies. The third category corresponded to self-employment and business income and farm income from rented land. The fourth category represented wages, salaries and pensions.[2]

Exemptions included income derived from patents, copyrights and other intellectual property, profits from cooperative societies, severance payments, local and federal treasury bonds interest, low-interest saving accounts (this exemption extended later to all saving accounts and time deposits) and dividends. The tax structure was rather rudimentary: there was a flat rate for

---

1 Several attempts to create a personal income tax between 1916 and 1930 (in 1917, 1920, 1922, 1924, and 1928) were systematically blocked in the senate, dominated by the Conservative party. For a detailed account on the political reasons for the failure of any fiscal reform concerning the income tax before 1932, see Sánchez Román, 2007. Cf. the case of Spain (Alvaredo and Saez, 2007 and Chapter 2) where the first personal income tax was enforced during the Second Republic.

2 Throughout the years the classification of income in the four categories is a key element as each category is affected by different deductions.

income in the first three categories, and a three-bracket progressive scale for wages, salaries and pensions.

Tax filing was strictly individual, but income coming from elements under joint tenancy was allocated to the husband.

While the exemption on local and national treasury bonds interest was eliminated in 1942 (Law 12808), the first major reform, motivated by the need of increasing fiscal revenues, was accomplished between 1943 and 1946 (Decree 18299 of 12/31/1943). The tax scale was radically modified, maintaining the existing rates on the lowest incomes and increasing them at the top. The top marginal rate tripled, jumping from 7% to 22%. It should be noted that the new top marginal rate was similar to those in force, at the time, in Chile (27%) and Brazil (21.4%) but considerably lower than those in the United States, Canada, the UK and France. Classification of income suffered some changes: professional income was transferred from the third to the fourth category while farm income –from owned and rented land- was completely included in the third category (decree 14338 of 5/20/1946).[3]

While the growing inflation started by the second half of the century could have implied a rise in the number of taxpayers (by reducing the significance of the minimum threshold), non-taxable income and family deductions were regularly updated. As only those with positive taxable income were obliged to file, the percentage of tax filers with respect to total tax units remained low (see Table 3.3, column 4). At the same time, the brackets in the tax scale remained stable, whereas the rates were increased again in 1955 (Law 14393 of 12/31/1954) as shown in Table 3.3, column 9.

In 1962 a fiscal amnesty attempted to uncover all income that had been hidden by taxpayers between 1956 and 1961.[4] The strategy was the following: the individual made a formal statement of the "actual" amount and composition of his net wealth by 12/31/1961; he also had to approximate the consumption afforded with hidden income during the previous six years. The difference between the actual wealth and the wealth reported in the tax file for 1961 was considered as the capitalization of non-reported income. Using this information, the tax bureau attempted to estimate the level of tax evasion by income brackets in 1959. Results are shown in Table 3.4.

The same strategy was followed in 1970 for the tax evaded between 1964 and 1969. This time and quite surprisingly, reporting net assets placed in foreign countries was not mandatory (Law 18529 of 12/31/1969). Unfortunately the tax authorities did not publish the estimation of the level of tax evasion in detail. Over a total of 589 thousand taxpayers, 300 thousand individuals declared 65% of unreported income.

---

3 Among the regulations that introduced important changes in the income tax regulation, the reader may refer to: Law 1/19/1932 (creation of the income tax); Law 11586 of 7/2/1932 (ordering of the tax); Law 11757 of 10/11/1933 (on the exemption of local and national treasury bonds); Law 11682 of 1/2/1933 and Decree 112578 of 5/4/1938 (classification of income and redefinition of the progressive tax scale); Decree 18299 of 12/31/1943 (change in tax scale); decree 14338 of 5/20/1946 (re-classification of income).
4 Decree 6480 (1962).

Tax scale was revised again in 1969 (law 18.527 of 12/31/1969), when marginal rates ranged from 12% to 46%, and in 1974, establishing a scale going from 7% to 46% (Law 20628 of 12/27/1973, which abolished the old *Impuesto sobre los Réditos Personales* and created a new *Impuesto a las Ganancias de las Personas Físicas y de las Sucesiones Indivisas*). The maximum marginal tax rate moved down to 45% in 1985 (Law 23.260 of 9/25/1985)

By 1997, the top marginal rate had been reduced to 33% and increased to 35% again in 2000 (Decree 450 of 3/31/1986; Decree 2352 of 12/18/1986; Decree 649/97 of 8/6/1997; Law 25239 of 12/31/1999).

3.B. References on Data Sources for Argentina

3.B.1. Tax Statistics

Statistical information covering the income tax for years 1932-1950 has been regularly published between 1935 and 1950: Dirección General de Impuestos a los Réditos, Memoria 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946; Dirección General Impositiva, Memoria 1947, 1948, 1949, 1950. Tables display the distribution of taxpayers by brackets of income together with net income, taxable income, family deductions, minimum exempted income and tax paid.

The continuity of the publication was lost between 1950 and 1997. The Tabulations for 1951-1954, 1956 1958 and 1959 were published in Dirección General Impositiva, Boletín 1957, 1958, 1959, 1961, 1962 (April), 1962 (October).

The data for 1953, 1959 and 1961, when not taken from tax statistics (as pointed out in the main text and in the tables), correspond to Consejo Nacional de Desarrollo, Distribución del Ingreso y Cuentas Nacionales en la Argentina-Investigación Conjunta CONADE-CEPAL, volumes I-V, Buenos Aires (1965). This study attempted to measure, for the whole economy, the distribution of income in 1953, 1959 and 1961 using a variety of sources, including national accounts, banking sector balance sheets, the 1963 income and expenditure survey and income tax statistics as the ones used in this paper. Consequently, the source of information for those years is not restricted to tax tabulations.

The information for 1970, 1971, 1972 and 1973 was obtained from Dirección General Impositiva, Ministerio de Economía, Estadísticas Tributarias Ejercicios 1972/73 and Departamento de Estudios, División Estadística, Ministerio de Economía, 1973, Boletín Estadístico Número Especial, Aporte de la DGI a las III Jornadas Tributarias del Colegio de Graduados de Ciencias Económicas de Buenos Aires.

More detailed data describe the evolution of the income and wealth taxes between 1997 and 2004: Administración Federal de Ingresos Públicos, Ministerio de Economía, Estadísticas Tributarias 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005.

3.B.2. Comparison between Tax Tabulations and Household Surveys

As it is usually the case, household surveys are of little help when focusing on the very rich and do not offer valuable information when trying to get an idea of unreported income in tax data.[5] The rich are missing from surveys either for sampling reasons or because they refuse to cooperate with the time-consuming task of completing or answering to a long form. When found, they are sometimes intentionally excluded so as to minimize bias problems generated by outliers. The practice of eliminating extreme observations, usually seen as data contamination, relies in many cases on expert judgment.[6] Groves and Couper, 1998 report that the probability of response is negatively correlated with almost all measures of socioeconomic status.[7] Székeley and Hilgert, 1999 have analyzed a large number of Latin American surveys to confirm that the top reported incomes generally correspond to the prototype of highly educated professionals rather than capital owners. They find that in sixteen countries total income of the ten richest households in the survey is very similar to the average wage of a manager of a medium to large size firm.[8]

To get a sense of the mismatch, we quantified the gap between top incomes from Argentine household surveys and top incomes from tax tabulations. This was done by applying the statutory income tax schedule to the actual income of each individual in the survey, after substracting exempted income, the main allowances and family deductions and selecting those individuals with positive taxable income, as they are the ones present in the tax statistics. Table 3.5 presents the results of the comparison for 1997. Household surveys correspond to Encuesta Permanente de Hogares (EPH), October, Instituto Nacional de Estadística y Censos.

We proceeded in the following way. We corrected the October 1997 survey weights so that the adult population covered by the survey matches our reference total for tax units. As survey income refers to monthly values, annual income was computed by up scaling dependent labor income and pensions by a factor of 13 (twelve months plus a year-end bonus). Income from all other sources was multiplied by 12. Family deductions established by the tax schedule were calculated using the household composition information. Deduction for spouse was $2,400; deduction for each dependent was $1,200. Personal allowance was $4,800. Since other allowances permitted by law vary according to personal characteristics, expenses, and sources of income, it is not possible to know exactly the individual amount to be deducted. We computed the ratio

---

5 It has already been mentioned that periodic households surveys are only available since 1974.
6 See Cowell and Feser, 1996.
7 They also report how, while survey interviewers in poor countries can usually collect data in very poor areas, penetrating the gated communities in which many rich people live is often impossible.
8 In ten cases, total income of the richest households in the survey is below the average salary of a manager.

allowances/income by brackets from the tax tabulations, and applied them to survey incomes. Individuals with taxable income below 0 were eliminated. The remaining individuals were organized by levels of income so as to make the comparison with the tax tabulations.

While there were 698 tax files with income above $1,000,000 and 26 tax files with above $5,000,000, the survey's top 160 individuals only have income between $500,000 and $1,000,000.

Survey information generally differs also from national accounts data. However, a word of caution is necessary here. The fact that means of consumption and income from household surveys and national accounts differ is not only because the rich might not be present in the surveys: the two sources of information are different and they measure different concepts. National accounts track money and are more likely to capture large transactions, while surveys follow people and are less likely to include large transactors. In the developing world, surveys detect almost exclusively wages and pensions, self-employment income and public transfers, while capital income is largely neglected. Deaton (2005) analyzes the issue in detail and acknowledges that extensive prior adjustments of the national accounts mean income (or consumption) are required before using them to up scaling survey estimates.[9] The Canberra Expert Group on Household Income Statistics (2001) has also examined the relationships between the definition of income in national accounts and the income appropriate for distribution analysis.

3.C. Income Denominator

3.C.1. Total Number of Individuals and Tax Units

The income tax in Argentina has never allowed joint filing for married couples. Consequently, the reference total for tax units, defined as the number of individuals had everybody been required to file, is computed as the number

---

9 Deaton (2005) has found that the ratio of survey to national accounts consumption is generally higher in the poorest countries and lower in the richest. In general consumption measured from surveys frequently grows less rapidly than consumption measured from national accounts. Additionally, there exists a negative relationship between the ratio of survey to national accounts on the one hand, and the level of per capita GDP on the other. This relationship is steepest among the poorest countries, is flatter in the middle-income countries and resumes its downward slope among the rich economies. One of the reasons is that consumption is easier to measure in surveys than is income in poorer countries where many people are self-employed, while the opposite is true in rich countries. Deaton's remarks are, however, mainly directed at the measurement of poverty. For example, the system of national accounts recommends, in measuring production for own consumption, that the effort be made only when the amounts produced are likely to be quantitatively important in relation to the total supply of goods in the country. This rule makes little sense when we are worried about poor households.

of persons in the Argentine population aged 20 and over. These series are based on census linear interpolations and reported in Table 3.3, column [2]. National censuses were conducted in 1914, 1947, 1960, 1970, 1980, 1991 and 2001. Column [3] indicates the total number of tax returns actually filled. The fraction of the adult population filing a tax return is presented in Column [4].

Comisión Nacional del Censo, Tercer censo nacional: levantado el 1 de junio de 1914, ordenado por la Ley no. 9108 bajo la presidencia del Dr. Roque Saenz Pena, ejecutado durante la presidencia del Dr. Victorino de la Plaza, Buenos Aires (1919); Dirección Nacional de Estadística y Censos, IV Censo General de Población 1947, Buenos Aires (1951); Dirección Nacional de Estadística y Censos, Censo General de Población 1960, Buenos Aires (1965); Instituto Nacional de Estadística y Censos, Censo Nacional de Población y Vivienda 1991. Resultados definitivos, Total del país, Serie B n° 25, Buenos Aires (1993); Instituto Nacional de Estadística y Censos, Censo Nacional de Población, Hogares y Vivienda 2001, Resultados Generales Total del País, Buenos Aires.

3.C.2. Income

To relate the amounts recorded in the tax tabulations to a comparable reference income, we build up the series of personal income from the national accounts. Information comes from the National Accounts System 1993. Starting from total GDP, minus indirect and direct taxes not paid by families, minus depreciation, minus employers' social security contributions, minus imputed rents on owner-occupied houses, minus financial intermediation services consumed by the public sector, minus undistributed profits, plus social transfers minus interest paid by the financial sector (interest is not included in tax statistics), minus 33% of unincorporated profits. This procedure generates a reference income of about 65% of GDP for recent years. The level of desegregation of information required to compute income is not available for all the years. Consequently we applied the 65% factor to the GDP in current prices taken from Administración Federal de Ingresos Públicos (2002), based on information from Secretaría de Política Económica, Banco Central de la República Argentina and Instituto Nacional de Estadística y Censos.[10]
As pointed out in Atkinson (2005), given the increasing significance of items such as employers' contributions, non-household institutions such as pension funds and public transfers, it is not evident that a constant percentage computed on recent information is appropriate to describe the situation during the first half of the century.

---

10 In the case of Spain the reference total income also turns out to be roughly equal to 60% of GDP with deviations of less than 1% (see Alvaredo and Saez, 2007).

3.C.3. Prices

The first official consumer price index dates back to 1943. The CPI is published monthly by the Instituto Nacional de Estadística. The annual index was computed as the arithmetic average of monthly indices from 1943 to 2004. For 1935-1942, the price index was taken from Vazquez Presedo (1971) column [1], Table V-2.15; for 1932-1934 it corresponds to Della Paolera and Taylor (2001), chapter 13.

3.D. Estimating Top Shares

3.D.1. Basic Pareto Interpolation

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

The first step consists then in estimating the income thresholds corresponding to each of the percentiles P90, P95, P99, …, P99.99, that define our top income groups. For each percentile p, we look first for the published income bracket [s,t] containing the percentile p. We estimate then the parameters a and k of the Pareto distribution by solving the two equations: $k=s \; p^{(1/a)}$ and $k=t \; q^{(1/a)}$ where p is the fraction of tax returns above s and q the fraction of tax returns above t.[11] Pareto parameters k and a may vary from bracket to bracket. Once the density distribution on [s,t] is estimated, it is possible to estimate the income threshold, y_p, corresponding to targeted percentile p.

The second step consists of estimating the amounts of income reported above income threshold y_p. We estimate the amount reported between income y_p and t (the upper bound of the published bracket [s,t] containing y_p) using the estimated Pareto density with parameters a and k. We then add to that amount the amounts in all the published brackets above t.

Once the total amount above y_p is obtained, we obtain directly the mean income above percentile p by dividing the amount by the number of individuals above percentile p. Finally, the share of income accruing to individuals above percentile p is obtained by dividing the total amount above y_p by our income

---

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

denominator series. Average incomes and income shares for intermediate fractiles (P90-95, P95-99, etc.) are obtained by subtraction.

The composition for 2001-2004 is estimated from the published tables in indicating for each income bracket not only the number of taxpayers and the total amount of their total income but also the separate amounts for each type of income as well as the deductions. The composition of income within each group was estimated from these tables using a simple linear interpolation method. Such a method is less satisfactory than the Pareto interpolation method used to estimate top income levels (no obvious law seems to fit composition patterns in a stable way). See Piketty and Saez (2003) for a more precise discussion of this method where it is systematically compared with direct estimates using micro data.

References

Adelman, J. (1994). *Frontier Development : Land, Labor and Capital on Wheatlands of Argentina and Canada 1890-1914,* Oxford: Oxford University Press.

Ahumada, H., F. Alvaredo, A. Canavese and P. Canavese (2003). 'Estimación del Tamaño de la Economía Oculta por medio de la Demanda de Circulante: Una Revisión de la Metodología con una Ilustración para Argentina', *Revista de Análisis Económico*, 18(1): 103-115.

Ahumada, H., F. Alvaredo and A. Canavese (2000). 'Un Análisis Comparativo del Impacto Distributivo del Impuesto Inflacionario y de un Impuesto sobre el Consumo', Economica, XLVI (2), July/December 2000.

Ahumada, H., F. Alvaredo and A. Canavese (2007). 'The Monetary Method and the Size of the Shadow Economy', *Review of Income and Wealth*, 53(2): 363-371.

Altimir, O. (1986). 'Estimaciones de la distribución del ingreso en la Argentina, 1953-1980', *Desarrollo Económico*, 25(100).

Altimir, O. and L. Beccaria (1999). 'Distribución del Ingreso en la Argentina', Serie Reformas Económicas, CEPAL.

Alvaredo, F. and E. Saez (2007). 'Income and Wealth Concentration in Spain in a Historical and Fiscal Perspective', Cepr Discussion Paper 5836.

Andreoni, J. (1991). 'The Desirability of a Permanent Tax Amnesty', *Journal of Public Economics*, 45(2): 143-159.

Atkinson, A. (2005). 'Top Incomes in the United Kingdom over the Twentieth Century', *Journal of the Real Statistical Society*, Series A, 168(2): 325-343.

Atkinson, A. (2007). 'Measuring Top Incomes: Methodological Issues, in A.B. Atkinson, A. B. and T. Piketty, op. cit., chapter 2.

Atkinson, A. and A. Leigh (2007a). 'The Distribution of Top Incomes in Australia', in A.B. Atkinson, A. B. and T. Piketty, op. cit.

Atkinson, A. and A. Leigh (2007b). 'The Distribution of Top Incomes in New Zealand', in A.B. Atkinson, A. B. and T. Piketty, op. cit.

Atkinson, A. B. and T. Piketty (2007). *Top Incomes over the Twentieth Century: A Contrast Between European and English Speaking Countries*, Oxford: Oxford University Press.

Auerbach, A. and J. Slemrod, J. (1997). 'The Economic Effects of the Tax Reform Act of 1986', *Journal of Economic Literature*, 35: 589-632.

Banco Central de la República Argentina (1962). Boletín Estadístico, January.

Banerjee, A. and T. Piketty (2005). Top Indian Incomes 1922-2000, *The World Bank Economic Review,* 19(1): 1-20.

Braun, O. and L. Joy (1967). 'A Model of Economic Stagnation: A Case Study of the Argentine Economy', *Economic Journal,* 78(312).

Canberra Expert Group on Household Income Statistics (2001). Final Report and Recommendations, Ottawa.

Consejo Nacional de Desarrollo and Comisión Económica para América Latina y el Caribe (1965). *Distribución del Ingreso y Cuentas Nacionales en la Argentina,* 5 volumes, Buenos Aires.

Cont, W. and N. Susmel (2006). 'Evasión Impositiva en Impuestos Directos Personales: Ganancias de las Personas y Seguridad Social', in *La Presión Tributaria sobre el Sector Formal de la Economía,* Fundación de Investigaciones Latinoamericanas (ed.), Buenos Aires.

Cortés Conde, R. (1979). *El Progreso Argentino,* Buenos Aires: Editorial Sudamericana.

Cortés Conde, R. and E. Gallo (1972). *La República Conservadora,* Buenos Aires: Editorial Paidós.

Cowell, F. and M. Victoria-Feser, M (1996). 'Robustness Property of Inequality Measures', *Econometrica,* 64(1):77-101.

Deaton, A. (2005). 'Measuring Poverty in a Growing World (or Measuring Growth in a Poor World)', *Review of Economics and Statistics,* 87(1):1-19.

Dell, F. (2007). 'Top Incomes in Germany Throughout the Twentieth Century: 1898-1998', in A.B. Atkinson, A. B. and T. Piketty, op. cit.

Dell, F; T. Piketty and E. Saez (2007). 'Income and Wealth Concentration in Switzerland over the Twentieth Century', in A.B. Atkinson, A. B. and T. Piketty, op. cit.

Della Paolera, G. and A. Taylor, A. (2001*). Straining at the Anchor: The Argentine Currency Board and the Search for Macroeconomic Stability 1880-1935,* Chicago: The University of Chicago Press.

Di Tella, G. and R. Dornbusch, R. (1983). *The Political Economy of Argentina 1946-1983,* The University of Pittsburgh Press.

Di Tella, G. and M. Zymelman (1973). *Los Ciclos Económicos Argentinos,* Buenos Aires: Editorial Paidós.

Di Tella, G. and M. Zymelman. (1967). *Las Etapas del Desarrollo Económico Argentino,* Buenos Aires: Editorial Universitaria de Buenos Aires.

Diaz Alejandro, C. (1970). *Essays on the Economic History of the Argentine Republic*. New Haven, Conn. Yale University Press (Spanish version: (1983) *Ensayos sobre la Economía Argentina*, Buenos Aires: Amorrortu Editores).

Dieguez, H. and A. Petrecolla, A. (1979). 'La Distribución del Ingreso en el Gran Buenos Aires', Editorial del Instituto Di Tella, Buenos Aires.

Engel, E., A. Galetovic, A. C. and Raddatz (1999). 'Taxes and Income Distribution in Chile: Some Unpleasant Redistributive Arithmetic', *Journal of Development Economics*, 59(1): 155-192.

Feenberg, D. and J. Poterba(1993). 'Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns', NBER Working Papers 4229, National Bureau of Economic Research.

Gasparini, L. (1999). 'Incidencia Distributiva del Sistema Impositivo Argentino', in FIEL (ed.) *La Reforma Tributaria en la Argentina*, Buenos Aires.

Gasparini, L. (2004). 'Different Lives: Inequality in Latin America and the Caribbean', in *Breaking with History? Inequality in Latin America and the Caribbean*, World Bank.

Gasparini, L. and W. Sosa Escudero (2003). 'Implicit Rents from Own-housing and Income Distribution: Econometric Estimates for Greater Buenos Aires'. *Journal of Income Distribution*, 12.

Gasparini, L., F. Gutiérrez and L. Tornarolli (2007). 'Growth and Income Poverty in Latin America and the Caribbean: Evidence from Household Surveys', *Review of Income and Wealth*, 53(2): 209-245.

Gasparini, L., M. Marchionnini and W. Sosa Escudero (2001). *La Distribución del Ingreso en la Argentina: Perspectivas y Efectos sobre el Bienestar*, Buenos Aires: Fundación Arcor.

Gasparini, L., M. Marchionnini and W. Sosa Escudero (2004). 'Characterization of Inequality Changes Through Microeconometric Decompositions. The Case of Greater Buenos Aires', in F. Bourguignon, F. Ferreira and N. Lustig (eds) *The Microeconometrics of Income Distribution Dynamics in East Asia and Latin America*, New York: Oxford University Press.

Gonzalez Rozada, M. and M. Menendez, M. (2006). 'Why have Poverty and Income Inequality Increased so Much? Argentina, 1991-2001', *Journal of Economic Development and Cultural Change,* 55(1).

Gordon, R. and . Slemrod (2000). 'Are 'Real' Responses to Taxes Simply Income Shifting Between Corporate and Personal Tax Bases?' In J. Slemrod (ed.) *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, Harvard University Press.

Groves R. and M. Couper (1998). *Nonresponse in Household Interview Surveys*, New York: Wiley.

Jauretche, A. (1966). *El Medio Pelo en la Sociedad Argentina*, Buenos Aires: A. Peña Lillo Editor.

Johnson, L. (1994). 'Distribution of Wealth in Nineteenth-Century Buenos Aires Province: The Issue of Social Justice in a Changing Economy', in K. J. Andrien and L. Johnson (eds.) *The Political Economy of Spanish America in the Age of Revolution, 1750-1850*, Alburquerque, N. M.: University of New Mexico Press.

Johnson, L. (2000). 'The Pampa Transformed: Measuring Economic Growth and Wealth Inequality in the Rosas Period'. University of North Carolina, mimeo.

Johnson, L. and Z. Frank (2006). 'Cities and Wealth in the South Atlantic: Buenos Aires and Rio de Janeiro before 1860', *Comparative Studies in Society and History*, 48: 634-668.

Kopczuk, W. and E. Saez (2004). 'Top Wealth Shares in the United States, 1916-2000: Evidence from Estate Tax Returns', *National Tax Journal*, 57(2): 445-487.

Kuznets, S. (1953). 'Shares of Upper Income Groups in Income and Savings', National Bureau of Economic Research.

Leigh, A. and P. van der Eng (2007). 'Top Incomes in Indonesia, 1920-2004', Discussion Papers from Centre for Economic Policy Research, n. 549, Research School of Social Sciences, Australian National University.

Lindemboim, J., J. Graña and D. Kennedy (2005). 'Distribución Funcional del Ingreso en Argentina. Ayer y Hoy', Documentos de Trabajo, 4, Centro de Estudios sobre Población, Empleo y Desarrollo, Instituto de Investigaciones Económicas, Facultad de Ciencias Económicas, Universidad de Buenos Aires.

Luna, F. (1958). *Alvear,* Hyspamérica, Buenos Aires.

Luna, F. (1989). *Soy Roca*, Editorial Sudamericana, Buenos Aires.

Maddison, A. (2001). *The World Economy. A Millennial Perspective.* Paris: OECD.

Maddison, A. (2003). *The World Economy. Historical Statistics.* Paris: OECD.

Mallon, R. and J. Sourrouille (1975). *Economic Policymaking in a Conflict Society: The Argentine Case*, Center for International Affairs, Harvard University Press.

Ministerio de Economía (1973). 'Boletín Estadístico, Número Especial, Aporte de la DGI a las III Jornadas Tributarias del Colegio de Graduados de Ciencias Económicas de Buenos Aires', Departamento de Estudios, División Estadística.

Moriguchi, C. and E. Saez (2007). The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics, forthcoming *Review of Economics and Statistics*.

Nolan, B. (2007). Long-Term Trends in Top Income Shares in Ireland, in A.B. Atkinson and T. Piketty, 2007, op. cit.

Ocampo, V. (1979-1984). *Autobiografía*, 6 volumes, Revista Sur, Buenos Aires (reprinted in (2005), 3 volumes, Buenos Aires: Editorial Victoria Ocampo).

Organización de Estados Americanos and Banco Interamericano de Desarrollo (1967). *Estudio sobre Política Fiscal en la Argentina*, 7 volumes. Buenos Aires.

Ott, K. (2004). The Evolution of the Informal Economy and Tax Evasion in Croatia, *Journal of Tax Research*, 2(1), pp. 113-124.

Petrecolla, A. (1977). Desarrollo, Salarios e Ingreso Nacional, Revista Argentina de Finanzas, n.1. Buenos Aires.

Piketty T. and E. Saez (2003). 'Income Inequality in the United States, 1913-1998', *Quarterly Journal of Economics*, 118(1): 1-39; updated version in A.B. Atkinson and T. Piketty, 2007, op. cit.

Piketty T. and E. Saez (2006). 'The Evolution of Top Incomes: A Historical and International Perspective', *American Economic Review*, 96(2):200-205.

Piketty, T. (2003). 'Income Inequality in France 1901-1998', *Journal of Political Economy*, 111(5):1004-1042.

Piketty, T. and N. Qian (2006). 'Income Inequality and Progressive Income Taxation in China and India', 1986-2015, Cepr Discussion Papers 5703.

Piketty, T; G. Postel-Vinay and J. Rosenthal (2006). 'Wealth Concentration in a Developing Economy: Paris and France, 1807-1994', *American Economic Review*, 96(1): 236-256.

Piketty, T. (2001). *Les Hauts Revenus en France au 20ᵉᵐᵉ siecle – Inegalites et Redistributions, 1901-1998*, Paris : Editions Grasset.

Rapoport, M. (1980). *Gran Bretaña, Estados Unidos y las Clases Dirigentes Argentinas*, Buenos Aires: Editorial de Belgrano.

Rapoport, M. (1988). *Aliados o Neutrales? La Argentina frente a la Segunda Guerra Mundial*, Buenos Aires: Editorial Universitaria de Buenos Aires.

Rapoport, M. and C. Spiguel (1994). *Estados Unidos y el Peronismo. La Política Norteamericana en la Argentina 1949-1955,* Buenos Aires: Grupo Editor Latinoamericano, Colección Estudios Internacionales.

Presidencia de la Nación, República Argentina (1967). *Estudio de Política Fiscal en la Argentina*, Preparado por el Programa Conjunto de Tributación OEA/BID, 1963, 7 volumes. Buenos Aires.

Riihelä, M., R. Sullström and M. Tuomala (2005). 'Trends in Top Income Shares in Finland, VATT Discussion Paper 371, Government Institute for Economic Reseach, Helsinki..

Roine, J. and D. Waldenström (2006). 'The Evolution of Top Incomes in an Egalitarian Society: Sweden, 1903-2004', Research Institute of Industrial Economics IFN Working Paper 667.

Saez, E. and M. Veall, M. (2005). 'The Evolution of Top Incomes in Northern America: Lessons from Canadian Evidence', *American Economic Review*, 95(3):831-849. Longer version in A.B. Atkinson and T. Piketty, 2007, op. cit.

Saez, E. (2001). Using Elasticities to Derive Optimal Income Tax Rates, *Review of Economic Studies*, 68: 205-229.

Saez, E. (2004). 'Reported Incomes and Marginal Tax Rates, 1960-2000: Evidence and Policy Implications', in J. Poterba (ed.) *Tax Policy and the Economy*, Cambridge: MIT Press, 18.

Salim, J. and D'Angela W. (2005). 'Estimación del Incumplimiento en el IVA. Año 2000 a 2004', Administración Federal de Ingresos Públicos, Buenos Aires.

Salim, J. and D'Angela W. (2006). 'Estimación del Incumplimiento en el IVA. Año 2005, Administración Federal de Ingresos Públicos', Buenos Aires.

Salverda, W. and A. B. Atkinson (2007). 'Top Incomes in the Netherlands over the Twentieth Century', in A.B. Atkinson and T. Piketty, 2007, op. cit.

Sánchez Román, J. (2007a). 'Economic Elites, Regional Cleavages and the First Attempts at Introducing the Income Tax in Argentina', mimeo. Forthcoming in *Hispanic American Historical Review*, 88(2).

Sánchez Román, J. (2007b). 'Taxation and Peronism', mimeo.

Sebrelli, J. (1985). *La Saga de los Anchorena*, Buenos Aires: Editorial Sudamericana.

Slemrod J. (2000). *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, Harvard University Press.

Slemrod, J. (1992). 'Do Tax Matter? Lessons from the 1980s', *American Economic Review*, 82(2): 250-256.

Slemrod, J. (1995). 'Income Creation or Income Shifting? Behavioral Responses to the Tax Reform Act of 1986', *American Economic Review*, 85(2): 175-180.

Slemrod, J. (2001). 'A General Model of the Behavioral Response to Taxation', *International Tax and Public Finance*, 8(2): 119-128.

Slemrod, J. and S. Yitzhaki (2002). 'Tax Avoidance, Evasion, and Administration', in: A. J. Auerbach & M. Feldstein (eds.) Handbook of Public Economics, vol. 3, chapter 22, Elsevier.

Sokoloff, K. and Zolt, E. (2007). 'Inequality and the Evolution of Institutions of Taxation in the Americas', in S. Edwards, G. Esquivel, and G. Marquez (eds.) *Growth, Institutions and Crises: Latin America from a Historic Perspective*, Chicago: University of Chicago Press.

Surrey, S. and O. Oldman, (1960). 'Examen Preliminar del Sistema Impositivo de la República Argentina', Dirección General Impositiva, Buenos Aires.

Surrey, S. and O. Oldman, (1961). 'Report of a Preliminary Survey of the Tax System of Argentina', Public Finance.

Székeley, M. and M. Hilgert (1999). 'What's Behind the Inequality We Measure: An Investigation Using Latin American Data', Research Department Working Paper 409. Inter-American Development Bank.

Taylor, A. (1992). 'External Dependence, Demographic Burdens and Argentine Economic Decline After the Belle Epoque', *Journal of Economic History*, 52: 907-936.

Vazquez Presedo, V. (1971). *Estadísticas Históricas Argentinas*, 2 vols. Buenos Aires: Ed. Macchi.

Vazquez Presedo, V. (1988). *Estadísticas Históricas Argentinas. Compendio 1873-1973*, Buenos Aires: Academia Nacional de Ciencias Económicas.

TABLE 3.1. Structure of Tax Revenues. Argentina 1932-2004

	% of National Government Tax Receipts							
	Personal Income Tax and Corporate Tax			Social Contributions	Property Taxes	Sales Tax	International Trade	Other Taxes
	Personal Income Tax	Corporate Income Tax	Total (1)+(2)					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1932	6.04	0.12	6.16	15.97	1.53	24.48	40.70	11.16
1933	5.97	2.31	8.28	14.99	1.42	25.01	40.35	9.95
1934	7.18	1.30	8.48	14.89	1.74	26.03	38.84	10.01
1935	6.74	2.64	9.38	14.08	1.67	30.89	35.22	8.76
1936	7.88	1.06	8.94	14.34	2.08	32.78	33.09	8.76
1937	8.17	2.01	10.18	12.92	1.55	31.91	36.58	6.86
1938	7.39	4.81	12.20	13.41	1.68	32.50	33.58	6.63
1939	8.08	4.90	12.98	14.13	1.66	34.72	29.39	7.12
1940	8.09	5.66	13.75	15.36	1.51	36.43	25.55	7.41
1941	11.10	2.85	13.95	16.05	2.15	39.17	20.88	7.79
1942	13.73	4.63	18.36	15.95	2.25	39.07	17.01	7.36
1943	19.33	11.01	30.34	15.54	2.31	35.70	9.78	6.33
1944	18.59	10.50	29.09	16.09	2.38	36.69	7.97	7.78
1945	15.96	8.64	24.60	27.39	1.63	31.84	7.50	7.05
1946	16.82	17.08	33.90	23.80	1.74	24.94	9.96	5.66
1947	15.78	12.57	28.35	32.38	1.07	20.31	13.30	4.60
1948	15.08	12.36	27.44	36.09	1.16	20.44	9.45	5.42
1949	13.92	10.80	24.72	38.08	0.90	26.98	4.55	4.77
1950	16.51	8.27	24.78	34.61	4.86	28.91	3.40	3.44
1951	15.08	9.67	24.75	31.98	3.20	31.78	5.19	3.09
1952	12.03	15.29	27.32	32.21	3.64	30.82	3.11	2.91
1953	11.74	10.61	22.35	35.33	4.49	32.49	1.78	3.56
1954	11.40	9.72	21.12	37.21	4.23	32.65	2.27	2.53
1955	10.91	10.50	21.41	37.54	3.64	31.40	2.75	3.26
1956	12.39	11.86	24.25	37.87	2.61	28.67	2.87	3.74
1957	15.78	8.53	24.31	33.32	1.78	31.53	3.42	5.65
1958	18.05	7.50	25.55	32.75	1.95	30.82	4.35	4.58
1959	16.06	10.44	26.50	34.05	1.48	27.37	6.51	4.11
1960	10.43	14.65	25.08	29.10	5.69	32.36	4.18	3.59
1961			23.28	31.66	4.30	33.59	3.58	3.59
1962			19.43	29.01	3.10	33.44	12.07	2.95
1963			17.84	28.42	2.39	34.67	13.64	3.03
1964			14.59	34.86	1.97	28.72	17.22	2.64
1965			19.95	30.89	1.89	29.41	14.67	3.20
1966			19.83	27.27	3.86	34.44	11.62	2.98
1967			17.54	30.83	5.34	28.27	15.28	2.74
1968			14.79	30.30	4.72	33.61	13.43	3.15
1969			15.23	28.86	4.88	34.16	13.34	3.52
1970	5.80	12.73	18.53	28.59	6.01	31.90	11.87	3.10
1971	6.00	8.15	14.14	32.19	5.59	32.50	12.74	2.84
1972	5.61	7.33	12.95	29.93	4.85	31.80	17.82	2.66
1973	4.70	9.04	13.74	33.84	5.08	29.28	15.11	2.95
1974			14.99	32.37	4.57	33.06	11.99	3.03
1975			8.21	39.36	0.51	35.35	13.83	2.73
1976			9.25	30.59	4.67	31.01	17.92	6.57
1977			11.80	24.07	6.07	38.76	10.51	8.80
1978			11.15	27.57	5.39	44.23	7.95	3.72
1979			7.83	31.16	4.89	44.12	8.97	3.03
1980			9.17	29.35	4.70	43.79	10.21	2.77
1981			10.62	15.77	5.12	54.75	11.51	2.23
1982			9.53	13.76	8.47	54.36	11.75	2.15
1983			7.49	14.84	7.08	49.69	16.62	4.28
1984			4.26	19.77	6.39	51.43	14.29	3.87
1985			6.00	22.33	6.92	43.80	18.40	2.56
1986			7.79	21.10	8.37	45.10	15.07	2.56
1987			9.84	24.51	8.42	41.03	12.09	4.12
1988			8.90	20.89	12.42	43.01	10.19	4.60
1989			10.39	14.76	12.56	34.16	22.86	5.27
1990			4.82	22.31	9.08	44.98	13.06	5.75
1991			4.54	23.76	12.16	46.62	6.43	6.50
1992			7.63	23.48	4.92	53.93	6.12	3.93
1993			11.15	24.34	1.78	52.86	6.41	3.47
1994			12.86	29.71	1.43	47.55	6.18	2.27
1995			14.62	27.45	1.21	49.94	4.42	2.36
1996			15.74	23.62	1.84	53.22	5.25	0.33
1997	3.60	13.52	17.12	21.78	1.26	53.92	5.77	0.14
1998	3.54	15.36	18.90	20.50	1.77	52.93	5.60	0.29
1999	3.41	17.40	20.81	19.29	2.10	52.04	4.84	0.91
2000	4.11	18.61	22.72	18.10	2.47	51.75	4.14	0.83
2001	3.40	19.87	23.27	17.76	8.25	46.27	3.64	0.82
2002	5.32	13.04	18.36	16.02	10.58	42.17	12.26	0.61
2003	5.24	16.65	21.89	13.41	10.36	38.62	15.35	0.38
2004	4.26	19.20	23.46	13.29	9.48	39.72	13.53	0.51

Source: Dirección General de Impuestos a los Réditos, Memoria, several years; Dirección General Impositiva, Memoria, several years; Administración Federal de Ingresos Públicos, Estadísticas Tributarias, several years.

TABLE 3.2. Structure of Tax Revenues. Argentina 1932-2004

	National Government Tax Receipts as % of GDP							
	Personal Income Tax and Corporate Tax			Social Contributions	Property Taxes	Sales Tax	International Trade	Other Taxes
	Personal Income Tax	Corporate Income Tax	Total (1)+(2)					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1932	0.61	0.01	0.62	1.62	0.16	2.48	4.12	1.13
1933	0.58	0.22	0.80	1.46	0.14	2.43	3.92	0.97
1934	0.64	0.12	0.76	1.34	0.16	2.33	3.48	0.90
1935	0.68	0.27	0.94	1.42	0.17	3.11	3.54	0.88
1936	0.74	0.10	0.84	1.34	0.19	3.07	3.10	0.82
1937	0.77	0.19	0.96	1.22	0.15	3.00	3.44	0.65
1938	0.73	0.48	1.21	1.33	0.17	3.23	3.34	0.66
1939	0.76	0.46	1.22	1.33	0.16	3.26	2.76	0.67
1940	0.72	0.50	1.22	1.37	0.13	3.24	2.27	0.66
1941	0.88	0.23	1.11	1.28	0.17	3.11	1.66	0.62
1942	1.05	0.35	1.40	1.21	0.17	2.98	1.30	0.56
1943	1.63	0.93	2.56	1.31	0.19	3.02	0.83	0.54
1944	1.58	0.89	2.47	1.37	0.20	3.12	0.68	0.66
1945	1.49	0.81	2.30	2.56	0.15	2.97	0.70	0.66
1946	1.87	1.90	3.77	2.65	0.19	2.77	1.11	0.63
1947	2.19	1.75	3.94	4.49	0.15	2.82	1.85	0.64
1948	2.24	1.84	4.08	5.37	0.17	3.04	1.41	0.81
1949	2.14	1.66	3.80	5.86	0.14	4.15	0.70	0.73
1950	2.85	1.43	4.27	5.97	0.84	4.99	0.59	0.59
1951	2.59	1.66	4.26	5.50	0.55	5.47	0.89	0.53
1952	1.90	2.41	4.30	5.07	0.57	4.85	0.49	0.46
1953	1.84	1.67	3.51	5.54	0.70	5.10	0.28	0.56
1954	1.91	1.63	3.54	6.23	0.71	5.47	0.38	0.42
1955	1.73	1.67	3.40	5.97	0.58	5.00	0.44	0.52
1956	1.98	1.89	3.87	6.04	0.42	4.58	0.46	0.60
1957	2.13	1.15	3.28	4.49	0.24	4.25	0.46	0.76
1958	2.20	0.91	3.11	3.98	0.24	3.75	0.53	0.56
1959	1.93	1.25	3.18	4.08	0.18	3.28	0.78	0.49
1960	1.25	1.76	3.01	3.49	0.68	3.88	0.50	0.43
1961			2.83	3.84	0.52	4.08	0.44	0.44
1962			2.12	3.17	0.34	3.65	1.32	0.32
1963			2.08	3.32	0.28	4.05	1.59	0.35
1964			1.54	3.68	0.21	3.03	1.82	0.28
1965			2.31	3.58	0.22	3.41	1.70	0.37
1966			2.50	3.43	0.49	4.33	1.46	0.37
1967			2.54	4.47	0.77	4.10	2.22	0.40
1968			1.99	4.08	0.64	4.53	1.81	0.42
1969			1.94	3.68	0.62	4.35	1.70	0.45
1970	0.92	2.02	2.94	4.54	0.95	5.07	1.89	0.49
1971	0.84	1.15	1.99	4.53	0.79	4.57	1.79	0.40
1972	0.70	0.91	1.61	3.73	0.60	3.96	2.22	0.33
1973	0.62	1.19	1.81	4.47	0.67	3.86	1.99	0.39
1974			2.35	5.08	0.72	5.19	1.88	0.48
1975			0.88	4.21	0.05	3.78	1.48	0.29
1976			1.18	3.90	0.59	3.95	2.28	0.84
1977			1.39	2.84	0.71	4.57	1.24	1.04
1978			1.31	3.24	0.63	5.19	0.93	0.44
1979			0.89	3.54	0.56	5.02	1.02	0.34
1980			1.16	3.72	0.60	5.55	1.29	0.35
1981			1.24	1.84	0.60	6.37	1.34	0.26
1982			0.95	1.37	0.84	5.40	1.17	0.21
1983			0.70	1.38	0.66	4.62	1.55	0.40
1984			0.40	1.84	0.59	4.78	1.33	0.36
1985			0.76	2.82	0.87	5.53	2.32	0.32
1986			0.95	2.58	1.02	5.51	1.84	0.31
1987			1.19	2.97	1.02	4.97	1.46	0.50
1988			0.94	2.21	1.31	4.54	1.08	0.49
1989			1.21	1.72	1.46	3.98	2.66	0.61
1990			0.51	2.38	0.97	4.80	1.39	0.61
1991			0.58	3.06	1.57	6.00	0.83	0.84
1992			1.14	3.51	0.74	8.07	0.92	0.59
1993			1.84	4.02	0.29	8.74	1.06	0.57
1994			2.30	5.30	0.25	8.49	1.10	0.40
1995			2.46	4.62	0.20	8.40	0.74	0.40
1996			2.54	3.82	0.30	8.60	0.85	0.05
1997	0.61	2.28	2.89	3.68	0.21	9.10	0.97	0.02
1998	0.60	2.61	3.21	3.48	0.30	8.98	0.95	0.05
1999	0.58	2.97	3.56	3.30	0.36	8.90	0.83	0.16
2000	0.72	3.25	3.97	3.17	0.43	9.05	0.72	0.14
2001	0.58	3.41	3.99	3.05	1.42	7.94	0.62	0.14
2002	0.88	2.16	3.05	2.66	1.76	6.99	2.03	0.10
2003	1.03	3.27	4.30	2.63	2.04	7.59	3.02	0.07
2004	0.96	4.31	5.27	2.98	2.13	8.92	3.04	0.11

Source: Dirección General de Impuestos a los Réditos, Memoria, several years; Dirección General Impositiva, Memoria, several years; Administración Federal de Ingresos Públicos, Estadísticas Tributarias.

TABLE 3.3. Reference Totals for Population, Income and Inflation, 1932-2004

	Tax Units and Population				Total Income		Price Index	Inflation	Taxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Population	Tax Units	Number of tax returns	(3)/(2) (%)	Total income (million 2000 Pesos)	Average income (2000 Pesos)	CPI (2000:100)	(%)	Top Marginal Tax Rate (%)
	('000s)	('000s)	('000s)						
1932	11,570	6,372	113	1.8	28,520	4,476	1.51E-12	-10.3	12
1933	11,817	6,538	112	1.7	27,664	4,231	1.64E-12	8.2	12
1934	12,070	6,708	133	2.0	28,439	4,240	1.51E-12	-7.6	12
1935	12,328	6,883	142	2.1	30,199	4,387	1.60E-12	6.0	12
1936	12,592	7,063	150	2.1	31,026	4,393	1.74E-12	8.5	12
1937	12,861	7,247	151	2.1	31,283	4,317	1.78E-12	2.6	12
1938	13,137	7,436	145	2.0	33,550	4,512	1.77E-12	-0.6	12
1939	13,418	7,630	142	1.9	33,654	4,411	1.80E-12	1.5	12
1940	13,705	7,829	134	1.7	34,942	4,463	1.84E-12	2.2	12
1941	13,998	8,033	147	1.8	35,508	4,420	1.89E-12	2.6	12
1942	14,297	8,242	122	1.5	37,362	4,533	2.00E-12	5.7	12
1943	14,603	8,457	141	1.7	37,774	4,467	2.02E-12	1.1	25
1944	14,916	8,678	167	1.9	37,519	4,323	2.01E-12	-0.3	25
1945	15,235	8,904	180	2.0	41,744	4,688	2.41E-12	19.8	25
1946	15,561	9,136	189	2.1	40,403	4,422	2.83E-12	17.6	27
1947	15,894	9,375	221	2.4	44,014	4,695	3.22E-12	13.6	27
1948	16,178	9,562	250	2.6	48,906	5,115	3.64E-12	13.1	27
1949	16,468	9,754	255	2.6	51,588	5,289	4.77E-12	31.1	27
1950	16,762	9,949	365	3.7	50,917	5,118	5.99E-12	25.6	27
1951	17,062	10,148	386	3.8	51,534	5,078	8.19E-12	36.7	27
1952	17,367	10,352	476	4.6	53,542	5,172	1.14E-11	38.7	32
1953	17,678	10,559	558	5.3	50,846	4,815	1.18E-11	4.0	32
1954	17,994	10,770	545	5.1	53,539	4,971	1.23E-11	3.8	32
1955	18,316	10,986	n/a	n/a	55,750	5,075	1.38E-11	12.3	40
1956	18,644	11,206	587	5.2	59,689	5,327	1.56E-11	13.4	40
1957	18,977	11,430	n/a	n/a	61,346	5,367	1.95E-11	24.7	40
1958	19,317	11,659	605	5.2	64,523	5,534	2.56E-11	31.6	40
1959	19,662	11,893	491	4.1	68,464	5,757	5.47E-11	113.7	40
1960	20,014	12,131	n/a	n/a	64,040	5,279	6.93E-11	26.6	40
1961	20,326	12,343	n/a	n/a	69,079	5,597	7.88E-11	13.7	40
1970	23,362	14,438	591	4.1	98,567	6,827	4.76E-10	13.6	46
1971	23,785	14,686	551	3.8	103,869	7,073	6.41E-10	34.7	46
1972	24,215	14,939	532	3.6	108,836	7,285	1.02E-09	58.5	46
1973	24,653	15,196	494	3.3	112,235	7,386	1.63E-09	60.3	46
1997	34,756	22,403	1,259	5.6	172,927	7,719	101.20	0.5	33
1998	35,126	22,869	1,114	4.9	186,946	8,175	102.14	0.9	33
1999	35,500	23,346	819	3.5	194,148	8,316	100.95	-1.2	33
2000	35,878	23,833	786	3.3	187,578	7,871	100.00	-0.9	35
2001	36,260	24,329	674	2.8	179,303	7,370	98.93	-1.1	35
2002	36,646	24,836	728	2.9	159,769	6,433	124.53	25.9	35
2003	37,037	25,354	763	3.0	173,891	6,859	141.27	13.4	35
2004	37,431	25,882	748	2.9	189,539	7,323	147.49	4.4	35

Notes: Population and tax units estimates based on census.

Tax units estimated as number of adults aged 20 and over.

TABLE 3.4. Under-reporting in Income Tax. 1959

| Income Levels | | | | un-reported income |
| in 1959 m$n | | in 2000 US Dollars | | |
(from	to)	(from	to)	(% of reported income)
	30,000		6,667	33
30,001	40,000	6,667	8,889	34
40,001	60,000	8,889	13,333	36
60,001	90,000	13,334	20,000	38
90,001	120,000	20,000	26,667	39
120,001	200,000	26,667	44,444	40
200,001	300,000	44,445	66,667	40
300,001	700,000	66,667	155,556	36
700,001	2,000,000	155,556	444,444	31
2,000,001		444,445		27

Source: Presidencia de la Nación (1967), volume V
Notes: m$n refers to 'pesos moneda nacional', the legal currency in 1959

TABLE 3.5. Income Tax Tabulation and Household Survey 1997

Income Brackets in 1997 US Dollars		Tax Statistics		Survey Statistics	
		#	th.US Dollars	#	th. US Dollars
	10,000	356,793	2,002,216	278,573	2,520,039
10,000	20,000	359,544	5,219,874	1,084,653	15,600,000
20,000	30,000	198,613	4,877,585	327,086	8,131,826
30,000	40,000	113,129	3,914,582	117,165	4,139,473
40,000	50,000	68,388	3,054,019	42,057	1,882,858
50,000	60,000	42,882	2,344,636	21,110	1,158,234
60,000	80,000	48,631	3,350,531	19,238	1,329,835
80,000	100,000	26,136	2,329,231	8,196	732,496
100,000	150,000	23,466	2,818,377	3,834	428,004
150,000	200,000	8,555	1,467,866	976	152,213
200,000	300,000	6,616	1,596,016		
300,000	500,000	3,849	1,455,500	1,345	487,354
500,000	1,000,000	1,895	1,259,405	160	115,200
1,000,000	1,500,000	411	488,769		
1,500,000	2,000,000	181	337,018		
2,000,000	3,000,000	31	85,207		
3,000,000	5,000,000	49	186,703		
5,000,000		26	226,908		
Total		1,259,195	37,014,443	1,904,393	36,677,531

Source: AFIP, Estadísticas Tributarias 1998 and EPH October 1997.

Table 3.6. Top Income Shares in Argentina, 1932-2004

	Top 5%	Top 1%	Top 0.5%	Top .1%	Top .01%	Top 5-1%	Top 1-0.5%	Top 0.5-0.1%	Top 0.1-.01%	Top .01%
	(2)	(3)		(5)	(6)	(8)		(9)	(11)	(12)
1932		18.77	14.58	7.52	2.49		4.18	7.07	5.02	2.49
1933		17.18	13.35	6.80	2.39		3.83	6.55	4.41	2.39
1934		18.06	14.02	7.28	2.45		4.03	6.74	4.83	2.45
1935		18.44	14.32	7.41	2.49		4.12	6.91	4.92	2.49
1936		20.40	15.56	7.76	2.46		4.84	7.81	5.29	2.46
1937		20.44	15.84	8.11	2.60		4.60	7.73	5.51	2.60
1938		20.47	15.83	8.10	2.58		4.63	7.74	5.52	2.58
1939		20.88	16.23	8.34	2.72		4.66	7.89	5.62	2.72
1940		20.11	15.79	8.25	2.65		4.32	7.53	5.60	2.65
1941		22.43	17.85	9.44	3.09		4.58	8.41	6.35	3.09
1942		23.77	19.73	11.38	4.18		4.04	8.36	7.20	4.18
1943		25.96	20.90	11.62	4.16		5.06	9.27	7.46	4.16
1944		24.75	19.66	10.63	3.63		5.08	9.04	7.00	3.63
1945		23.39	18.34	9.76	3.31		5.04	8.59	6.45	3.31
1946		22.63	17.96	9.79	3.46		4.67	8.17	6.33	3.46
1947		24.02	19.06	10.51	3.72		4.96	8.54	6.80	3.72
1948		23.22	18.30	9.78	3.20		4.92	8.53	6.58	3.20
1949		19.34	15.11	7.87	2.40		4.23	7.24	5.48	2.40
1950		19.81	15.55	8.15	2.58		4.25	7.40	5.57	2.58
1951		16.96	13.25	6.85	2.14		3.70	6.41	4.70	2.14
1952		15.96	11.87	5.64	1.57		4.09	6.23	4.07	1.57
1953	29.07	15.35	11.21	5.12	1.42	13.71	4.15	6.09	3.70	1.42
1954	30.28	16.54	12.33	5.84	1.71	13.74	4.21	6.48	4.14	1.71
1956	28.96	15.66	11.66	5.42	1.54	13.31	4.00	6.23	3.89	1.54
1958		14.17	10.53	4.98	1.39		3.64	5.54	3.60	1.39
1959 (a)	30.41	15.92	11.54	5.23	1.40	14.49	4.38	6.31	3.83	1.40
1961(a)	28.00	14.68	10.81	4.91	1.45	13.32	3.87	5.91	3.45	1.45
1970		12.18	7.66	2.60	0.51		4.52	5.06	2.09	0.51
1971		10.78	6.92	2.36	0.58		3.86	4.56	1.79	0.58
1972		9.44	6.06	2.15	0.55		3.37	3.91	1.60	0.55
1973		7.40	5.04	2.04	0.54		2.36	3.00	1.50	0.54
1997	22.45	12.39	9.02	4.27	1.39	10.07	3.37	4.74	2.88	1.39
1998		12.57	9.06	4.37	1.43		3.51	4.69	2.94	1.43
1999		13.53	10.32	5.22	1.78		3.22	5.10	3.44	1.78
2000		14.34	11.03	5.68	1.97		3.31	5.35	3.71	1.97
2001		12.91	10.03	5.22	1.82		2.88	4.81	3.40	1.82
2002		15.53	12.34	6.92	2.70		3.19	5.42	4.23	2.70
2003		16.85	13.41	7.40	2.79		3.44	6.01	4.61	2.79
2004		16.75	13.45	7.02	2.49		3.30	6.43	4.53	2.49

Notes: Taxpayers are ranked by gross income.

The Table reports the percentage of total income accruing to each of the top groups. Top 1% denotes top percentile,

Income does not include capital gains.

(a) Results not based on income tax data but on CONADE/CEPAL.

TABLE 3.7. Country of origin of income tax payers 1932-1946

	year													
	1932	1933	1934	1935	1936	1937	1938	1939	1940	1942	1943	1944	1945	1946
Distribution of tax returns by nationality (%)														
Argentina	54.40	54.65	54.41	54.56	53.80	55.74	57.56	55.91	58.00	57.91	59.85	60.13	60.47	59.86
Germany	1.13	1.20	1.15	1.16	0.97	1.18	1.24	1.20	1.28	1.30	1.35	1.36	1.28	1.22
Belgium	0.17	0.17	0.17	0.15	0.13	0.14	0.14	0.14	0.17	0.15	0.18	0.15	0.16	0.13
Spain	14.27	14.36	14.39	14.58	14.90	15.53	14.63	14.56	14.68	13.86	12.51	12.59	12.69	11.79
United States	0.20	0.33	0.33	0.34	0.30	0.35	0.35	0.36	0.40	0.41	0.46	0.42	0.38	0.37
France	2.25	2.16	1.99	1.88	1.82	1.90	1.76	1.72	1.76	1.49	1.62	1.56	1.48	1.36
United Kingdom	1.61	1.73	1.52	1.49	1.29	1.44	1.41	1.39	1.55	1.37	1.53	1.42	1.34	1.25
Italy	13.92	13.42	13.40	12.86	14.61	13.65	13.10	11.01	11.41	9.79	9.57	9.37	9.20	10.70
URSS	0.95	0.99	1.02	1.04	1.03	1.17	1.13	1.12	1.15	1.22	1.18	1.22	1.21	1.23
Syria	1.04	1.05	1.20	1.30	1.34	1.34	1.33	1.32	1.37	1.39	1.34	1.31	1.30	1.15
Switzerland	0.53	0.54	0.49	0.48	0.48	0.52	0.53	0.48	0.52	0.47	0.52	0.51	0.48	0.46
Uruguay	1.23	1.19	1.14	1.09	1.01	1.10	1.04	1.05	1.07	1.03	1.10	1.04	0.99	0.88
Other	2.35	2.56	2.77	3.21	3.22	3.48	3.29	3.45	3.60	4.48	4.19	4.71	5.23	5.14
Not determined	5.94	5.65	6.03	5.87	5.11	2.44	2.50	6.28	3.04	5.12	4.59	4.21	3.80	4.46
Distribution of reported income by nationality (%)														
Argentina	57.51	56.90	56.74	57.94	55.51	58.55	60.31	58.30	59.64	58.15	59.63	60.27	62.69	60.62
Germany	1.13	1.41	1.35	1.34	1.21	1.42	1.46	1.30	1.49	1.25	1.32	1.38	1.23	1.07
Belgium	0.42	0.28	0.25	0.22	0.35	0.45	0.32	0.38	0.39	0.40	0.41	0.33	0.33	0.26
Spain	11.90	12.39	12.75	12.64	13.10	13.74	12.85	12.39	13.17	12.10	11.42	11.44	8.13	11.15
United States	0.57	0.85	0.86	0.89	0.69	0.67	0.81	0.84	0.94	0.95	1.00	0.88	0.74	0.68
France	3.12	3.10	2.70	2.57	2.60	2.69	2.83	2.37	2.59	2.10	1.96	2.13	2.13	1.88
United Kingdom	3.12	3.24	3.06	2.91	2.17	2.46	2.34	2.30	2.74	3.30	2.56	2.42	2.13	1.85
Italy	10.48	10.28	10.05	9.96	12.40	10.98	10.59	8.80	9.17	8.05	8.17	7.72	8.30	7.75
URSS	0.42	0.42	0.49	0.56	0.52	0.67	0.65	0.61	0.63	0.85	0.91	0.96	1.02	1.07
Syria	0.57	0.56	0.86	0.78	0.87	0.90	0.89	0.84	1.10	1.35	1.32	1.25	1.02	1.33
Switzerland	0.85	0.99	0.37	0.56	0.61	0.67	0.81	0.69	0.78	0.65	0.78	0.79	0.90	0.75
Uruguay	1.56	1.41	1.47	1.23	1.39	1.42	1.37	1.38	1.41	1.45	1.37	1.25	1.31	1.20
Other	1.84	2.11	2.45	1.90	2.78	2.99	2.59	2.83	3.29	4.40	4.84	5.05	5.80	5.51
Not determined	6.52	6.06	6.62	6.49	5.81	2.39	2.18	6.96	2.66	5.00	4.29	4.13	4.29	4.89

Source: Dirección Nacional de Impuestos a los Réditos, Memoria, several years.
Note: information for 1941 missing.

Table 3.8: Income Shares and Composition in Top
Income Groups based on Household Survey, 1982-2004

	Top 10%	Top 1%	Top .1%	Top 10%			Top 1%			Top 0.1%		
				Wage	Business	Capital+Rents	Wage	Business	Capital+Rents	Wage	Business	Capital+Rents
1980												
1981												
1982	42.11	11.17	2.90	58.84	36.34	5.12	36.70	49.16	14.18	5.91	57.85	36.19
1983												
1984	44.24	13.90	4.81									
1985	43.49	10.37	2.55	59.90	36.98	3.28	51.20	42.90	5.88	68.89	30.93	0.00
1986	44.23	11.61	2.38	53.84	42.40	3.61	35.18	60.00	4.57	17.45	75.75	6.88
1987	46.07	11.77	2.21	61.59	35.12	3.19	61.59	35.12	3.19	57.3	37.7	5.1
1988	45.39	11.26	2.31	63.59	33.91	2.56	57.28	37.71	5.08	57.3	37.7	5.1
1989	46.37	12.68	3.21	61.61	34.45	3.98	52.66	42.02	5.32	56.9	35.1	8.1
1990	45.24	12.57	2.99	63.79	34.53	1.58	47.14	44.19	8.77	45.1	40.9	14.3
1991	45.95	13.44	4.32	60.92	35.97	2.88	56.29	40.76	2.61	39.5	38.4	22.5
1992	43.15	10.63	2.08	55.88	41.81	2.57	45.69	47.41	6.87	43.9	53.2	2.9
1993	42.53	10.14	2.11	56.76	41.14	2.08	37.51	57.57	4.92	20.5	63.8	15.8
1994	43.07	10.58	2.40	60.30	36.88	2.99	51.70	45.12	3.17	24.7	69.2	6.1
1995	41.83	11.96	2.44	61.27	36.62	2.11	48.06	46.63	5.36	37.6	58.6	3.9
1996	41.68	11.29	2.36	61.80	35.63	2.58	57.30	41.04	1.66	36.8	49.3	13.6
1997	42.15	9.81	2.30	63.08	33.89	3.03	52.72	42.13	5.15	65.2	34.8	0.0
1998	44.02	10.84	1.97	62.34	35.81	1.85	56.61	37.47	5.92	57.0	43.0	0.0
1999	42.45	9.79	2.01	67.59	30.15	2.26	49.65	47.25	3.10	56.3	35.0	8.7
2000	43.22	10.50	2.01	68.88	28.36	2.76	52.75	42.47	4.78	25.4	71.7	2.8
2001	47.12	10.62	1.98	72.22	25.46	2.33	63.05	32.78	4.17	45.0	55.0	0.0
2002	44.29	10.97	2.32	76.08	22.31	1.62	57.01	39.84	3.15	65.4	25.3	9.3
2003	42.59	10.61	2.20	71.68	26.23	2.09	62.06	35.87	2.07	61.9	38.1	0.0
2004	42.41	10.55	2.12									

Notes: Fractiles defined in terms of the number of tax units.
Survey incomes with no adjustments.

Table 3.9 Composition in Top Income Groups, 2001-2004

	Top 1%				Top 0.5%				Top 0.1%				Top 0.01%			
	Rents	Capital	Business	Wages	Rents	Capital	Business	Wages	Rents	Capital	Business	Wages	Rents	Capital	Business	Wages
2001	6.2	10.0	34.7	49.2	5.0	8.5	39.7	46.8	2.5	6.7	54.9	35.9	0.9	7.5	64.8	26.8
2002	5.9	19.7	36.7	37.7	4.5	19.1	43.2	33.3	2.7	16.1	54.4	26.7	1.0	9.9	67.2	21.9
2003	5.3	19.6	41.4	33.6	4.5	19.1	45.2	31.2	2.2	14.9	59.1	23.7	0.7	9.4	69.5	20.4
2004	5.7	19.0	45.0	30.3	4.9	17.8	48.1	29.1	1.9	11.6	63.8	22.7	0.8	9.3	71.2	18.7

	Top 1-0.5%				Top 0.5-0.1%				Top 0.1-.01%				Top 0.01%			
	Rents	Capital	Business	Wages	Rents	Capital	Business	Wages	Rents	Capital	Business	Wages	Rents	Capital	Business	Wages
2001	10.7	15.9	14.5	58.9	7.6	10.3	24.2	57.9	3.7	6.1	47.7	42.5	0.9	7.5	64.8	26.8
2002	10.8	21.8	14.3	53.1	7.4	24.0	24.3	44.4	3.5	18.9	48.8	28.8	1.0	9.9	67.2	21.9
2003	11.1	23.2	14.6	51.0	7.6	24.8	26.3	41.3	3.1	18.1	53.2	25.6	0.7	9.4	69.5	20.4
2004	13.2	29.1	16.7	40.9	8.8	25.8	28.5	36.9	2.8	13.5	57.8	25.9	0.8	9.3	71.2	18.7

Source: Computations based on income tax return statistics

CHAPTER 4

ITALY 1974-2004

Abstract

This chapter describes the evolution of top income shares in Italy between 1974 and 2004. We provide systematic and homogenous time series of income concentration based on tax records. Tax statistics have hardly been used before to study income concentration in Italy. Top income shares have increased steadily since the mid 1980s, mainly driven by top wages and self-employment income. Notwithstanding this trend, the increase is very small relative to the surge experienced by top incomes in the United States and other Anglo-Saxon countries. Thus, the Italian experience is also closer to the one of continental Europe countries such as France, Spain or Portugal.

JEL classification: D3, H2, N3, O1

4.1. Introduction

Italy was home of Vilfredo Pareto, and under his influence the debate about the shape of the income distribution was very active nationwide during the first half of the XXth century.[1] However, little could be done in practical terms at that moment to know the actual distribution of income, mainly due to the unavailability of data. The first households' survey was conducted in 1947/1948.[2] In 1923 the government introduced the *Imposta Complementare*, which was a tax (additional to the traditional schedule taxes) levied on top incomes with a progressive tax scale; in 1951 the authorities imposed the requirement of a unique annual tax file detailing all taxable income and income taxes paid. The *Imposta Complementare* remained in existence until 1972 and could have provided information on top incomes, but, to our knowledge, there are no published tabulations showing the income assessed to it. Income tax data have been regularly published only since 1974.

Brandolini and Sestito, 1994 and Brandolini, 2000, 2004 provide a comprehensive description of the dynamics of the distribution of income in Italy during the second half of the XXth. century using survey information.[3] Their estimates offer the best evidence to date on inequality trends in Italy from a historical perspective. The main features can be summarized as follows. First, when 1948 and 1968 are compared (the years of the 'Italian economic miracle') it turns out that the level of inequality did not significantly changed. As no comparable data are available for the intermediate years, it is not possible to

---

[1] Pareto was born in Paris in 1848, during his family's self-imposed exile. They moved back to Italy in 1858.

[2] Brandolini, 1999 gives a detailed account of the development of households' surveys in Italy. In 1963/1964 the Italian statistics bureau (ISTAT) organized the first official survey. The Bank of Italy has conducted an annual survey between 1965 and 1987 (except for 1985) and every two years between 1989 and 1995 and since 1998 (IBFI, Indagine sui Bilanci delle Famiglie Italiane, or SHIW, Survey of Households' Income and Wealth).

[3] Other studies about income and wealth distribution in Italy include D'Alessio and Signorini, 2000, Brandolini and D'Alessio, 2001, Brandolini et al., 2004, Roberti, 1971, Fiorio, 2006, Albertini, 2003, 2004, Bottiroli Civardi and Targetti Lenti, 2001, Baldini, 1996.

rigorously establish whether this was the result of a relative stability or, rather, of movements that eventually balanced each other. Second, income distribution markedly improved during the following decade 1968-1977. Third, the Gini coefficient displayed W-shaped dynamics since the end of the 1970s, with valleys in 1982 and 1991 and peaks in 1979, 1987 and 1993.[4] Fourth and final, inequality remained stable until 2002; a sharp increase is experienced since then. Estimates of the Gini coefficient from the Bank of Italy's Survey of Household Income and Wealth (SHIW) between 1977 and 2004 are shown in Figure 4.1.

Despite the stability of relative measures of inequality (and the improvement of absolute ones) between 1993 and 2002, Italian households seem to have developed a feeling of impoverishment. Their perceptions about financial hardship and housing condition deteriorated since the mid 1990s and, more recently, their expectations about economic prospects (both personal and of their country) got significantly worse in Italy than in other European Union countries, including those belonging to the EMU.[5] In terms of levels, the inequality of equivalent disposable income in Italy is one of the highest in the European Union, as shown in Smeeding, 2000 and the Luxembourg Income Study's comparative indicators, but it is still lower than that of Spain or Portugal.[6] Boeri and Brandolini, 2004 review several potential explanations to this apparent contradiction between perceptions and facts. A first explanation points to expectations. The strong deceleration of growth since 1993 with respect to the previous two decades, the concerns about the long-term sustainability of the public budget (a Ricardian equivalence argument) and the belief of a weakening of the country competitiveness due to the European monetary policy could have led Italians to drastically revise downwards their

---

[4] Atkinson, 2003 gives the same description.

[5] See Boeri and Brandolini, 2004.

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

expectations of future consumption growth. A second explanation points to possible measurement problems with the data, which the authors rule out by comparing different sources. A third possible cause has to do with the observed widening gap between the incomes of employees and self-employees. A final tentative reason is associated to the increased job precariousness: under stagnating incomes and risk aversion, greater uncertainly reduces the well-being of individuals.

We analyze here the performance of the very high-income earners, something that escapes survey-based results. The feeling among middle classes that the rich are progressively becoming even richer can be hypothesized as an additional element to explain the sense of impoverishment among Italian households.

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

This chapter describes the evolution of top income shares in Italy between 1974 and 2004. We provide systematic and homogenous time series of

---

[7] Agenzia delle Entrate, Fisco Oggi, 1/17/2003. Only 33 out of 500 individuals in the list are women, that is, less than 7%.

income concentration based on tax records. Tax statistics have hardly been used before to study income concentration in Italy.[8] This is mainly due to the usual shortcomings of tax-based data: they relate to gross (pre-tax) income; the definitions of income and the income unit follow those of the changing income tax legislation (a shift from the family to the individual unit was enforced between 1975 and 1976[9]); capital gains are mostly excluded and assessed to a separate flat-rate tax; capital incomes are recorded to different degrees along time; last but not least, tax data are affected by tax evasion and avoidance. Unfortunately, we cannot build a secular evolution of top income shares; records and elaborations on tax returns are only available since 1974.

Together with the cases of Spain and Portugal, the experience of Italy provides new information to compare the evolution of income concentration in the Mediterranean Europe. We find that top income shares have increased steadily since the mid 1980s, mainly driven by top wages and self-employment income. Notwithstanding this trend, the increase is very small relative to the surge experienced by top incomes in the United States. Thus, the Italian experience is also closer to the one of continental Europe countries such as France and Spain.

The chapter is structured as follows. Section 4.2 describes our data, sources and methods, and discusses the issue of tax evasion. Section 4.3 presents and analyzes the trends in top income shares between 1974 and 2004. Section 4.4. Section 4.5 briefly discusses the role of marginal tax rates on top shares. Section 4.6 offers a conclusion. The details on data sources and methods as well as the complete sets of results are presented in the Appendix to Chapter 4.

---

[8] Exceptions are Brandolini, 2000, 2004, and ISAE, 2002. Income tax statistics have been extensively used for the analysis of fiscal reforms and to predict tax receipts, as in Giarda, 2003, Pellegrino 2006, 2007.

[9] The shift from family to individual taxation does not affect our estimates, as published statistics provide both individual and family distributions.

4.2. Data and Methodological Issues

4.2.1. Data and Series Construction

Our estimates are based on personal income tax returns statistics compiled by the Italian tax administration annually from 1974 to 2004. The published tabulations, structured by range of total before tax income, provide information of total income assessed, number of taxpayers, taxable income, deductions, allowances and tax paid. Unfortunately, as far as we can document, no tabulations exist before 1973, when a tax reform introduced the 'modern' income tax and the registry of taxpayers. Consequently, our analysis is focused by necessity on the thirty years following 1974.

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

We define income as gross income before all deductions and including all income items reported on personal tax returns: salaries and pensions, self-employment and unincorporated business net income, dividends, farm income, real estate income, and other smaller income items. Interest income is not included, as it is only subject to a flat tax withheld at the source without further requirement of reporting. Realized capital gains were mostly untaxed up to 1998, and they are subject to a separate flat rate tax since then. Consequently the series

presented here exclude capital gains. Our income definition is before personal income taxes but after employers' payroll taxes and corporate income taxes.

As the top tail of the income distribution is very well approximated by Pareto distributions, we apply simple parametric interpolation methods to estimate the thresholds and average income levels for each fractile. This method follows the classical study by Kuznets, 1953 and has been used as well as in all the top income studies presented in Atkinson and Piketty, 2007. In the case of Italy there is no micro-data of tax returns that would allow us to check the validity of our estimations based on published tax statistics. However, Piketty, 2001, Piketty and Saez, 2003 and Alvaredo and Saez, 2007 (see also Chapter 2) have validated this method by comparing the results obtained using micro-data available for recent years in France, the United States and Spain.[10]

In order to estimate shares of income, we need to divide the income amounts accruing to each fractile by an estimate of total personal income defined ideally as total personal income reported on income tax returns had everybody been required to file a tax return. We approximate the ideal income denominator as the sum of (1) total wages and salaries (net of social security contributions) from National Accounts, (2) old-age and disability pensions from the Social Security Administration, (3) 66% of unincorporated business income from National Accounts, (4) all capital income reported on tax returns (given the high level of concentration of capital income, this amounts to assuming that non-filers receive a negligible fraction of capital income; for example, in 2004, the top 10% income earners obtained 62% of total capital income reported on tax returns.).

Table 4.1.A and Table 4.1.B present information about thresholds and average incomes for top fractiles in 2004 and 2000, respectively. Table 4.1.B uses the cited list of the top 500 income earners to provide estimates up to the top 0.001%. Tables with remaining information are then presented in the

---

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

appendix to this chapter: Table 4.A shows reference totals for population, income and inflation used in our computations and Table 4.B presents the results for the top income shares.

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

4.2.2 The Issue of Tax Avoidance and Evasion

There is a generalized view of tax evasion in Italy being extremely elevated and much higher than in other OECD countries. Audits and subsequent scandals involving show-business stars, well-known fashion designers and sport stars help support this idea among the general public, even when they also provide evidence about the fact that top income earners are very visible for the tax administration. The publication listing the top 500 income earners, probably motivated by a strategy to shame prominent evaders (as done in Spain in the 1930s, see Chapter 2), is an example of such visibility. It is thus necessary to qualify the effect of income tax evasion for our estimates as well as for their comparability. We make reference to three key elements: the level of incomes reported in the tax returns, the existent estimations of income tax evasion and the amounts evaded through tax heavens.

Firstly, it is usually argued that the average income reported in Italian tax forms is exaggeratedly low (ISAE, 2006). However, inspection of published tabulations and our computations show that income thresholds and average

incomes corresponding to the *top percentiles* are higher in Italy than in Spain, for instance. In 2004, an income of at least 69,191 Euros was required to belong to the top 1% in Spain (excluding capital gains), this figure being 81,280 Euros in Italy. This represents a 17.5 percent difference, which is much larger than the distance between the average income in both countries. The situation seems different at the bottom half of the distribution: also in 2004, the bottom 50% of Italian tax-filers had incomes (always excluding capital gains) below 13,000 Euros, while their Spanish counterparts had incomes below 15,500 Euros. However, this kind of comparison, which usually appears in the media and in scholar papers as supportive evidence of scandalous levels of evasion, is misleading. In Spain, in 2004, only 53 percent of adults filed a tax return; in Italy 86 percent of adults did so.[11] This means that the bottom 50% of Italian tax-filers is not necessarily comparable to the bottom 50% of their Spanish counterparts.

Secondly, existent estimates of tax evasion in Italy over this period agree on the following facts. First, evasion decreases with income. Second, consistently with the experience in other OECD countries, it is very low for wages, salaries and pensions: there is little room for evading those income components that are reported independently by employers or payers. Thirdly, evasion is important in the case of small business and self-employees, where there is no independent reporting.[12] On average, results point to an average 50% evasion rate in self-employment income. In any case, estimations must be read

---

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

[12] D'Amuri and Fiorio, 2005 compare the information from the Bank of Italy survey (SHIW) with a representative sample of 250,000 anonymous tax returns in 2000 to study evasion in wages, salaries and self-employment income. Bernardi and Bernasconi, 1996 and Bernardi, 1996 analyze the issue for the years 1991 and 1996 respectively by comparing reported incomes with national accounts information; they estimate the following under-reporting rates: 26% for overall income, 8.5% for wages and 58.7% for self-employment income. Other studies providing similar results include Bernardi, et al., 1992, Bernasconi and Marenzi, 1997 (who obtain an overall evasion rate of 15% for 1991, 11% for wages, 30% for professionals' income and 53% for other self-employees' income), Cannari et al., 1997, Cannari and Violi, 1990, Marè, 1996, Pirotta, 1986, SOGEI, 1999. Brosio et al., 2002, analyze the geographical differences and unsurprisingly argue that noncompliance is more important in the South. ISAE, 2006 and Monacelli, 1996 provide reviews of the literature applied to Italy.

with caution due to the various ad-hoc assumptions required to obtain them: they can only be taken as a rough approximation.[13]

Finally, recent events have put back in the spotlight the issue of tax heavens. The very rich are generally thought to be able to evade important fractions of their incomes through fiscal paradises. In their study of top incomes in Switzerland, Dell et al., 2007 have already addressed this issue. Even when there are many tax heaven jurisdictions which are actively used to evade taxes on capital income, their estimates for Switzerland dissipate the myth that the sums earned through secret Swiss accounts are gigantic and capable of modifying the top share estimates in a significant way.[14]

Our estimates would indeed be biased downwards if many high-income individuals were small business owners and evader self-employees. It is also worth recalling here that the capital income component of our denominator equals all non-business non-labor income reported on tax returns. We follow this strategy because capital income in National Accounts is substantially different from capital income on tax returns due to imputed rents of homeowners, imputed interest to bank account holders, returns on (non-taxable) pension funds, etc. As capital income is very concentrated, non-filers receive a negligible fraction of it.[15] In section 4.4 we provide some useful

---

[13] When the estimations of evasion are based on the comparison of reported incomes with National Accounts, the researcher always faces the problem of the mismatch between income definitions. When the estimations are based on the comparison with incomes reported to households' surveys, re-ranking issues and under-reporting in the survey come into play (see Canberra Expert Group on Household Income Statistics, 2001 for an examination of the theoretical relation between the definition of income in the national accounts and the control total for income appropriate for income distribution analysis, and Deaton, 2005). The noticeable difficulties in comparing individual incomes from tax statistics and incomes from the Bank of Italy's survey (SHIW) have been analyzed in detail in Marenzi, 1989, Oropallo, 1998, Marino et al., 2003, Pellegrino, 2006, 2007.

[14] The authors compare a measure of total capital income evaded through Swiss accounts with total income reported by top income groups in France and show that the numbers are small relative to the top 1% or even the top 0.1%, although they are comparable in magnitude to total incomes reported by the top 0.01%. If all this 'evaded' capital income (which belong also to non-French nationals) were added back to the top 0.01% French incomes, the top 0.01% share would double in recent years, still resulting in a very modest figure compared to top income concentration in the United Sates.

[15] See e.g. Park 2000, for a comprehensive comparison in the case of the United States where over 90% of adults file tax returns.

counterfactual experiments to assess the impact of evasion in our top income shares.

4.3. The Dynamics of Top Income Shares in Italy

Figure 4.2 displays the average personal income per adult that is used as the denominator for our top income shares estimations, along with the price index for the period 1974 to 2004. After a period of expansion between 1975 and 1992, the 1992 crisis (linked to a record level of public debt and to the exchange rate crisis, which forced Italy to abandon the fixed exchange rate regime) was followed by important oscillations in real economic growth, resulting in an average income in 2004 which was only 5 percent higher than that of 1992.

Figure 4.3 shows the share of total personal income owned by the top decile divided in three subgroups: the bottom half of the top decile (top 10-5%), the following 4% (top 5-1%) and the top percentile. The three series respond to two different patterns. The top 10-5% shares have displayed modest fluctuations throughout the period and they actually declined between 1974 and 2004. The top 5-1% and the top 1% have displayed first a U-shaped pattern, with a reduction in income concentration from 1975 until the mid 1980s, followed later by a rising trend; the top 1% share increased significantly from 6.3% in 1983 to 9.3% in 2003. Consequently, the increase in income concentration with took place in Italy since the mid 1980s has been a phenomenon happening within the top 5% of the distribution.[16]

Figure 4.4 analyzes concentration further by splitting the top 1% into three groups: the top 1-0.5%, the top 0.5-0.1% and the top 0.1%. The richer the group considered, the higher the increase in the share from the mid 1980s: the top 1-0.5% increases from 2.2 to 2.9 percent between 1982 and 2004, while the

---

[16] As found in Charter 2, the increase in income concentration which took place in Spain since 1981 has been a phenomenon concentrated within the top 1% of the distribution.

top 0.1% increases sharply by over 80% from 1.5 percent in 1983 to 2.7 percent in 2003.

The presented estimations depend both on the definition of the income denominator and the control total for the number of tax units. We therefore follow Atkinson, 2005, in considering the distribution within top groups. Figure 4.5 shows the share of the top 1% within the share of the top 10%, the share of the top 0.1% within the share of the top 1% and the share of the top 0.01% within the share of the top 0.1%. The relative distribution does not depend on the control for total income. This demonstrates in another way the rise of income concentration within the top groups.

To understand the mechanisms of this increase in income concentration at the top we move on now to the analysis of the composition of top incomes. Figures 4.6, 4.7 and 4.8 display the share and composition of the top 0.01%, top 0.1% and top 10% income fractiles from 1976 to 2004. They show that the increase in top shares is mainly due to two components: wage income and self-employment income. They also show that the drop observed in the top 0.1% between 2003 and 2004 was caused by a reduction in capital incomes. The importance of top wages (especially top executive compensation) to explain the rise in top income shares during the last quarter of the XXth. century is not new and has been a standard result in all the studies analyzing concentration in Anglo-Saxon countries. However, top wages did not surge in continental Europe or Japan to the same extent and even the results for Italy are very modest compared with the existent estimations for North America (see Piketty and Saez, 2003 and Saez and Veall, 2005).

The published list of taxpayers cited in the introduction seems to support the 'superstars' theory. Nevertheless, Italy also has other specificities. It has been argued that the rise in earnings inequality started in the mid 1980s was in fact the result of economic institutions created in the 1970s. The *Scala Mobile* was a wage indexation mechanism granting the same absolute wage increases to all employees as prices rose. More specifically, it provided a fixed increment in nominal wages according to a special price index (*Indice Sindacale*). By granting

the same absolute (as opposed to the same percentage) wage increase to every worker, this institution tended to compress the wage distribution and played a key role in the reduction of earnings inequality between the mid 1970s and the mid 1980s. Manacorda, 2004 claims that, when the *Scala Mobile* was abandoned, the subsequent rise in inequality was largely a reaction to the compression differentials generated before.[17] The impact of such a mechanism on top wages and executive compensation was presumably very limited, but the increase in top shares since the first half of the 1980s matches the evolution of the Gini coefficient (based on survey data) between 1982 and 1987 (see Figure 4.1).

It is instructive to compare the trends in income concentration between Italy and other countries. Figure 4.9 displays the top 0.01% income share in Italy, Spain (from Chapter 2 and Alvaredo and Saez, 2007), France (Piketty, 2001 and Landais, 2007) and the United States (Piketty and Saez, 2003). As in the case of Spain, although income concentration has increased in Italy in the last twenty years, this increase is very small relative to the surge experienced by top incomes in the United States. Thus, the Italian experience is also closer to the one of continental Europe countries such as France and Spain than Anglo-Saxon countries such as the United States. Figure 4.10 plots the same variables but excluding the United States. Italy starts with a level of concentration below that of Spain and France but approaches and eventually surpasses them.

4.5. Sensitivity of the Results

Given the comparisons with other European countries presented in the previous section, and the concern about the effect of evasion on our estimates, it is reasonable to ask how sensitive these results are to changes in the personal

---

[17] In the 1980s the equalizing power of the *Scala Mobile* started to decline both due to the drop in inflation and to the weakening of unions' power. In 1980, 40,000 white-collar workers demonstrated against the equalizing effects of the *Scala* in front of the FIAT headquarters in Turin. The growing dissatisfaction forced the government to progressively lower the scope of the *Scala Mobile* until its total abolition in 1990. See also Erickson and Ichino, 1995 and Signorini and Visco, 2002.

income numerator and denominator. Reducing the income denominator to 90% of the series used (see Table 4.A, Column 4) would mean that the share of the top 0.01% in 1988 became 0.45% in place of 0.41% and that the share of the top 0.1% became 2.0% in place of 1.83%. These changes would not affect the comparisons presented in Figures 4.9 and 4.10.

A second important question refers to the impact of tax evasion on our top share estimates. We can easily answer the following question: what is the effect of a 10% under-reporting rate in self-employment income among high-income earners? Such a change would mean that the share of the top 10% is adjusted upwards by 1% *on average* (not 1 percentage point); in particular, the top 10% share in 1995 becomes 31% instead of 30.5%. Along the same lines, the share of the top 0.1% augments 3.5% *on average* (not 3.5 percentage points): the top 0.1% share in 1995 becomes 2.17% in place of 2.07%.

These magnitudes seem to suggest, together with the finding (cited in section 4.2.2) that evasion decreases with income, that evasion of self-employment and small business income is unlikely to account for the gap in top incomes between Italy (and continental Europe) and Anglo-Saxon countries documented in Figure 4.9 and in Atkinson and Piketty, 2007.

4.5 The Effects of Top Marginal Tax Rates on Reported Top Incomes

The literature on behavioral responses to taxation stresses the important role that income taxes can have on incomes reported for tax purposes. At least until the beginning of the 1980s, the income tax in Italy had a very progressive structure with many brackets and a very high statutory top marginal rate (82% in 1974). However, few taxpayers had enough income to be in the top bracket. In the last thirty years the system has evolved to a much smaller number of brackets with a lower statutory top rate (see Table 4.E).[18]

---

[18] This has been a common pattern of personal income tax systems in most developed countries. Top statutory marginal tax rates were reduced in 1975 (from 82 to 72 percent), 1983

We computed the average marginal tax rate (weighted by income) for the top 0.01% group and plot it in Figure 4.11 together with the top 0.01% income share.[19] Several elements are worth noticing. First, the tax rate cut of 1975 is associated to a decrease in the top income share from 1974 to 1975. Second, the relative stability of the top 0.01% income share between 1976 and 1988 happens in a period of stable (or increasing in 1976-1979) marginal rates. Finally, the rising trend of top shares started by the end of the 1980s is associated to a large reduction in tax rates, which go down 17 percentage points from 62% in 1988 to 45% in 2001-2004. The inherent noise in top income shares from year to year, however, would make it difficult to detect systematic effects unless the elasticity of response is very large. New research and better data are required to analyze if the elasticity of reported income with respect to tax rates is not an intrinsic parameter but might vary with the degree of enforcement and the ability of taxpayers to avoid and evade taxes, as proposed by Slemrod (1995).

4.6. Conclusion

This chapter has analyzed income concentration in Italy between 1974 and 2004 using income tax statistics. Unfortunately, as tax returns tabulations are only available since 1974, it is not feasible to provide an account of the long-run evolution. Despite their limited time scope, tax records provide interesting insights on income concentration in Italy in the last three decades, which are not adequately caught by existent survey data. Top income shares have increased steadily since the mid 1980s; a large fraction of such increase is due to the growing importance of top wages and self-employment income. Notwithstanding this trend, the rise in top shares is much smaller than the one that took place in the United States. Consequently, the Italian case together with the results obtained for Spain in Chapter 2 show that the Mediterranean Europe

---

(from 72 to 65 percent), 1989 (from 62 to 50 percent), in 1998 (from 51 to 46 percent), in 2000 (from 46 to 45.5 percent) and in 2001 (from 45.5 to 45 percent).

[19] Details about the estimation of the income-weighted marginal tax rates are given in the appendix to this chapter.

has evolved closer to the trends observed in continental Europe. Our series measure only top income concentration and hence are silent about changes in the lower and middle part of the distribution. As a result, our series follow different patterns than broader measures of inequality such as Gini coefficients or macro-based estimates. This can be seen by comparing Figure 4.1 and Figure 4.3.

TABLE 4.1.A.

Thresholds and Average Incomes in Top Income Groups in 2004

Percentile threshold (1)	Income threshold (2)	Income Groups (3)	Number of adults (aged 20+) (4)	Average income in each group (5)
		Full Adult Population	46,811,000	15,860 €
Top 10%	28,815 €	Top 10-5%	2,340,550	32,738 €
Top 5%	38,626 €	Top 5-1%	1,872,440	52,677 €
Top 1%	81,280 €	Top 1-0.5%	234,055	92,433 €
Top .5%	108,129 €	Top 0.5-0.1%	187,244	141,487 €
Top .1%	215,402 €	Top 0.1-0.01%	42,130	317,437 €
Top .01%	631,364 €	Top 0.01%	4,681	1,184,614 €

Notes: Computations based on income tax return statistics and National Accounts.

Income defined as annual gross income reported on tax returns,

before individual income taxes but net of all social contributions (employer and employee), and excluding capital gains

Amounts are expressed in current 2004 Euros.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example,

an annual income of at least 28,815 Euros is required to belong to the top 10% tax units, etc.

TABLE 4.1.B.

Thresholds and Average Incomes in Top Income Groups in 2000

Percentile threshold (1)	Income threshold (2)	Income Groups (3)	Number of adults (aged 20+) (4)	Average income in each group (5)
		Full Adult Population	45,710,000	15,104 €
Top 10%	27,582 €	Top 10-5%	2,285,500	31,360 €
Top 5%	37,223 €	Top 5-1%	1,828,400	50,863 €
Top 1%	79,016 €	Top 1-0.5%	228,550	89,878 €
Top .5%	104,910 €	Top 0.5-0.1%	182,840	136,914 €
Top .1%	207,304 €	Top 0.1-0.01%	41,139	300,100 €
Top .01%	582,907 €	Top 0.01-0.001%	4,114	845,737 €
Top .001%	1,973,571 €	Top 0.001%	457	4,160,256 €

Notes: Computations based on income tax return statistics and National Accounts.

Income defined as annual gross income reported on tax returns,

before individual income taxes but net of all social contributions (employer and employee), and excluding capital gains

Amounts are expressed in 2004 Euros.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example,

an annual income of at least 27,582 Euros is required to belong to the top 10% tax units, etc.
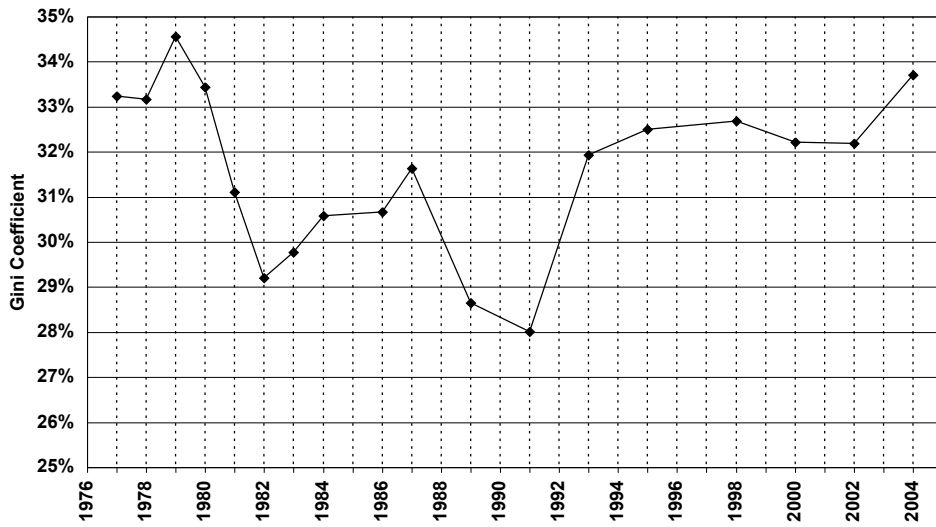
FIGURE 4.1

Gini Coefficient from survey data, 1977-2004

Source: Own calculations on Survey of Households' Income and Wealth (SHIW).
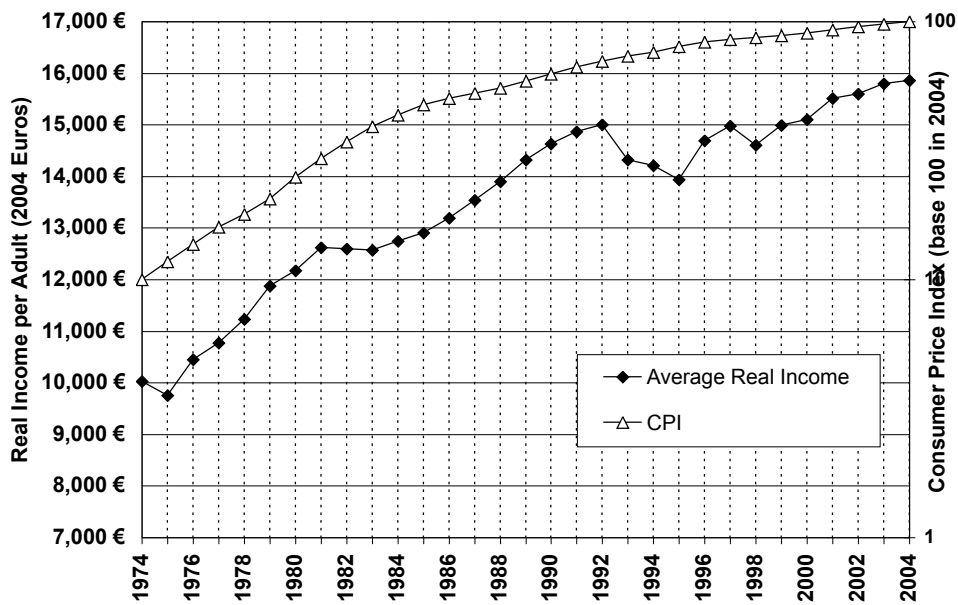
FIGURE 4.2.
Average Real income and Consumer Price Index in Italy 1974-2004

Source: Table 4.A.
Figure reports the average real income per adult (aged 20 and above), expressed in real 2004 Euros.
CPI index is equal to 100 in 2004.
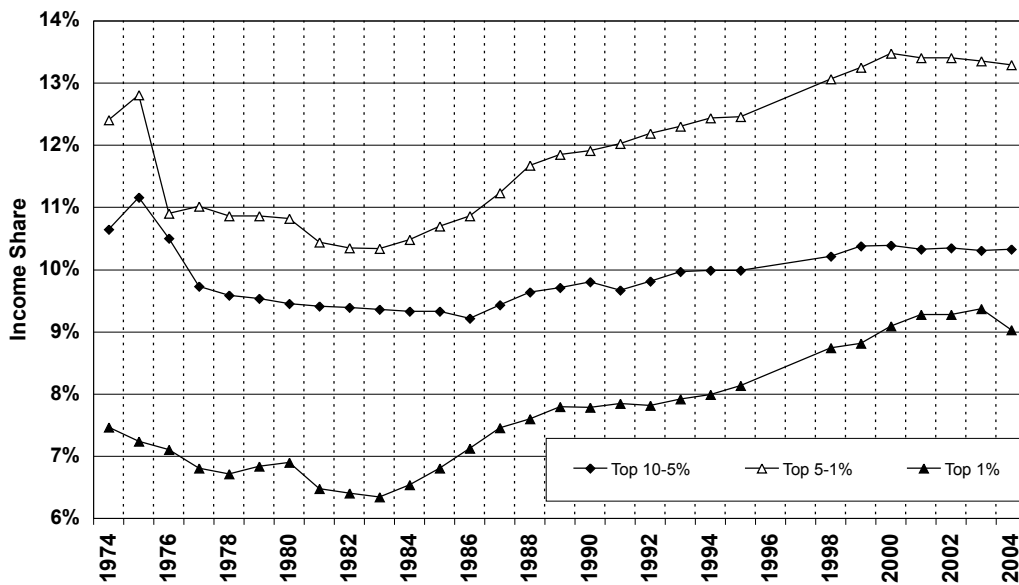
FIGURE 4.3
The Top 10-5%, Top 5-1%, and Top 1% Income Share in Italy, 1974-2004

Source: Table 4.B, columns top 10-5%, top 5-1%, and top 1%.
Income excludes realized capital gains.
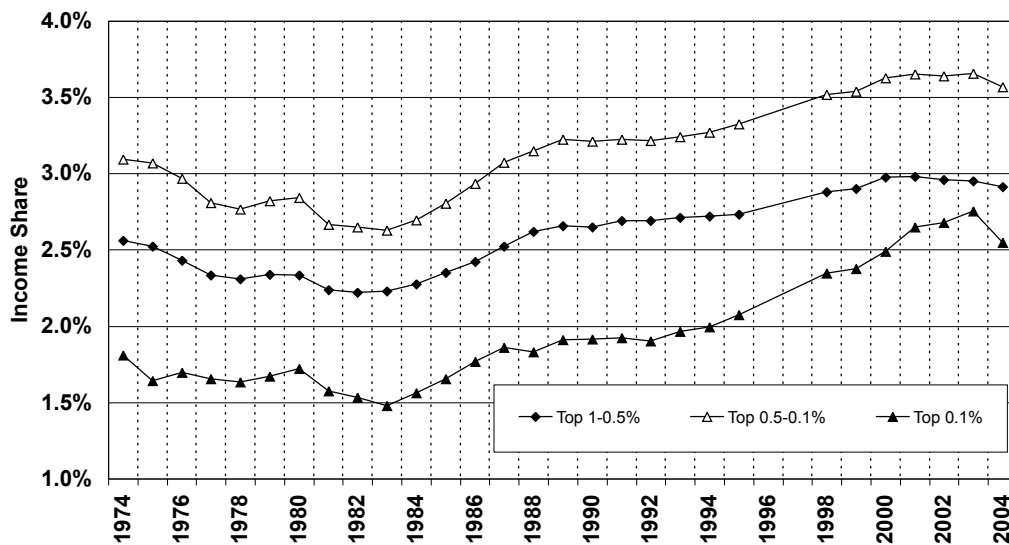
FIGURE 4.4
The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Income Share in Italy, 1974-2004

Source: Table 4.B, columns top 1-0.5%, top 0.5-0.1%, and top 0.1%.
Income excludes realized capital gains.
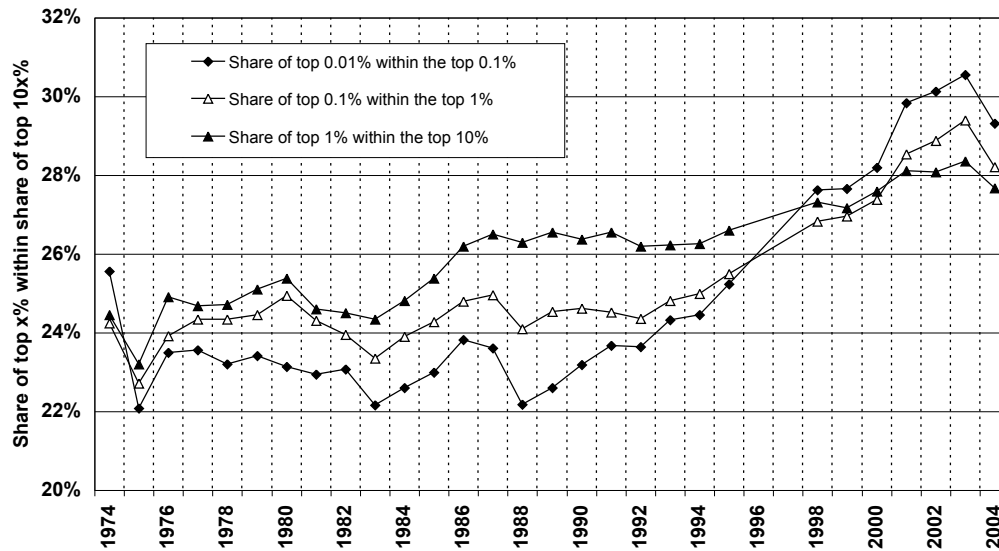
FIGURE 4.5
Shares within shares in Italy, 1974-2004

Source: Table 4.B, columns top 10%, top 0.1% and top 0.01%.
Income excludes realized capital gains.
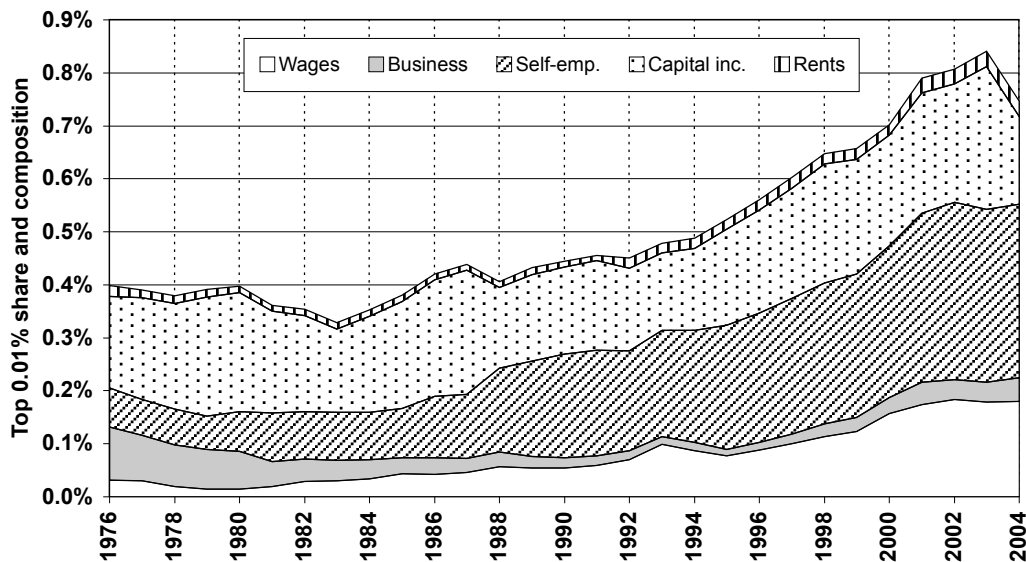
FIGURE 4.6
The Top 0.01% Income Share and Composition in Italy, 1976-2004

Source: Table 4.B, top 0.01% income share and Table 4.C, composition columns for top 0.01%.
The figure displays the income share of the top 0.01% tax units, and how the top 0.01% incomes are
divided into the following income components: wages and salaries (including pensions),
business, self-employment income, capital income (mainly dividends), and rents.
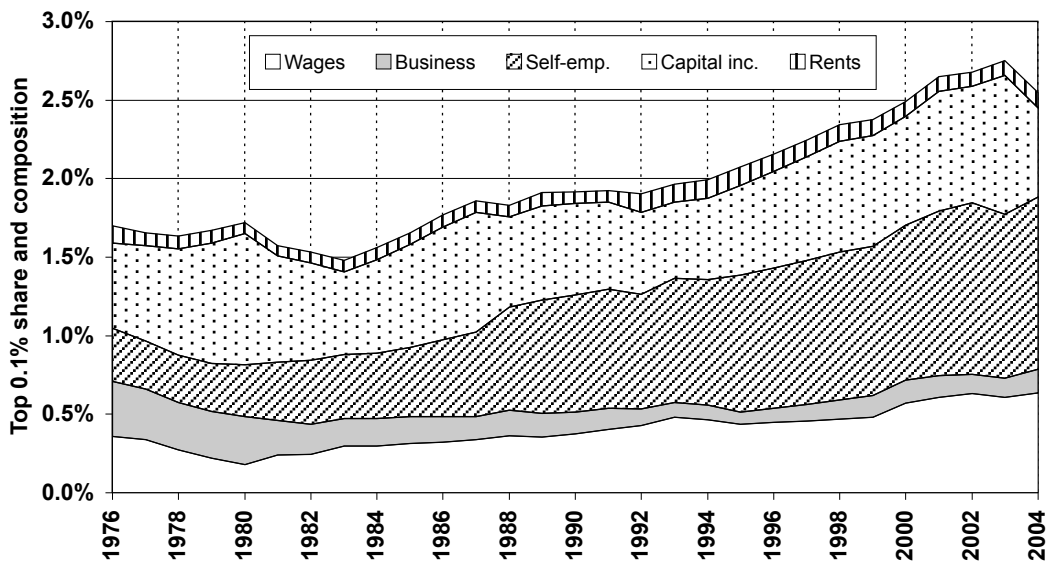
FIGURE 4.7

The Top 0.1% Income Share and Composition in Italy, 1976-2004

Source: Table 4.B, top 0.1% income share and Table 4.C, composition columns for top 0.1%.
The figure displays the income share of the top 0.1% tax units, and how the top 0.1% incomes are
divided into the following income components: wages and salaries (including pensions),
business, self-employment income, capital income (mainly dividends), and rents.
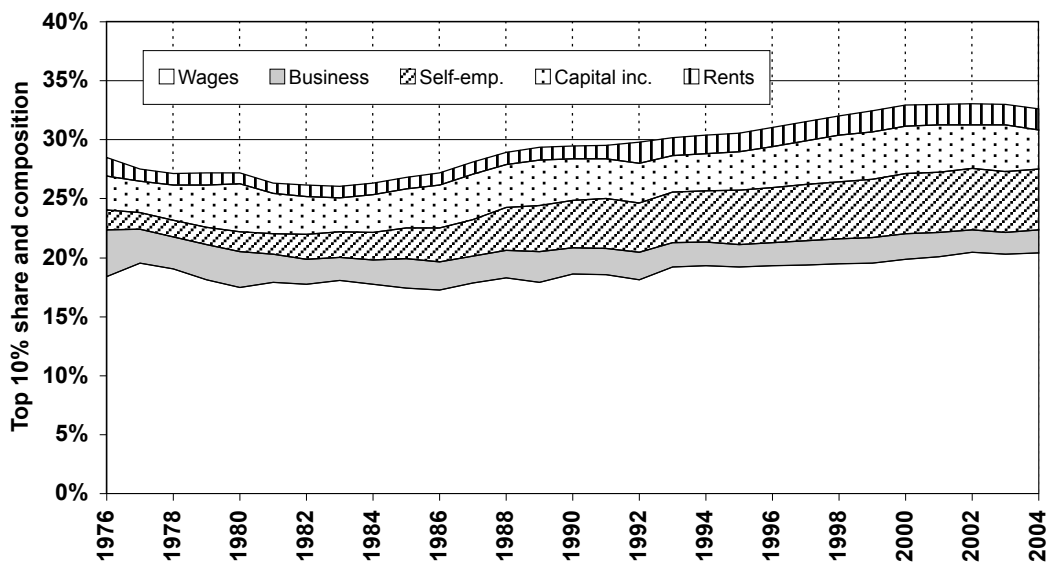
FIGURE 4.8

The Top 10% Income Share and Composition in Italy, 1976-2004

Source: Table 4.B, top 10% income share and Table 4.C, composition columns for top 10%.
The figure displays the income share of the top 10% tax units, and how the top 10% incomes are
divided into the following income components: wages and salaries (including pensions),
business, self-employment income, capital income (mainly dividends), and rents.
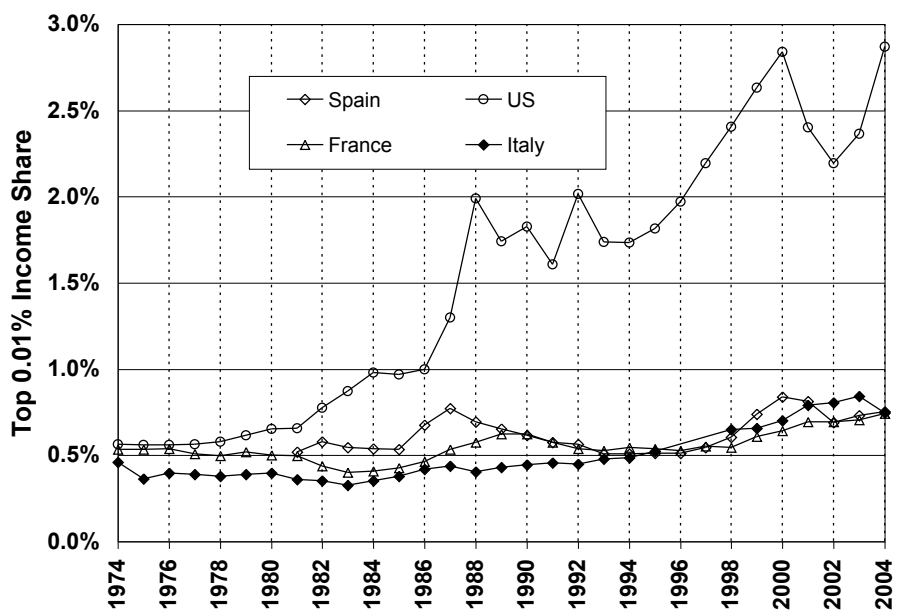
FIGURE 4.9

The Top 0.01% Income Share in Italy, Spain, US and France, 1974-2004

Sources: US: Piketty and Saez (2003); France: Piketty (2001) and Landais (2007);
Spain: Alvaredo and Saez (2007) and Chapter 2; Italy: Table 4.B.
Top 0.01% income share excludes realized capital gains.
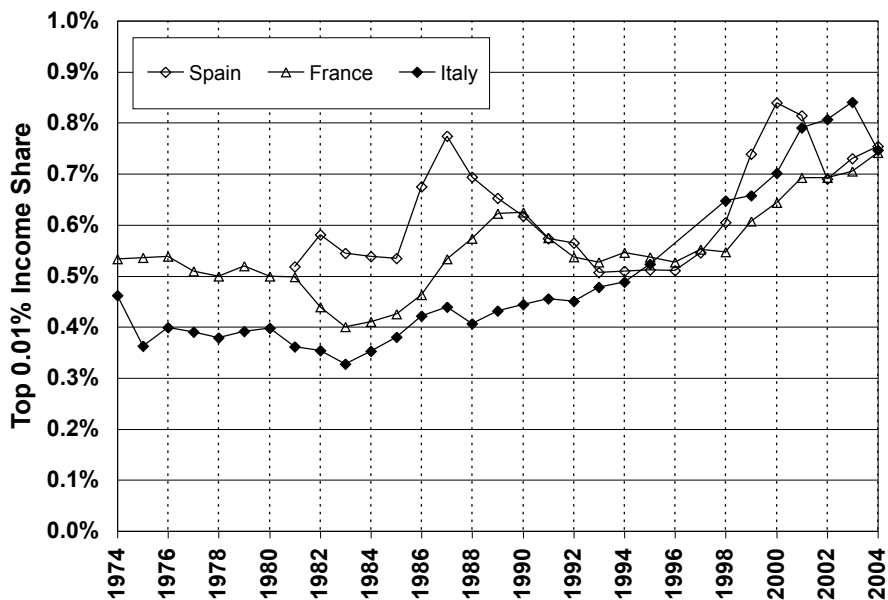
FIGURE 4.10

The Top 0.01% Income Share in Italy, Spain and France, 1974-2004

Sources: France: Piketty (2001) and Landais (2007);
Spain: Alvaredo and Saez (2007) and Chapter 2; Italy: Table 4.B.
Top 0.01% income share excludes realized capital gains.
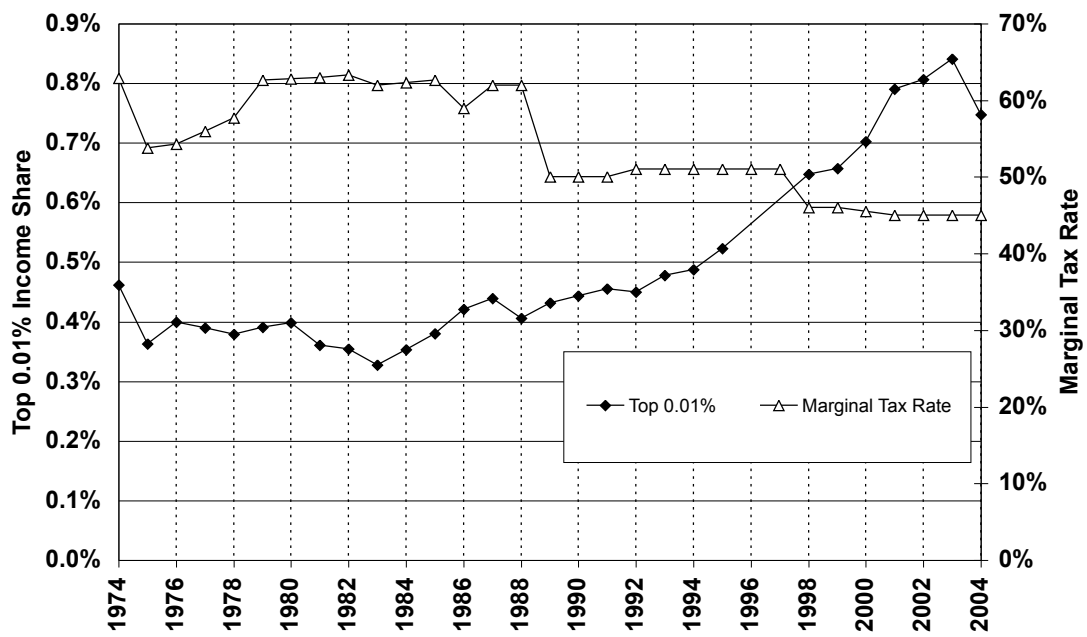
FIGURE 4.11
The top 0.01% income Share in Italy, 1974-2004.

Source: Top 0.01% income share 1974-2004 from Table 4.B (column top 0.01%).
Marginal tax rate: Own computations. Details in Appendix to Chapter 4.

APPENDIX TO CHAPTER 4

4.A. The Income Tax in Italy

In 1864 Italy reorganized the different taxes already in place in the pre-unification states into a new tax system, which emulated that of the Kingdom of Piemonte and Sardegna (Law 1830 of 7/14/1864 and Royal Decree 4021 of 8/24/1877). The reform relied on the traditional schedule taxes on salaries, rents, corporate profits, business profits, self-employment and capital income, estate and gifts (Imposta sul Redito Dominicale dei Terreni, Imposta sul Reddito dei Fabbricati, Imposta sul Reddito Agrario, Imposta sui Redditi di Ricchezza Mobile (wages, salaries, pensions, business income, capital income, self-employment income), Imposta Fondiaria). Under such a system, with withholdings at the source and different schedules covering different sources of income, the authorities did not know the total income of individuals, which were the subject of different assessments.

The Progetto Meda and the Riforma De Stefani (Royal Decree 3062 of 12/30/1923) introduced a new tax (*Imposta Complementare*), which was an additional income tax levied on top incomes, with a progressive tax scale, the bottom marginal rate being 2% and the top marginal rate evolving from 65% between 1923 and 1950 to 50% between 1951 and 1973. Only in 1951 (Law 25 of 1/11/1951, *Riforma Vanoni*) the authorities imposed the requirement of a unique annual tax file detailing all taxable income and income taxes paid. The *Imposta Complementare* remained in existence until 1972. Even when such a tax could have provided information on total top incomes that had not been available before on a regular basis, there are no published tabulations by ranges of income covering the income assessed to the *Imposta Complementare* over this period (see Appendix 4.B).

Local governments imposed an additional personal income tax with progressive rates (ranging from 2% to 12%), the *Imposta di Famiglia* (Law 4513/1869; abolished by D.P.R. n. 597 of 11/29/1973). For an account of the facts around the main tax reforms between 1950 and 1970, see Botarelli, 2004.

After almost a decade of studies on tax reform,[1] the modern personal income tax (*Imposta sui Redditi delle Persone Fisiche, IRPEF*) was introduced by the Law 9/10/1971. It fully came into force in the year 1974 and since then detailed official tax statistics began to be recorded on a yearly basis. The reform caused a shift from a limited overall income tax system with 2.2 million filed returns for the *Imposta Complementare* in the tax year 1972 to a mass tax with more than 15 million family-based tax returns or 23.3 million individually-based tax returns in 1974 (Table 4.A, Column 2).

---

[1] On the work done by the ad hoc commission chaired by Prof. Cosciani, see Commissione per lo Studio della Riforma Tributaria, 1964.

Initially taxation was based on the family unit, but in 1976 the Constitutional Court decided that the obligation to file jointly for married couples was thereafter unconstitutional (Court Decision 179/1976), joint filing interfering with the choice of creating or dissolving a conjugal tie. As explained in Appendix 4.C.2, published tabulations by range of income provide both the individual and the family distributions separately for 1974 and 1975; consequently the shift from family to individual taxation does not imply a discontinuity in our series.

Taxable income covers a) urban and rural rents, b) wages and salaries, c) pensions, d) self-employment income, e) farm income, f) business income from sole proprietorships and partnership income, g) capital income (dividends) and h) other income (a very small fraction of non-financial capital gains[2], copyrights, income from games of chance). Interest income is not taxed through the personal income tax but subject to a separate flat tax withheld at the source. Capital gains were mostly untaxed until 1998, and subject to a separate taxation since then. Consequently our income definition excludes interest and realized capital gains. For an account of the changes in capital gains taxation, see Ricotti and Sanelli, 2005.

In 1974 tax rates ranged from 10% to 82% with 31 brackets; a 10 points reduction in top marginal rates followed in 1975, the number of brackets being fairly stable up to 1982 (see Table 4.E). In 2004 there were only 5 brackets with a top marginal tax rate of 45%. As pointed out in Saez and Veall, 2005, the evolution of many brackets extending very far into the distribution of incomes and a high nominal top rate toward a much smaller number of brackets with a lower top rate is a common pattern of personal income tax systems of developed countries. However, the top marginal rate is a very defective measure of tax burden: 1974 very few taxpayers had enough income to be in the top bracket and taxed at 82%. Fixed bracket limits along time and growing inflation implied and increase in effective marginal rates between 1975 and 1979 (Figure 4.10) even when there were no changes in the statutory schedule.

Despite the frequent changes in the tax code, the fundamentals of the Italian personal income tax have not changed in a radical way since introduction of the *IRPEF*. Table 4.F enumerates the tax forms upon which the tax statistics are built on, together with some basic tax code changes.

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

Since 1980 (Law 119 of 3/31/1981) pensioners with no other income source are exempted from filing Form 101; they must file form 201 since 1984.

---

[2] Mainly capital gains from real state sold within 5 years after purchase, if not used as main dwelling.

Since 1991 individuals with only wages and salaries and who do not benefit from specific deductions are also exempted from filing tax returns through the Form 101. However, this fact partially affects tax statistics only for 1991 and 1992: firstly, because many individuals kept sending the Form 101 even if it was not required (see Herr, 2002), and secondly because starting in 1993 employers as well as the social security administration (INPS, INPDAP) must report individuals' incomes to the tax agency through Form 770. The information in Forms 770 is matched with tax returns (Forms 740 and 730) in order to add incomes of employees and pensioners exempted from filing. Additionally, a close look at the published tabulations for 1991 and 1992 shows that the reduction in the number of tax files due to the mentioned exemptions unsurprisingly occurred at the lower part of the distribution, and, consequently, does not affect our estimates.

Gross income in tax statistics is total income before deductions and personal direct taxes but net of social security contributions.
A detailed description of the evolution of the IRPEF between 1974 and 1998 can be found in Herr (2002). For a general view of the Italian taxation structure, see Bernardi, 1996, 2002. 2005.

4.B. References on Data Sources for Italy

Following the requirement of a unique individual annual tax file established by the law 25 of 1/11/1951, the tax agency launched an annual publication detailing the number of tax files and total assessed income, disaggregated by provinces, which appeared regularly from 1951 to 1973: Ministero Delle Finanze. Direzione Generale Delle Imposte Dirette. Dichiarazione Unica Dei Redditi. Dati Statistici (Presentata nell'anno 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973), Roma: Istituto Poligrafico dello Stato. Unfortunately no tabulations by range of income are provided; the only information available displays total assessed income and total number of tax returns. We report these references for bibliographical purposes.

Much more detailed data describe the evolution of the income tax between 1974 and 2004. Income tax statistics are published by the Minister of Finance every year since 1974. In 1974 a taxpayers' register was organized.

1974: Ministero delle Finanze, Anagrafe Tributaria, Analisi Delle Dichiarazioni dei Redditi delle Persone Fisiche Presentate nel 1975. Table DU-74-12-01: Distribuzione del reddito individuale comprensivo del reddito di lavoro dipendente dichiarato col modello 101 rispetto al reddito complessivo individuale. Two previous preliminary publication exists: Ministero delle Finanze, Anagrafe Tributaria, Elaborazione Statistiche sulle Dichiarazioni delle Persone Fisiche (Modelo 740) Relative ai Redditi del 1974 and Ministero delle Finanze, Direzione Generale delle Imposte Dirette, Centro Informativo,

Elaborazione Statistiche Generali sulle Dichiarazioni dei Redditi delle Persone Fisiche (Modello 740) presentate nel 1975.

1975: Ministero delle Finanze, Anagrafe Tributaria, Le Dichiarazioni dei Redditi delle Persone Fisiche Presentate nel 1976. Table DU-75-12-01: Distribuzione del reddito individuale comprensivo del reddito di lavoro dipendente dichiarato col modello 101 rispetto al reddito complessivo individuale.

1976: Ministero delle Finanze, Anagrafe Tributaria, Le Dichiarazioni dei Redditi delle Persone Fisiche Presentate nel 1977. Table 3.2.2: Composizione dell'Ammontonare dei Tipi di Redditi per Classi di Reddito Complessivo and Table 3.4.1: Riepilogo Generale delle Dichiarazioni per Classi di Reddito Complessivo.

1977: Ministero delle Finanze, Anagrafe Tributaria, Centro Informativo delle Imposte Dirette, Analisi Delle Dichiarazioni dei Redditi delle Persone Fisiche Presentate nel 1978. Table 3.2.2: Distribuzione dell'ammontonare dei redditi del totale percettori in relazione al reddito complessivo; Table 3.4.1: Distribuzione del numero complessivo dei dichiaranti e degli ammontonari di redditi, deduzione, detrazioni e imposte individuali rispetto al reddito complessivo.

1978-1991: Ministero delle Finanze, Direzione Generale delle Imposte Dirette, Analisi Delle Dichiarazioni dei Redditi delle Persone Fisiche Presentate nel 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992. Table 3.2.2: Distribuzione dell'ammontare dei redditi del totale dichiaranti in relazione al reddito complessivo; Table 3.4.1: Distribuzione del numero complessivo dei dichiaranti e degli ammontari di redditi, deduzioni, detrazioni e imposte individuali rispetto al reddito complessivo.

1992-1995: Ministero delle Finanze, Analisi Delle Dichiarazioni dei Redditi delle Persone Fisiche Presentate nel 1993, 1994, 1995. Table 2.2: Distribuzione dell'ammontare dei redditi del totale dichiaranti in relazione al reddito complessivo; Table 3.

1996-1997: No tax statistics available.

1998-2004: Ministero dell'Economia e delle Finanze. Dipartimento per la Politiche Fiscali. Ufficio Studi e Politiche Economico-Fiscali. Sistema Statistico Nazionale. Le Dichiarazioni in Cifre. Analisi Statistiche Anno d'Imposta 1998, 1999, 2000, 2001, 2002, 2003, 2004. Persone Fisiche (electronic publication). Table 1.2.2. Distribuzione dell'ammontare dei redditi per classi di reddito complessivo.

Ministero delle Finanze. Direzione Generale delle Imposte Dirette. Ufficio di Statistica. Analisi Dei Redditi delle Persone Fisiche suddivisi per Categorie Omogenee di Contribuenti. Dichiarazione Presentate nel 1982, 1983, 1984, 1985, 1986, 1987, 1989, 1990, 1991, 1992, 1993.

4.C. Income Denominator

4.C.1. Total number of individuals

For the period 1974-2004, total number of tax units is computed as the number of individuals in the Italian population aged 20 and above. Figures are reported in Table 4.A, Column 1; Column 2 also indicates the total number of tax returns actually filled as well as the fraction of adult population filing a tax return (Column 3).

For 1974-1980 the data are taken from Capocaccia, R. and G. Caselli (1990) Popolazione Residente per Età e Sesso nelle Province Italiane. Anni 1971-1981, Università degli Studi di Roma 'La Sapienza', Dipartimento di Scienze Demografiche, Fonti e strumenti, n.2. For 1981-2004 the series are obtained from Istituto Nazionale di Statistica (ISTAT), Ricostruzione Intercensuaria della Popolazione al 1° Gennaio 1982-1991, Istituto Nazionale di Statistica (ISTAT), Ricostruzione Intercensuaria della Popolazione al 1° Gennaio 1992-2001 and Istituto Nazionale di Statistica (ISTAT) Popolazione Totale per Singolo Anno di Età 2002, 2003, 2004.

4.C.2. Total Income Denominator

Total income is defined as: (i) wages and salaries from National Accounts net of all effective social security contributions (paid by employers and employees) plus (i) old-age pensions (which have to be reported) plus (iii) 2/3 of unincorporated business income plus (iv) all capital income (all non-business non-labor income) reported on tax returns.

Regarding the estimation of the unincorporated business income in the denominator, the business income in the National Accounts statistics includes an estimation of the black market economy. This is captured by a very large unincorporated business sector, which is disproportionably larger than business income assessed in income tax returns. Hence we estimate that about 1/3 of such business income is from the informal sector and hence escapes taxation.

Concerning the estimation of capital income in the denominator, it is worth noting that, as capital income is very concentrated, non-filers receive a negligible fraction of it. For example, in 2004, the top 10% income earners obtained 62% of total capital income reported on tax returns. Capital income in personal income in National Accounts is substantially different from capital income on tax returns because of imputed rents of homeowners, imputed interest to bank account holders, returns on (non-taxable) pension funds, etc. That is why we use capital income from tax returns to define our denominator. See e.g. Park 2000, for a comprehensive comparison in the case of the United States where over 90% of adults file tax returns.

The total denominator series expressed in 2000 Euros are reported in Table 4.A, Column 4. The average income per adult is reported in Column 5, and the CPI index (base 100 in year 2000) is presented in Column 6.

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

GDP, Wages and Salaries:
(a) Istituto Nazionale di Statistica (ISTAT), <u>Contabilità Nazionale. Conti Economici Nazionali 1970-2005</u>. For real GDP 1974-2004: Produzione a prezzi base (Reference year 2000). For nominal GDP 1974-2004: Conto della produzione a prezzi correnti. For wages and salaries 1974-2004: Conto dell'attribuzione dei redditi primari (current values).
Prices:
(b) Istituto Nazionale di Statistica (ISTAT), Consumer Price Index 1974-2004 (also in OECD, Statistical Compendium, 2007.1).
Social Security Contributions:
(c) Istituto Nazionale di Statistica (ISTAT), <u>Conti e Aggregati Economici delle Amministrazioni Pubbliche 1980-2006</u>, Table 1: Conto Economico Consolidato delle Amministrazioni Pubbliche for effective social security contributions 1980-2004 and Table 20: Contributi Sociali Prelevati dalle Amministrazioni Pubbliche per tipo 1980-2006. For the effective social security contributions for 1974-1979 we assumed that their ratio to GDP was equal to the ratio observed in 1980.
Pensions:
(e) Istituto Nazionale di Statistica (ISTAT), <u>Le prestazioni pensionistiche in Italia dal 1975 al 2000</u>. For pensions 1975-2000: Table 2: Spesa pensionistica totale per tipo, settore, ente erogatore, categoria, gestione e ripartizione territoriale, al 31 dicembre.
(f) Istituto Nazionale di Statistica (ISTAT), <u>Annuario Statistico Italiano 2001</u>, Chapter 4 Assistenza e previdenza sociale, Table 4.9: Pensioni e relativo importo annuo per comparto, ente erogatore e tipo - Anno 2001.
(g) Istituto Nazionale di Statistica (ISTAT), <u>Le prestazioni pensionistiche in Italia 2002, 2003, 2004</u>. Table. 1.1 and Table 2.1: Spesa pensionistica IVS e pensioni indennitarie per tipo, settore, ente erogatore, categoria, gestione e ripartizione territoriale, al 31 dicembre.
Unincorporated profits:
(h) OECD, Statistical Compendium, 2007#1. Simplified Accounts for Households and Non Profit Institutions Serving Households (NPISH) and for Corporation. Mixed income, Gross, Current prices.

4.D. Estimating Top Shares

4.D.1. Basic Pareto Interpolation

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

The first step consists then in estimating the income thresholds corresponding to each of the percentiles P90, P95, P99, ..., P99.99, that define our top income groups. For each percentile p, we look first for the published income bracket [s,t] containing the percentile p. We estimate then the parameters a and k of the Pareto distribution by solving the two equations: $k = s\, p^{(1/a)}$ and $k = t\, q^{(1/a)}$ where p is the fraction of tax returns above s and q the fraction of tax returns above t.[3] Note that the Pareto parameters k and a may vary from bracket to bracket. Once the density distribution on [s,t] is estimated, it is straightforward to estimate the income threshold, say y_p, corresponding to percentile p.

The second step consists of estimating the amounts of income reported above income threshold y_p. We estimate the amount reported between income y_p and t (the upper bound of the published bracket [s,t] containing y_p) using the estimated Pareto density with parameters a and k. We then add to that amount the amounts in all the published brackets above t.

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

Results are presented in Table 4.B (top income shares) and Table 4.D (top fractiles income levels).

4.D.2. Composition shares

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

The composition of income within each top group was estimated from these tables using linear interpolations. Such a method is less satisfactory than the Pareto interpolation used to estimate top income thresholds; however no obvious law seems to fit composition patterns in a stable way. Estimates perform satisfactorily when compared to micro-data (see, e.g. Piketty and Saez, 2007 for a more precise discussion of this method and Chapter 2 for the comparison with direct estimates using micro data in the case of Spain). Results are presented in Table 4.C.

We consider five types of income: rents, wage income, self-employment income and entrepreneurial income and capital income. Rents include income from rural and urban real estate. Wage income includes wages, salaries and pensions, net of social security contributions. Self-employment income is

---

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

income from professionals (such as dentists, lawyers, etc) and independent workers, while entrepreneurial income includes small business income (income from sole proprietorship, partnerships income and farm income). Finally, capital income includes mainly dividends.

4.D.3. Adjustments to Raw Pareto Interpolations and Composition

1. Shift from family to individual taxation in 1976

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

2. Changes in compositions due to changes in the tax code

Starting in 2001 income from the Collaborazioni Coordinate e Continuative (Co.Co.Co.) has to be reported under the form of wages and salaries in the tax forms (Law 342 of 11/21/2000). Before that year it was considered self-employment income for tax purposes. As this is an important source of income among top taxpayers, the shift generates a spurious and visible change in the raw compositional patterns of top fractiles from self-employment towards wage income since 2001. To correct this, we assumed that the growth rate of self-employment income (net of Co.Co.Co.) between 2001 and 2002 equaled that of Co.Co.Co. income between 2000 and 2001.

4.D.4. Estimating Marginal Tax Rates

Average marginal tax rates (income weighted) used in Figure 4.11 have been computed as follows. We consider each of the income thresholds P99, P999, etc. estimated from the interpolation methods described in this Appendix. We subtract from the raw income the average level of deductions and average level of allowances (for example, for the income threshold P99, we identify the bracket in the tax tabulations to which this level of income belongs and subtract the average deductions and allowances in that bracket). This gives the net taxable income. Tax liability is obtained from taxable income from the tax schedules in Table 4.E, from which the marginal tax rate for any taxable income can be obtained.

We estimate the income-weighted marginal tax rate for the top 0.01% as:

[Share P99.99-99.999 x MTR 99.995 + Share 99.999-100 x (MTR 99.999+MTR99.9999)/2]/

[Share P99.99-999+Share P99.999-100]

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

References

Agenzia delle Entrate, Fisco Oggi, (2003). 'Paperoni d'Italia, il 37 per cento in Lombardia. Quasi Uno su Tre Vive a Milano', 17 Gennaio.

Albertini, M. (2003). 'The Impact of Changes in Household Forms on Income Inequality: The Case of Italy 1977-2000', EUI Working Paper, European University Institute, n. 19.

Albertini, M. (2004). 'Who Were and Who are the Poorest and the Richest People in Italy: The Changing Household's Characteristics of the People at the Bottom and at the Top of the Income Distribution', Quaderni del Dipartimento di Sociologia e Ricerca Sociale, Università degli Studi di Trento, n. 31.

Alvaredo, F. and E. Saez (2007). 'Income and Wealth Concentration in Spain in a Historical and Fiscal Perspective', Cepr Discussion Paper 5836.

Atkinson, A. B. (2003) 'Income Inequality in OECD Countries: Data and Explanations', CESifo Working Paper n. 881, February.

Atkinson, A. B. (2005). 'Top Incomes in the UK over the Twentieth Century', *Journal of the Royal Statistical Society*, 168(2): 325-343.

Atkinson, A. B. (2007) Measuring Top Incomes: Methodological Issues, in Atkinson, A. B. and T. Piketty (eds.), op. cit.

Atkinson, A. B. and A. Leigh (2004). 'Understanding the Distribution of Top Incomes in Anglo-Saxon Countries over the Twentieth Century', Working Paper, Nuffield College, Oxford.

Atkinson, A. B. and A. Leigh (2006). 'The Distribution of Top Incomes in Australia', in Atkinson, A. B. and T. Piketty (eds.), op. cit.

Atkinson, A. B. and T. Piketty (2007). *Top Incomes over the Twentieth Century: A Contrast Between European and English Speaking Countries*, Oxford: Oxford University Press.

Atkinson, A. B. and W. Salverda (2003). 'Top Incomes in the Netherlands and the United Kingdom over the Twentieth Century', *Journal of the European Economic Association*, 3(4): 883–913.

Atkinson, A.B., L. Rainwater and T. Smeeding (1995). 'Income Distribution in OECD Countries: Evidence from the Luxemburg Income Study (LIS)', Social Policy Studies 18. Paris: OECD.

Baldini, M. (1996). 'Inequality Decomposition by Income Source in Italy, 1987-1993', Materiali di Discussione del Dipartimento di Economia Politica dell'Università di Modena, n. 143, May.

Baldini, M., and Bosi, P. (2002). 'La riforma dell'Imposta sul Reddito: Aspetti di Equità e di Efficienza', Politica Economica, n. 3, pp. 303-340.

Bernardi, L. (1996). 'L'Irpef: Un'Introduzione al Dibattito', in Fossati A. and S. Giannini (eds.) *I Nuovi Sistemi Tributari*, Milano: Franco Angeli, pp. 17-48.

Bernardi, L. (2002). 'Tax System and Reforms in Europe: Italy', Società Italiana di Economia Pubblica Working Papers, n. 183.

Bernardi, L. (2005). 'Tax Reforms in Italy and in Europe: An introduction', *Giornale degli Economisti e Annali di Economia*, vol. 64, pp. 133-152.

Bernardi, L. and M. Bernasconi (1996). 'L'Evasione Fiscale in Italia: Evidenze Empiriche', *Il Fisco*, n.38, October, p. 19-35.

Bernasconi, M. A. Marenzi and F. Pozzi (1992). 'L'Analisi di Microsimulazione delle Imposte Dirette e Dei Contributi Sociale a Carico delle Famiglie: Medello e Resultati', in P. Bosi and S. Lugaresi (eds.) Bilancio Pubblico e Redistribuzione, Bologna: Il Mulino, pp. 129-175.

Bernasconi, M. and A. Marenzi (1997). 'Gli Effettti Redistributivi dell'Evasione Fiscale in Italia', Banca d'Italia, Convegno sulle Ricerche Quantitative per la Politica Economica, Perugia: Sadiba.

Biancotti, C., G. D'Alessio and A. Neri (2004). 'Errori di Misura nell'Indagine sui Bilanci delle Famiglie Italiane', Temi di Discussione, n. 522, Banca d'Italia.

Birindelli, L., L. Bisaglia, G. Brunello and D. Rizzi (1994). 'La Distribuzione Personale e Familiare delle Risorse', in N. Rossi (ed) *La Transizione Equa 1992-1993. Secondo Rapporto Consiglio Nazionale dell'Economia e del Lavoro sulla Distribuzione e Redistribuzione del Reddito in Italia*, Bologna: Il Mulino, pp. 119-191.

Boeri, T. and A. Brandolini (2004). 'The Age of Discontent: Italian Households at the Beginning of the Decade', *Giornale degli Economisti e Annali di Economia*, n. 3/4.

Bosi, P. and M.C. Guerra (various years). 'I Tributi nell'Economia Italiana', Il Mulino.

Botarelli, S. (2004). 'Tra Riforme Mancate e Riforme Attenuate: da Vanoni alla Riforma degli Anni '70', Università degli Studi di Siena, Dipartimento di Economia Politica, Quaderni, n. 434, Settembre.

Bottiroli Civardi, M. and R. Targetti Lenti (2001). 'Profili Reddituali, Livello di Istruzione e Disuguaglianza nella Distribuzione Personale dei Redditi in Italia', Quaderni del Dipartimento di Economia Pubblica e Territoriale, Università degli Studi di Pavia, n. 1.

Brandolini, A. (1999). 'The Distribution of Personal Income in Post-War Italy: Source Description, Data Quality, and the Time Pattern of Income Inequality', Giornale degli Economisti e Annali di Economia, 58(2), pp. 183-239. Working paper version available es Discussion Paper, n. 350, April , Rome, Bank of Italy.

Brandolini, A. (2000). 'Appunti per una Storia della Distribuzione del Reddito in Italia nel Secondo Dopoguerra', *Rivista di Storia Economica*, vol. 16, n. 2, August, pp. 215-230.

Brandolini, A. (2004). 'Income Inequality and Poverty in Italy: A Statistical Compendium', Banca d'Italia, mimeo.

Brandolini, A. and L. Cannari (1994). 'Methodological Appendix: The Bank of Italy's Survey of Household Income and Wealth', in A. Ando, L. Guiso and I. Visco (eds.) *Savings and the Accumulation of Wealth*, Cambridge: Cambridge University Press, pp. 369-386.

Brandolini, A. and P. Sestito (1994). 'La Distribuzione dei Redditi Familiari in Italia: 1977-1991', in N. Rossi (ed.) *La Transizione Equa, 1992-1993. Secondo Rapporto sulla Distribuzione e Redistribuzione del Reddito in Italia*, Bologna: Il Mulino.

Brandolini, A., L. Cannari, G. D'Alessio and I. Faiella (2004). Household Wealth Distribution in Italy in the 1990s, Temi di Discuzione, n. 530, Banca d'Italia.

Brosio, G., A. Cassone and R. Ricciuti (2002). 'Tax Evasion across Italy: Rational concompliance or Inadequate Civic Concern?', Public Choice, (112): 259-273.

Canberra Expert Group on Household Income Statistics (2001) Final Report and Recommendations, Ottawa.

Cannari L. and G. D'Alessio (1992). 'Mancate Interviste e Distorsione Degli Stimatori', Temi di Discussione n.172, Banca d'Italia.

Cannari, L. and G. D'Alessio (1994). 'Composizione e Distribuzione della Ricchezza delle Famiglie', in N. Rossi (ed.) *La Transizione Equa 1992-1993. Secondo rapporto Consiglio Nazionale dell'Economia e del Lavoro sulla Distribuzione e Redistribuzione del Reddito in Italia*, Bologna: Il Mulino, pp. 245-277.

Cannari, L. and G. D'Alessio (2006). *La Ricchezza Degli Italiani*, Bologna: Il Mulino.

Cannari, L. and R. Violi (1990). 'Effetti Redistributivi dell'Imposta Personal sul Reddito: Il Caso Italiano e L'Ipotesi di Tassazione Secondo il Reddito Normale', in M. Leccissotti (ed.) *Per un'imposta sul Reddito Normale*, Bologna: Il Mulino, pp. 105-122.

Cannari, L. and R. Violi (1995). 'Reporting Behaviour in the Bank of Italy's Survey of Italian Household Income and Wealth', in C. Dagum and A. Lemmi (eds.) *Research on Economic Inequality*, vol. 6, pp. 117-130.

Cannari, L., V. Ceriani and G. D'Alessio (1997). 'Il Recupero degli Imponibili Sottratti a Tassazione', *Ricerche Quantitative per la Politica Economica*, vol. 2, pp. 493-589, Banca d'Italia.

Capocaccia, R. and G. Caselli (1990). 'Popolazione Residente per Età e Sesso Nelle Province Italiane. Anni 1971-1981', Università degli Studi di Roma 'La Sapienza', Dipartimento di Scienze Demografiche, Fonti e Strumenti, n.2.

Clementi, F. and M. Gallegati (2004). 'Power Law Tails in the Italian Personal Income Distribution', working paper, Università degli Studi di Roma 'La Sapienza', August.

Commissione per los Studio della Riforma Tributaria (1964). Stato dei Lavori della Commissione per lo Studio della Riforma Tributaria a cura di C. Cosciani. Milano: Giuffrè.

Cowell, F. A. (1995). *Measuring Inequality*, second edition, London: Prentice Hall.

D'Amuri, F. and C. Fiorio (2005). 'Workers' tax evasion in Italy', *Giornale degli Economisti e Annali di Economia*, Vol. 64, n. 2/3, December.

D'Alessio, G. and L. F. Signorini (2000). 'Disuguaglianza dei Redditi Individuali e Ruolo della Famiglia in Italia', Temi di Discuzione n. 390, Banca d'Italia.

Deaton, A. (2005) Measuring Poverty in a Growing World (or Measuring Growth in a Poor World). Review of Economics and Statistics, 87(1): 1-19.

Dell, F., T. Piketty and E. Saez (2007). Income and Wealth Concentration in Switzerland over the Twentieth Century, in Atkinson, A. B. and T. Piketty (eds.) op. cit.

Di Nardo J., N. Fortin and T. Lemieux (1996). 'Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach', *Econometrica*, 64(5): 1001-1044.

Erickson, C. and A. Ichino (1995). 'Wage Differentials in Italy. Market Forces, Institutions and Inflation' in R. Freeman and L. Katz (eds) *Differences and Changes in the Wage Structure*, Chicago and London: University of Chicago Press, pp. 265-305.

Feenberg, D. and J. Poterba (1993). 'Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns', in J. Poterba (ed.) *Tax Policy and the Economy*, vol. 7, Cambridge: MIT Press, pp. 145-177.

Feenberg, D. and J. Poterba (1993). 'Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns', in J. Poterba (ed.) *Tax Policy and the Economy*, vol. 7, Cambridge: MIT Press.

Ferrera, M. (2006). *Le politiche sociali. L'Italia in Prospettiva Comparata*, Bologna: Il Mulino.

Fiorio, C. V. (2006). 'Understanding Inequality Trends: Microsimulation Decomposition for Italy,' STICERD - Distributional Analysis Research Programme Papers 78, London School of Economics.

Forster, M. and M. Pellizzari (2000). 'Trends and Driving Factors in Income Distribution and Poverty in the OECD Area.' Labor Market and Social Policy Occasional Papers n. 42. OECD: Paris.

Galbiati, R. and A. Zanardi (2001). 'The Redistributive Effects of Tax Evasion: a Comparison between Conventional and Multi-criteria Perspectives', Econpubblica Working Paper, n.81, December.

Gallo, F. (1995). 'Tassazione delle Attività Finanziarie e Problematiche dell'Elusione' in G. Muraro and N. Sartor (eds.) *La Tassazione delle Attività Finanziarie*, Milano: Franco Angeli.

Gastaldi F. and P. Liberati (2000). 'Imposte e Redistribuzione in Italia', in G. Garofalo and A. Pedone (eds.) *Distribuzione, Redistribuzione e Crescita - Gli Effetti Delle Diseguaglianze Distributive*, Milano: Franco Angeli.

Giarda, E. (2003). 'Distribuzione dei Redditi Dichiarati: Stime e Previsioni del Gettito IRPEF', Dipartimento di Economia Pubblica e Territoriale, Università di Pavia, Società Italiana di Economia Pubblica.

Herr, U. (2002). 'L'Evoluzione della Struttura dell'IRPEF: Un'Analisi Attraverso le Dichiarazioni' in E. Longobardi (ed.) *I Centogiorni e Oltre: Verso una Rifondazione del Rapporto Fisco-Economia?,* Il Fisco, n. 18 and n. 11, pp. 381-401.

ISAE Istituto di Studi e Analisi Economica (2002). 'Evoluzione Ventennale Della Distribuzione del Reddito in Italia: Un'Analisi dei Dati Fiscali a partire dal 1974', Rapporto Trimestrale n.11, pp. 189-208.

ISAE Istituto di Studi e Analisi Economica (2005), 'La Distribuzione Funzionale e Personale del Reddito in Italia a partire dagli Anni Novanta', in Rapporto 'Finanza Pubblica e Redistribuzione', pp.1-30, October.

ISAE Istituto di studi e analisi economica (2006), 'L'Evasione dell'Imposta Personale sul Reddito delle Persone Fisiche: Rilevanza e Problemi', in ISAE Rapporto Finanza Pubblica e Redistribuzione, Chapter 3, October.

Kuznets, S. (1953). *Shares of Upper Income Groups in Income and Savings*, NewYork: National Bureau of Economic Research.

Landais, C. (2007). 'Les Hauts Revenus en France (1998-2006): Une Explosion des Inegalités?', Paris School of Economics Working Paper, June.

Leigh, A. (2007). 'How Closely Do Top Income Shares Track Other Measures of Inequality?,' Discussion Papers 562, Centre for Economic Policy Research, Research School of Social Sciences, Australian National University.

Manacorda, M. (2004). 'Can the Scala Mobile Explain the Fall and the Rise of Earnings Inequality in Italy? A Semiparametric Analysis 1977-93', Journal of Labor Economics, 22(3): 585-613.

Marè, M. (1996). 'L'Evasione in Italia e nei Paesi OCSE: Evidenze, Determinanti, ed Effetti Economici', Moneta e Credito, Vol.49, n.195, September, pp. 393-443.

Marenzi, A. (1989). 'La Distribuzione del Carico Fiscale in Italia: Un Modello di Microsimulazione', Pavia, Dipartimento di Economia Pubblica e Territoriale.

Marino, M. and C. Rapallini (2003). 'La Composizione Familiare dell'Imposta sul Reddito delle Persone Fisiche: Un'Analisi degli Effetti Redistributivi e Alcune Considerazioni sul Benessere Sociale', Banca d'Italia, Temi di Discussione, n. 477.

Monacellli, D. (1996). 'Problemi di Stima dell'Evasione Fiscale: Una Rassegna dei Metodi e Degli Studi Effetuati per l'Italia', Economia Pubblica, n.6, pp. 103-125.

Moriguchi, C. and E. Saez (2007). 'The Evolution of Income Concentration in Japan, 1886-2005: Evidence from Income Tax Statistics', forthcoming *Review of Economics and Statistics.*

Oropallo, F. (1998). 'Valutazione dello Strumento del "Riccometro" con un Modello di Microsimulazione', FORMEZ, Centro Formazione e Studi.

Park, T. S. (2000). 'Comparison of BEA Estimates of Personal Income and IRS Estimates of Adjusted Gross Income', *Survey of Current Business*, November, 7-13.

Pellegrino, S. (2006). 'La Lordizzazione dei Redditi netti IRPEF: Strumenti per la Microsimulazione sul 2005', Dipartimento di Economia Pubblica e Territoriale, Università di Pavia, Società Italiana di Economia Pubblica, Working Paper n. 478.

Pellegrino, S. (2007). 'Il Modello di Microsimulazione IRPEF 2004', Dipartimento di Economia Pubblica e Territoriale, Università di Pavia, Società Italiana di Economia Pubblica, Working Paper n. 583.

Piketty T. and Saez, E. (2006), 'The Evolution of Top Incomes: a Historical and International Perspective', *American Economic Review*, 96(2): 200-205.

Piketty, T. (2001). *Les hauts revenus en France au 20eme siècle – Inegalités et Redistributions, 1901-1998*, Paris: Editions Grasset.

Piketty, T. and Saez, E. (2003), 'Income Inequality in the United States 1913-1998', *Quarterly Journal of Economics*, 118: 1-39.

Piketty, Thomas (2003). 'Income Inequality in France 1901-1998', *Journal of Political Economy*, 111: 1-39.

Pittau, M. G. and R. Zelli (2004). 'Testing for Changing Shapes of Income Distribution: Italian Evidence in the 1990s from Kernel Density Estimates', *Empirical Economics*, 29(2): 415-430.

Pittau, M.G. and R. Zelli (2002). 'Income Distribution in Italy: A Nonparametric Analysis', Statistical Methods and Applications, n. 10, October, pp. 175-190.

Ricotti, G. and A. Sanelli (2005). 'Conti Finanziari e Fiscalità: Un'Analisi Storica', presented at the Congress I Conti Finanziari: La Storia, I Metodi, l'Italia, I Confronti Internazionali', Perugia, SADIBA, Banca d'Italia, 1st-2nd December 2005.

Roberti, P. (1971). 'La Distribuzione del Reddito Nazionale', Rassegna Economica, 35(4): 801-832.

Rosen, S. (1981). 'The Economics of Superstars', *American Economic Review*, 71(5): 845-858.

Saez, E. and M. R. Veall (2005). 'The Evolution of Top Incomes in Northern America: Lessons from Canadian Evidence', *American Economic Review*, 95(3): 831-849.

Signorini, L. F. and I. Visco (2002). *L'Economia Italiana*, Bologna: Il Mulino.

Slemrod, J. (1995). 'Income Creation or Income Shifting? Behavioral Responses to the Tax Reform Act of 1986', *American Economic Review*, 85(2): 175-180.

Smeeding, T. (2000). 'Changing Income Inequality in OECD Countries: Updated Results from the Luxembourg Income Study (LIS)', in R. Hauser and I.

Becker (eds.) *The Personal Distribution of Income in an International Perspective*. Berlin: Springer-Verlag.

SOGEI (1999). Confronto tra Dati Fiscali e Dati di Contabilità Nazionale, vols. I and II, December, Roma.

Visco, V. (1995). 'Alcune Note Sulla Evoluzione della Legislazione Fiscale in Materia di Redditi di Capitale', in G. Muraro and N. Sartor (eds.) *La Tassazione delle Attività Finanziarie*, Milano: Franco Angeli.

Visentini, B. (1969). 'Relazione sullo Stato dei Lavori del Comitato di Studio per l'Attuazione della Riforma Tributaria'.

TABLE 4.A. Reference Totals for Population, Income, and Inflation, 1974-2004

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

Notes: Population and tax units estimates based on populations census.

Tax units estimated as number of adults aged 20 and over in Italy

Total income defined as wages and salaries from National Accounts (net of social contributions) plus pensions plus 50% of unincorporated business income, plus all non-business, non labor income reported on tax returns.

Consumer Price Index is the official CPI index (see Appendix for details).

Table 4.B. Top Income Shares in Italy (excluding Capital Gains), 1974-2004

	Top 10%	Top 5%	Top 1%	Top .5%	Top .1%	Top .01%	Top 10-5%	Top 5-1%	Top 1-5%	Top .5-1%	Top .1-.01%	Top .01%
	(2)	(3)	(4)	(5)	(6)	(7)	(10)	(11)	(12)	(13)	(14)	(7)
1974	30.50	19.86	7.46	4.90	1.81	0.46	10.64	12.40	2.56	3.09	1.35	0.46
1975	31.20	20.04	7.24	4.71	1.64	0.36	11.16	12.80	2.52	3.07	1.28	0.36
1976	29.75	18.00	7.10	4.67	1.70	0.40	10.50	10.90	2.43	2.97	1.30	0.40
1977	27.53	17.81	6.80	4.47	1.66	0.39	9.72	11.01	2.33	2.81	1.27	0.39
1978	27.15	17.56	6.71	4.40	1.63	0.38	9.58	10.86	2.31	2.77	1.25	0.38
1979	27.21	17.69	6.83	4.49	1.67	0.39	9.53	10.86	2.34	2.82	1.28	0.39
1980	27.17	17.72	6.90	4.56	1.72	0.40	9.45	10.82	2.33	2.84	1.32	0.40
1981	26.31	16.91	6.47	4.24	1.57	0.36	9.40	10.43	2.24	2.66	1.21	0.36
1982	26.14	16.75	6.40	4.18	1.53	0.35	9.39	10.34	2.22	2.65	1.18	0.35
1983	26.04	16.68	6.34	4.11	1.48	0.33	9.36	10.34	2.23	2.63	1.15	0.33
1984	26.34	17.01	6.54	4.26	1.56	0.35	9.32	10.48	2.28	2.70	1.21	0.35
1985	26.83	17.50	6.81	4.46	1.65	0.38	9.32	10.70	2.35	2.81	1.27	0.38
1986	27.20	17.98	7.13	4.70	1.77	0.42	9.22	10.86	2.42	2.93	1.35	0.42
1987	28.12	18.68	7.45	4.93	1.86	0.44	9.43	11.23	2.52	3.07	1.42	0.44
1988	28.91	19.27	7.60	4.98	1.83	0.41	9.64	11.67	2.62	3.15	1.43	0.41
1989	29.34	19.64	7.79	5.13	1.91	0.43	9.70	11.85	2.66	3.22	1.48	0.43
1990	29.50	19.69	7.78	5.13	1.92	0.44	9.80	11.91	2.65	3.21	1.47	0.44
1991	29.53	19.86	7.84	5.15	1.92	0.46	9.67	12.02	2.69	3.22	1.47	0.46
1992	29.81	20.00	7.81	5.12	1.90	0.45	9.81	12.19	2.69	3.22	1.45	0.45
1993	30.19	20.23	7.92	5.21	1.97	0.48	9.97	12.31	2.71	3.24	1.49	0.48
1994	30.41	20.42	7.99	5.26	2.00	0.49	9.99	12.43	2.72	3.27	1.51	0.49
1995	30.57	20.58	8.13	5.40	2.07	0.52	9.99	12.45	2.73	3.32	1.55	0.52
1996												
1995												
1998	32.01	21.80	8.74	5.86	2.35	0.65	10.21	13.06	2.88	3.52	1.70	0.65
1999	32.44	22.07	8.82	5.91	2.38	0.66	10.37	13.25	2.90	3.54	1.72	0.66
2000	32.94	22.56	9.09	6.12	2.49	0.70	10.38	13.47	2.98	3.63	1.79	0.70
2001	33.00	22.68	9.28	6.30	2.65	0.79	10.32	13.40	2.98	3.65	1.86	0.79
2002	33.03	22.68	9.28	6.32	2.68	0.81	10.35	13.40	2.96	3.64	1.87	0.81
2003	33.02	22.71	9.36	6.41	2.75	0.84	10.31	13.35	2.95	3.66	1.91	0.84
2004	32.64	22.32	9.03	6.12	2.55	0.75	10.32	13.29	2.91	3.57	1.80	0.75

Notes: Computations based on tax return statistics. Taxpayers are ranked by gross income (excluding capital gains).
The Table reports the percentage of total income accruing to each of the top groups. Top 10% denotes top decile,
top 10-5% denotes the bottom half of the top decile, etc.

Table 4.C. Income Composition in Top Income Groups, 1976-2004

	Top 10%					Top 5%					Top 1%					Top 0.5%					Top 0.1%					Top 0.01%				
	Rents	Wage	Self-Em	Business	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital
1976	5.6	64.6	6.0	13.9	10.0	6.0	58.2	8.2	15.1	12.5	6.5	43.6	15.2	16.1	18.6	6.4	37.3	18.2	16.6	21.5	6.4	21.1	19.9	20.7	31.9	5.3	7.8	18.5	25.3	43.2
1977	3.8	71.0	5.1	10.3	9.7	4.5	62.5	7.4	12.7	13.0	5.4	42.4	14.5	16.1	21.7	5.3	35.8	17.0	16.6	25.3	5.0	20.4	18.6	19.5	36.6	3.7	7.6	17.5	22.0	49.1
1978	3.6	70.2	5.2	10.0	11.0	4.3	61.3	7.5	12.2	14.8	5.1	40.7	14.2	15.4	24.6	5.1	34.0	16.2	15.9	28.8	5.0	16.8	18.5	18.4	41.3	3.8	5.2	17.9	20.5	52.5
1979	3.8	66.6	5.6	10.9	13.1	4.5	56.7	8.0	13.3	17.6	5.1	35.2	15.0	16.1	28.6	5.1	27.9	17.4	16.4	33.3	4.8	13.2	18.3	17.9	45.9	3.6	3.8	15.9	19.2	57.5
1980	3.4	64.3	6.2	11.2	14.9	4.0	53.2	8.8	13.9	20.2	4.5	30.6	15.8	16.9	32.2	4.5	23.2	18.0	17.3	37.1	4.1	10.4	19.1	17.9	48.6	3.0	3.5	18.6	18.2	56.7
1981	3.2	68.1	6.6	9.0	13.2	3.8	57.3	9.6	11.3	18.0	4.4	37.2	17.0	13.4	28.0	4.4	30.4	19.3	13.6	32.3	4.1	15.3	23.5	13.9	43.1	3.1	5.5	25.5	13.0	53.0
1982	3.7	67.8	7.9	8.3	12.3	4.4	57.2	11.6	10.2	16.7	5.0	36.7	21.2	11.8	25.3	5.1	29.6	24.5	11.9	28.9	4.7	16.0	26.8	12.4	40.2	3.6	8.2	25.2	11.9	51.1
1983	3.7	69.3	8.4	7.6	11.1	4.4	59.3	12.2	9.3	14.8	5.1	40.5	21.8	10.7	22.0	5.1	34.0	24.9	10.9	25.2	4.9	20.2	27.6	11.7	35.7	3.6	9.1	27.8	11.8	47.7
1984	3.7	67.3	8.8	8.0	12.1	4.5	56.9	12.7	9.7	16.1	5.2	39.0	21.6	10.8	23.6	5.2	32.8	23.8	11.0	27.2	4.9	19.0	26.7	11.2	38.2	3.5	9.7	25.2	10.3	51.3
1985	3.7	65.0	9.6	9.2	12.5	4.3	54.8	13.7	10.9	16.4	4.8	38.6	21.9	10.8	24.0	4.8	33.1	23.3	10.8	28.0	4.4	19.0	26.6	10.3	39.6	3.0	11.4	24.6	7.8	53.2
1986	3.9	63.6	10.4	8.8	13.4	4.5	53.7	14.5	10.0	17.3	4.8	38.0	22.1	10.0	25.1	4.8	32.3	23.7	10.0	29.3	4.3	18.2	27.7	9.3	40.5	2.9	9.9	27.5	7.7	52.1
1987	3.7	63.5	11.1	8.1	13.6	4.2	53.4	15.4	9.3	17.6	4.5	37.7	23.4	8.9	25.5	4.5	31.9	25.2	8.8	29.6	4.0	18.2	29.0	7.8	40.9	2.7	10.5	27.5	6.1	53.3
1988	3.5	63.3	12.7	8.0	12.5	4.0	53.5	17.5	9.1	15.9	4.3	37.6	27.4	9.0	21.7	4.3	31.8	30.0	9.2	24.7	4.1	19.9	35.8	8.7	31.5	2.6	14.0	39.2	6.7	37.5
1989	3.7	61.1	13.3	8.8	13.1	4.2	50.6	18.4	10.1	16.7	4.6	35.2	28.1	9.7	22.4	4.6	29.6	31.0	9.5	25.2	4.5	18.5	37.8	8.0	31.3	2.8	12.6	41.7	5.1	37.8
1990	3.7	63.1	13.7	7.6	12.0	4.1	53.1	18.9	8.6	15.2	4.3	37.6	29.1	8.3	20.9	4.2	31.8	32.1	8.2	23.7	3.7	19.7	39.0	7.2	30.5	2.2	12.3	43.8	4.4	37.2
1991	3.8	62.9	14.3	7.5	11.5	4.1	54.2	19.4	8.1	14.1	4.2	39.0	30.4	7.6	18.9	4.2	33.1	33.3	7.7	21.8	3.6	21.0	39.3	7.0	29.0	2.0	13.1	43.8	4.0	37.1
1992	6.0	60.8	14.1	7.7	11.4	6.5	53.3	18.8	7.9	13.5	6.9	40.2	28.3	6.9	17.7	6.9	34.6	31.4	6.8	20.3	6.3	22.5	38.2	5.7	27.4	4.2	15.7	41.7	3.7	34.7
1993	5.1	63.6	14.2	6.9	10.3	5.7	55.8	19.1	7.1	12.2	6.3	41.9	29.5	6.2	16.0	6.4	36.3	32.8	6.1	18.4	5.9	24.4	40.1	4.9	24.7	3.7	20.7	42.0	3.1	30.6
1994	5.2	63.5	14.2	6.7	10.5	5.9	55.4	19.2	7.0	12.5	6.5	41.2	29.5	6.1	16.8	6.6	35.5	32.7	5.9	19.3	6.0	23.3	40.1	4.7	25.9	3.9	17.8	43.3	3.3	31.7
1995	5.2	62.9	15.2	6.1	10.6	5.8	54.3	20.5	6.4	13.0	6.4	38.6	31.5	5.5	18.0	6.4	32.7	35.0	5.2	20.8	5.6	21.0	42.1	3.7	27.7	3.5	14.8	44.7	2.3	34.7
1996																														
1997																														
1998	5.1	60.8	15.0	6.7	12.4	5.6	52.1	20.0	7.3	15.1	5.8	36.0	30.1	7.2	20.9	5.7	29.9	33.5	7.1	23.8	4.5	20.0	40.1	5.3	30.1	3.1	17.6	41.1	3.7	34.5
1999	5.5	60.3	15.2	6.7	12.3	5.9	51.7	20.0	7.3	15.0	5.9	35.6	30.0	7.6	20.9	5.7	29.5	33.5	7.6	23.7	4.3	20.3	40.1	5.7	29.7	3.0	18.8	41.1	4.0	33.1
2000	5.4	60.4	15.4	6.6	12.2	5.7	52.6	20.0	7.1	14.7	5.5	37.7	29.5	7.3	20.1	5.2	31.5	33.1	7.4	22.9	3.8	23.0	39.6	5.8	27.9	2.8	22.4	40.8	4.2	29.8
2001	5.4	60.8	15.5	6.2	12.1	5.6	52.9	20.1	6.7	14.7	5.3	38.1	29.8	6.7	20.1	4.9	31.8	33.4	6.9	23.1	3.5	22.9	39.5	5.3	28.8	3.5	22.1	40.3	5.3	28.8
2002	5.4	62.0	15.8	5.7	11.2	5.6	54.3	20.6	6.0	13.5	5.3	39.3	30.7	5.8	19.0	4.9	32.9	34.6	5.8	21.9	3.4	23.6	40.7	4.6	27.7	3.4	22.8	41.6	4.6	27.7
2003	5.4	61.4	15.6	5.7	11.9	5.6	53.5	20.3	6.0	14.6	5.2	38.0	29.7	5.8	21.3	4.8	31.5	33.2	5.7	24.9	3.4	22.0	38.0	4.4	32.1	3.4	21.3	38.8	4.4	32.1
2004	5.5	62.5	15.9	6.0	10.1	5.8	54.9	20.8	6.4	12.1	5.5	40.1	31.3	6.6	16.5	5.2	33.9	35.7	6.7	18.5	3.9	24.9	43.0	6.0	22.2	3.9	24.1	43.9	6.0	22.2

Notes: Fractiles defined by size of total income. For each fractile, the first four columns (summing to 100%) give the percentage of
wage income (wages and salaries, pensions, other employment income), self-employment income, entrepreneurial income (farm income and small business income),
capital income (dividends) and rents.
Details on methodology are presented in Appendix.
Source: Computations based on tax return statistics

Table 4.C (continued). Income Composition in Top Income Groups, 1976-2004

	Top 10-5%					Top 5-1%					Top 1-0.5%					Top 0.5-0.1%					Top 0.1-0.01%					Top 0.01%				
	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital	Rents	Wage	Self-Em	Entrep.	Capital
1976	4.7	77.6	1.4	11.4	4.9	5.7	67.8	3.7	14.4	8.5	6.6	55.7	9.5	15.1	13.0	6.4	46.6	17.2	14.3	15.5	6.7	25.2	20.3	19.4	28.5	5.3	7.8	18.5	25.3	43.2
1977	2.7	86.7	1.1	6.0	3.5	3.9	74.9	3.0	10.5	7.7	5.5	55.1	9.6	15.0	14.9	5.5	44.9	16.1	14.9	18.6	5.4	24.3	18.9	18.7	32.7	3.7	7.6	17.5	22.0	49.1
1978	2.4	86.7	1.0	5.9	4.0	3.8	74.0	3.3	10.3	8.7	5.2	53.4	10.4	14.5	16.6	5.2	44.1	14.9	14.5	21.3	5.3	20.3	18.6	17.8	38.0	3.8	5.2	17.9	20.5	52.5
1979	2.7	85.2	1.0	6.4	4.7	4.0	70.2	3.6	11.5	10.7	5.2	49.2	10.4	15.5	19.6	5.3	36.6	16.9	15.4	25.8	5.1	16.0	19.0	17.5	42.4	3.6	3.8	15.9	19.2	57.5
1980	2.3	85.2	1.2	6.2	5.1	3.6	67.5	4.4	12.0	12.5	4.6	45.1	11.6	16.1	22.7	4.7	31.0	17.3	16.9	30.2	4.4	12.5	19.2	17.8	46.1	3.0	3.5	18.6	18.2	56.7
1981	2.0	87.5	1.2	4.9	4.4	3.4	69.7	5.0	10.1	11.8	4.4	50.0	12.6	12.9	20.0	4.6	39.3	16.8	13.4	25.9	4.4	18.3	22.9	14.2	40.2	3.1	5.5	25.5	13.0	53.0
1982	2.4	86.8	1.5	4.8	4.5	4.0	69.8	5.6	9.2	11.3	5.0	50.1	14.9	11.6	18.4	5.2	37.5	23.2	11.7	22.3	5.1	18.3	27.3	12.5	36.9	3.6	8.2	25.2	11.9	51.1
1983	2.4	87.2	1.6	4.5	4.4	4.0	70.9	6.3	8.5	10.4	5.0	52.5	16.0	10.3	16.2	5.2	41.8	23.4	10.4	19.3	5.3	23.3	27.5	11.7	32.2	3.6	9.1	27.8	11.8	47.7
1984	2.5	86.2	1.7	4.7	4.8	4.2	68.2	7.3	9.1	11.4	5.1	50.5	17.3	10.3	16.8	5.4	40.7	22.2	10.9	20.9	5.3	21.8	27.1	11.4	34.4	3.5	9.7	25.2	10.3	51.3
1985	2.5	84.3	2.0	6.2	5.1	4.0	65.2	8.5	10.9	11.5	4.8	48.9	19.1	10.8	16.4	5.0	41.4	21.4	11.1	21.2	4.8	21.3	27.2	11.1	35.6	3.0	11.4	24.6	7.8	53.2
1986	2.7	82.7	2.5	6.3	5.8	4.2	64.1	9.5	10.1	12.2	4.9	49.1	18.9	9.9	17.2	5.1	40.8	21.3	10.4	22.5	4.8	20.7	27.8	9.8	36.9	2.9	9.9	27.5	7.7	52.1
1987	2.6	83.3	2.6	5.8	5.7	4.0	63.9	10.1	9.6	12.4	4.6	49.2	19.9	9.0	17.4	4.8	40.1	22.9	9.4	22.8	4.4	20.6	29.5	8.4	37.1	2.7	10.5	27.5	6.1	53.3
1988	2.5	82.9	3.0	5.9	5.8	3.8	63.9	11.1	9.1	12.1	4.2	48.5	22.6	8.7	16.0	4.5	38.8	26.6	9.4	20.7	4.5	21.6	34.9	9.3	29.8	2.6	14.0	39.2	6.7	37.5
1989	2.7	82.2	3.1	6.2	5.9	4.0	60.8	12.0	10.4	12.9	4.4	46.1	22.4	10.2	17.0	4.8	36.2	27.0	10.4	21.7	4.9	20.3	36.6	8.8	29.3	2.8	12.6	41.7	5.1	37.8
1990	2.8	83.1	3.2	5.4	5.4	4.1	63.3	12.3	8.8	11.6	4.4	48.7	23.2	8.3	15.4	4.5	39.1	28.0	8.9	19.6	4.2	21.9	37.5	8.0	28.5	2.2	12.3	43.8	4.4	37.2
1991	2.8	80.8	3.9	6.2	6.1	4.1	64.2	12.3	8.4	11.0	4.2	50.2	24.7	7.4	13.4	4.5	40.2	29.8	8.1	17.4	4.1	23.5	38.0	7.9	26.5	2.0	13.1	43.8	4.0	37.1
1992	3.2	76.2	4.5	7.2	7.2	5.0	61.7	12.6	8.6	10.8	6.8	50.7	22.6	7.3	12.6	7.3	41.9	27.3	7.4	16.2	6.9	24.6	37.1	6.3	25.1	4.2	15.7	41.7	3.7	34.7
1993	3.7	79.5	4.2	6.3	6.3	5.4	64.7	12.4	7.7	9.8	6.2	52.8	23.1	6.6	11.4	6.8	43.5	28.4	6.7	14.6	6.6	25.6	39.5	5.5	22.8	3.7	20.7	42.0	3.1	30.6
1994	3.7	80.0	4.1	6.0	6.2	5.4	64.6	12.6	7.6	9.8	6.3	52.2	23.2	6.5	11.8	7.0	42.9	28.1	6.7	15.3	6.7	25.1	39.1	5.1	24.0	3.9	17.8	43.3	3.3	31.7
1995	3.8	80.6	4.3	5.5	5.8	5.4	64.6	13.3	7.0	9.7	6.4	50.3	24.6	6.3	12.5	6.9	40.0	30.5	6.1	16.5	6.2	23.1	41.2	4.2	25.3	3.5	14.8	44.7	2.3	34.7
1996																														
1997																														
1998	4.0	79.5	4.5	5.5	6.5	5.5	62.9	13.2	7.3	11.2	6.2	48.4	23.1	7.5	14.9	6.5	36.6	29.1	8.3	19.6	5.1	20.9	39.7	5.9	28.5	3.1	17.6	41.1	3.7	34.5
1999	4.7	78.4	4.9	5.4	6.6	5.9	62.5	13.4	7.2	11.1	6.4	47.9	22.9	7.7	15.1	6.6	35.7	29.1	8.8	19.8	4.8	20.9	39.6	6.4	28.4	3.0	18.8	41.1	4.0	33.1
2000	4.9	77.3	5.4	5.5	6.8	5.8	62.6	13.6	6.9	11.1	6.0	50.5	22.0	7.2	14.4	6.2	37.3	28.6	8.5	19.4	4.1	23.2	39.1	6.4	27.2	2.8	22.4	40.8	4.2	29.8
2001	4.8	78.3	5.4	5.2	6.3	5.9	62.9	13.6	6.7	10.9	5.9	51.4	22.3	6.5	13.9	6.0	38.0	29.1	8.0	18.9	3.5	23.2	39.2	5.3	28.8	3.5	22.1	40.3	5.3	28.8
2002	4.8	78.8	5.5	5.0	6.0	5.9	64.3	13.9	6.1	9.8	6.0	52.5	22.8	5.9	12.8	6.0	39.5	30.3	6.7	17.5	3.4	23.9	40.4	4.6	27.7	3.4	22.8	41.6	4.6	27.7
2003	4.8	78.9	5.5	5.0	5.9	5.9	64.1	13.9	6.1	10.0	6.1	51.8	22.6	6.1	13.5	5.8	38.6	29.6	6.6	19.4	3.4	22.3	37.7	4.4	32.1	3.4	21.3	38.8	4.4	32.1
2004	5.0	78.8	5.5	5.0	5.7	6.0	64.6	14.0	6.3	9.1	6.2	52.5	22.8	6.4	12.1	6.1	40.0	30.7	7.3	15.9	3.9	25.3	42.7	6.0	22.2	3.9	24.1	43.9	6.0	22.2

Notes: Fractiles defined by size of total income. For each fractile, the first four columns (summing to 100%) give the percentage of
wage income (wages and salaries, pensions, other employment income), self-employment income,
business income and capital income (dividends), and rents.
Details on methodology are presented in Appendix.
Source: Computations based on tax return statistics

Table 4.D. Top fractiles income levels (excluding capital gains) in Italy, 1974-2004

(fractiles defined by total income (excluding capital gains); incomes expressed in Euros 2000)

	P90-100 (1)	P95-100 (2)	P99-100 (3)	P99.5-100 (4)	P99.9-100 (5)	P99.99-100 (6)	P90-95 (7)	P95-99 (8)	P99-99.5 (9)	P99.5-99.9 (10)	P99.9-99.99 (11)	P90 (12)	P95 (13)	P99 (14)	P99.5 (15)	P99.9 (16)	P99.99 (17)
1974	27,668	36,032	67,656	88,887	164,020	418,960	19,305	28,125	46,425	70,103	135,693	17,043	22,339	41,531	54,441	100,384	243,745
1975	27,524	35,358	63,843	83,157	145,045	319,951	19,690	28,236	44,530	67,684	125,611	17,577	22,573	38,955	52,834	95,188	214,655
1976	28,139	34,054	67,139	88,263	160,571	377,626	19,859	25,783	46,015	70,186	136,454	14,342	19,465	39,768	54,609	100,291	242,046
1977	26,826	34,704	66,230	87,005	161,257	379,796	18,948	26,822	45,455	68,442	136,975	17,221	21,405	39,429	53,497	99,066	244,081
1978	27,582	35,689	68,153	89,409	165,925	385,207	19,474	27,573	46,896	70,280	141,561	17,650	22,012	40,624	55,064	102,218	249,653
1979	29,244	38,012	73,410	96,545	179,506	420,381	20,477	29,162	50,275	75,805	152,742	18,601	23,168	43,682	58,947	110,531	273,394
1980	29,915	39,018	75,946	100,491	189,415	438,050	20,811	29,787	51,400	78,261	161,789	18,927	23,521	44,778	60,314	115,975	290,242
1981	30,044	38,611	73,927	96,778	179,789	411,953	21,476	29,782	51,077	76,026	153,993	19,691	23,910	44,478	59,510	111,497	274,990
1982	29,794	38,178	73,004	95,371	174,909	403,882	21,411	29,472	50,638	75,486	149,468	19,638	23,783	44,139	59,071	108,880	262,921
1983	29,621	37,944	72,095	93,496	168,390	372,923	21,297	29,406	50,695	74,773	145,664	19,559	23,715	44,144	59,174	107,141	249,743
1984	30,369	39,237	75,361	98,225	180,091	407,132	21,502	30,206	52,497	77,758	154,864	19,675	24,023	45,789	61,159	113,016	270,307
1985	31,317	40,869	79,482	104,115	192,929	443,672	21,765	31,216	54,848	81,912	165,069	19,815	24,474	47,800	63,913	120,326	287,902
1986	32,454	42,912	85,012	112,174	210,849	502,933	21,997	32,387	57,849	87,506	178,395	19,953	25,008	50,324	67,642	129,397	315,323
1987	34,445	45,781	91,306	120,859	227,926	538,122	23,109	34,399	61,753	94,092	193,460	20,885	26,280	53,813	72,643	139,619	342,912
1988	36,347	48,463	95,553	125,220	230,243	510,598	24,231	36,690	65,886	98,964	199,093	21,827	27,767	57,389	76,975	145,488	340,608
1989	38,025	50,897	100,953	133,046	247,624	559,899	25,152	38,383	68,860	104,402	212,927	22,602	28,834	60,063	80,528	154,902	370,833
1990	39,040	52,128	102,951	135,732	253,462	587,785	25,952	39,422	70,170	106,299	216,316	23,348	29,669	61,367	82,141	157,330	378,719
1991	39,712	53,418	105,421	138,428	258,554	612,002	26,007	40,417	72,413	108,397	219,282	23,177	30,184	63,315	84,383	159,208	387,369
1992	40,456	54,282	105,997	138,940	258,296	611,198	26,631	41,353	73,053	109,101	219,085	23,661	31,038	64,074	85,055	159,681	386,044
1993	39,123	52,418	102,612	134,912	254,683	619,638	25,829	39,869	70,311	104,969	214,133	23,039	29,995	61,693	81,738	154,732	384,285
1994	39,090	52,499	102,659	135,340	256,458	627,640	25,681	39,959	69,978	105,061	215,215	22,822	29,899	61,589	81,437	155,247	386,441
1995	38,558	51,920	102,540	136,137	261,499	659,561	25,195	39,265	68,942	104,797	217,270	22,292	29,425	60,461	80,559	155,884	396,395
1996																	
1997																	
1998	42,281	57,597	115,478	154,859	309,739	856,100	26,965	43,126	76,097	116,139	249,032	23,698	31,748	66,824	88,977	174,618	476,707
1999	43,997	59,861	119,556	160,427	322,244	891,101	28,133	44,938	78,685	119,973	259,038	24,834	33,176	69,117	91,965	180,583	496,828
2000	45,020	61,666	124,243	167,162	340,284	959,032	28,375	46,021	81,323	123,882	271,535	24,956	33,680	71,495	94,924	187,571	527,422
2001	46,328	63,679	130,256	176,839	371,742	1,109,433	28,976	47,035	83,673	128,113	289,776	25,512	34,129	73,530	97,773	195,217	582,608
2002	46,627	64,035	130,934	178,353	378,207	1,139,208	29,219	47,310	83,516	128,389	293,651	25,704	34,518	73,328	97,702	197,094	593,671
2003	47,180	64,904	133,780	183,197	393,208	1,201,830	29,456	47,686	84,362	130,695	303,361	25,928	34,809	73,974	99,033	202,415	618,677
2004	46,835	64,049	129,594	175,552	365,685	1,071,855	29,622	47,663	83,635	128,019	287,221	26,072	34,950	73,543	97,837	194,899	571,267

Source: Computations based on tax statistics.
Notes: P99 denotes the income threshold required to belong to the top 1% of tax units; P99-100 is the average income of the top 1%;
P99-99.5 denotes the average income in the bottom half of the top percentile.

TABLE 4.E. Income Tax Rates, 1974-2004

Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)
1974			**1975**			**1976-1982**		
0	2	10	0	2	10	0	3	10
2	3	13	2	3	13	3	4	13
3	4	16	3	4	16	4	5	16
4	5	19	4	5	19	5	6	19
5	6	22	5	6	22	6	7.5	22
6	7	25	6	7	25	7.5	9	25
7	8	27	7	8	27	9	11	27
8	9	29	8	9	29	11	13	29
9	10	31	9	10	31	13	15	31
10	12	37	10	12	32	15	17	32
12	14	38	12	14	33	17	19	33
14	16	44	14	16	34	19	22	34
16	18	45	16	18	35	22	25	35
18	20	46	18	20	36	25	30	36
20	25	48	20	25	38	30	35	38
25	30	50	25	30	40	35	40	40
30	40	52	30	40	42	40	50	42
40	50	54	40	50	44	50	60	44
50	60	56	50	60	46	60	80	46
60	80	58	60	80	48	80	100	48
80	100	60	80	100	50	100	125	50
100	125	62	100	125	52	125	150	52
125	150	64	125	150	54	150	175	54
150	175	66	150	175	56	175	200	56
175	200	68	175	200	58	200	250	58
200	250	70	200	250	60	250	300	60
250	300	72	250	300	62	300	350	62
300	350	74	300	350	64	350	400	64
350	400	76	350	400	66	400	450	66
400	450	78	400	450	68	450	500	68
450	500	80	450	500	70	500	550	70
500		82	500		72	550		72

Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)
1983-1985			**1986-1988**			**1989**		
0	11	18	0	6	12	0	6	10
11	24	27	6	11	22	6	12	22
24	30	35	11	28	27	12	30	26
30	38	37	28	50	34	30	60	33
38	60	41	50	100	41	60	150	40
60	120	47	100	150	48	150	300	45
120	250	56	150	300	53	300		50
250	500	62	300	600	58			
500		65	600		62			

Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)
1990			**1991**			**1992-1997**		
0	6.4	10	0	6.8	10	0	7.2	10
6.4	12.7	22	6.8	13.5	22	7.2	14.4	22
12.7	31.8	26	13.5	33.7	26	14.4	30	27
31.8	63.7	33	33.7	67.6	33	30	60	34
63.7	159.1	40	67.6	168.8	40	60	150	41
159.1	318.3	45	168.8	337.7	45	150	300	46
318.3		50	337.7		50	300		51

Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)	Income (million lire) from	to	Tax Rate (%)
1998-1999			**2000**			**2001**		
0	15	18.5	0	20	18.5	0	20	18
15	30	26.5	20	30	25.5	20	30	24
30	60	33.5	30	60	33.45	30	60	32
60	135	39.5	60	135	39.5	60	135	39
135		45.5	135		45.5	135		45

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

Table F. Changes in tax filing rules 1974-2004.

Year	Tax forms	
1974	740, 101	Filing threshold: 840,000 lire.
1975	740, 101	Filing threshold: 1.2 million lire. Shift from family to individual tax unit (Constitutional Court, sentence 179/1976).
1976	740	Filing threshold: 1,420,000 lire.
1977	740, 101	A fixed 15% rate is implemented on tax basis (presidential decree 599/1973). Filing threshold: 1,620,000 lire. A softer system is granted to small business with income up to 12 millions (presidential decree 888/1977).
1978	740, 101	Updating of coefficient for land and real estate. Threshold distinguishing firm and small firm (subject to a softer tax levying) rises from 180 millions to 360 millions lire. Filing threshold is lowered to 1,380,000 lire.
1979	740, 101	Filing threshold: 1,620,000 lire.
1980	740, 101	No substantial changes.
1981	740, 101	Income threshold for benefiting from further deduction goes up to 3 millions lire. Abatement in due gross taxes by 3% for gross incomes not exceeding 30 millions lire (l. 645/81). Pensioners with only pension income
1982	740, 101	Filing threshold: 3.5 millions lire.
1983	740, 101	Filing threshold for dependent workers and pensioners raised to 4.5 millions lire. Income threshold for dependent children and relatives rises to 2,750,000 lire. Revision of IRPEF scale (Law 53/1983).
1984	740, 101	Filing threshold for dependent workers and pensioners rises to 4.8 millions lire. Exempted incomes, income subject to final withholding tax and incomes taxed separately above 2 millions, are computed in gross income in
1985	740, 101	Filing threshold for dependent workers and pensioners increases to 5.1 millions lire. New forfeit rules for self-employment and business income (Law 17/85)
1986	740, 101	Filing threshold for workers and pensioners rises to 5.4 millions lire. Revision of IRPEF tax rates scale (law 121/86). Increases in revaluation coefficients for land and rural income. Re-ordering of deduction system (Law 57/86)
1987	740, 101	Increase in deduction for spouse.
1988	740, 101	Filing threshold for workers and pensioners rises to 6,111,000 lire. Change in the 740 form . First general revision of cadastral coefficient for land and rural properties. Income taxed separately can be included in gross income
1989	740, 101	Revision of IRPEF scale (Law 69/1989). Filing threshold for workers and pensioners rises to 6,602,000 lire. Updating of cadastral coefficients on real estate.
1990	740, 101	Filing threshold for workers and pensioners rises to 7,138,000 lire. Revision of IRPEF scale Law 405/1990). Further changes in cadastral coefficients on real estate. Introduction of presumptive coefficients to assess income
1991	740	Filing threshold goes up to 7,579,000. Revision of IRPEF rates (Law 415/91). Employees and pensioners with only wages and pension income lower than 7,579,000 lire were exempted from filing tax return (form 740).
1992	740, 730, 770 (ex 101)	Filing threshold set at 8,047,000. Introduction of 730 form for workers and pensioners. Employers substitutive certificates (770) for wage paid to dependent workers were matched with tax returns (740, 730) in tax statistics to find incomes of employees and pensioners exempted from filing. Revision of deduction and filing threshold.
1993	740, 730, 770	Filing threshold for workers and pensioners rises to 8,538,000 lire. All Workers with wage income only exempted from filing (form 101).Employers substitutive certificates (770) were matched with tax returns (740, 730) to find
1994	740, 730, 201, 770	Profits reinvested by firms went untaxed; a deduction is allowed on contributions for complementary pension fund. Revaluation of coefficient on land and rural income.
1995	740, 730, 770	Filing threshold at 8.7 millions lire. Revaluation of coefficient on land and rural income. Deduction of contributions to complementary pension funds is granted to self-employed and entrepreneurs as well.
1996	740, 730, 770	No substantial changes.
1997	740, 730, 770	Filing threshold: 9 millions lire.
1998	740, 730, 770	Filing threshold: 9.1 millions lire.
1999	740, 730, 770	Lower rate (19%) on specific investments (Law33/1999). Changes in the deductions system: increase in the deduction for owner-occupied dwelling from 1,100,000 L. to 1,800,000 L.
2000	740, 730, 770	Revision of IRPEF scale. Revision of deduction for the owner-occupied dwelling. Revision of the deduction system. Introduction of deduction for health expenses.
2001	740, 730, 770	Revision of IRPEF rates and brackets. Deduction for pension contribution to complementary funds.
2002	740, 730, 770	Revision of IRPEF scale.
2003	740, 730, 770	Revision of IRPEF scales. A deduction of 3000 euros is recognized to all taxpayers, plus 1,500 euros for workers, 1,000 euros for pensioners, 1,500 euros for self-employees and small businesses.
2004	740, 730, 770	No substantial changes.

CHAPTER 5

PORTUGAL 1936-2004

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

JEL classification: D3, H2, N3, O1

5.1. Introduction

This chapter analyzes the evolution of income and wage concentration in Portugal between 1936 and 2004 using tax statistics and administrative records on individual earnings. Together with the chapters on Italy and Spain, this completes the study of top shares in three Southern European countries for which tax data are available. The case of Portugal is interesting on several grounds.

First, Portugal has undergone important changes in the political arena since the beginning of the XXth century. After the decline and final collapse of the constitutional monarchy, the First Republic was established in 1910. The parliamentary regime was turbulent and unstable, with eight presidents, thirty-eight prime ministers and a brief monarchy restoration over a seventeen-year period.[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. The Second Republic evolved to a right-wing dictatorship under the form of a single party corporative regime.[2] In the absence of the clear polarization of the Spanish society, the authoritarian system developed in a framework of institutional continuity. In 1928 Salazar was appointed minister of finance, and in 1933 he became prime minister, remaining in power until 1968. From the early 1930s to the end of the 1950s, Portugal followed a policy of relative isolationism under a corporatist socio-economic system (extensive state

---

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

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

regulation and private ownership of means of production). In the late 1950s, the regime shifted towards a moderately outward looking policy, which inaugurated a period of rapid growth until the beginning of the 1970s. Unlike Spain, Portugal was accepted into the Marshall plan in 1947 and the NATO in 1949. In 1974 a left-wing military coup put an end to the dictatorship. The revolutionary government granted independence to the Portuguese colonies in Africa and Asia, set out on a course of land expropriation and sweeping nationalization (banks, basic industries, utilities, insurance companies, newspapers) and followed a policy of freezing prices and rising wages.[3] The process has been described as a successful challenge to capitalist property.[4] 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 XXth. century, the country was an agricultural-based economy in which wine accounted for one third of total agrarian output.[5] In 1950s, GDP per capita was 15% lower than

---

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

[4] See Bermeo, 1997.

[5] Lains, 2003a,b argue that, despite its backwardness, the Portuguese economy had a good performance during the first half of the XXth century if compared to the previous fifty years. The economy expanded slowly under favorable external conditions before 1913, and expanded

that of Spain, 60% lower than that of France and 70% lower than in the United Kingdom.[6] Between the 1950s and the beginning of the 1970s the government shifted towards mild liberalization policies and imposed a strategy aimed at economic development and structural change; economic growth resumed at a quicker pace. However, the growth rates of per capita income should be read with caution in the light of massive emigration flows between 1950 and the early 1980s.[7] In the 1970s growth came to a halt, affected by the revolution of 1974, the nationalization spree and the less favorable international conditions. Since the mid 1980s, the privatization of major financial and industrial conglomerates and the fiscal and monetary policies followed to join the European Union started a period of considerable modernization and growth. Today, Portugal's GDP per capita is about 30-35% lower than the GDP per capita of the largest western European economies such as France, Germany or the United Kingdom, and about 20% lower than the GDP per capita in Spain.[8] As in the case of Spain, it is important to analyze income concentration during the growth and stagnation years in order to re-assess the link between economic development and income distribution.

Third, Portugal (as well as Spain) provides new evidence on the relationship between economic integration and income concentration. As mentioned above, the country joined the European Union in 1986, after seven years of gradual reforms for the dismantling of barriers to trade, capital and labor mobility.

Finally, there are no studies on the evolution of inequality in Portugal from a long-run historical perspective. Therefore, this study can be seen as the first serious attempt at compiling systematic time series of income concentration

more rapidly when international economic conditions were less favorable after the First World War. Nevertheless, improvements were poor by Western European standards. See also Lains, 2003c.

[6] Comparative data from Maddison, 2001, 2003.

[7] 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.

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

using primarily individual tax statistics, which have been completely ignored by previous studies.[9]

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

Using micro-data from the 1980/1981 and 1990/1991 households' surveys, Rodrigues, 1993, 1994, 1996 and Gouveia and Tavares, 1995 detect an unambiguous decline in income inequality during the 1980s.[10] In particular, Rodrigues 1994 finds that wages and capital income would have raised inequality, but their effects were nonetheless offset by the evolution of self-employees' income and pensions. On the contrary, Gouveia and Tavares, 1995 argue that the reduction in inequality during the 1980s could have been the result of the trade-earnings argument acting in reverse in Portugal: increased trade with Europe could have reinforced the country's specialization in low-skilled activities and therefore increased wages of unskilled workers. Nevertheless, the returns to education augmented substantially during the years after joining the European Union, as shown in Hartog, Pereira and Vieria, 2001, providing no clear evidence of a decline in the skill premium.[11]

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

---

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

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

ECHP between 1994 and 2001 and documents a reduction in earnings and income inequality as well as a rise in the concentration of capital income during that period.

Several researchers have focused on earnings inequality. Based on the employees' administrative records that we also use as a data source in this chapter, Cardoso, 1998a analyzes the years 1983-1992 and finds that rising inequality characterized the evolution of labor returns over the whole period, the upper part of the earnings distribution playing a major role in shaping both the level and the trend of inequality. One feature stands out: a stretched top, where dispersion increased remarkably. The same tendency has been described in OECD, 1993 and Ministéro do Emprego, 1992, which reports a 10 percent rise in the Gini index for earnings from 1982 to 1989.[12] Machado and Mata, 2001 and Hartog, Pereira and Vieria, 2001 suggest that a substantial part of this increase must be attributed to the returns to education, especially since joining the European Union.[13]

As we have already emphasized in previous chapters, our series measure only top income (or wage) concentration and hence are silent about changes in the lower and middle part of the distribution. Therefore, our series can very well follow different patterns when compared to global inequality measures such as Gini coefficients or macro-based estimates. Additionally, it is worth remembering that the rich are usually missing from surveys either for sampling reasons or because they refuse to cooperate with the time-consuming task of completing or answering to a long form. This explains the fact that the dynamics

---

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

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

of top income shares estimated from tax statistics may not resemble those deriving from survey data. In particular, high-income earners in our study are much richer than those described in Budría, 2007, whose results are based on the ECHP.[14]

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

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

5.2. Data and Methodological Issues

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

5.2.1. Income

Our estimates of top income shares are based on personal income tax return statistics compiled by the Portuguese bureau of statistics and the tax agency from 1936 to 1982 and between 1989 and 2003. Before 1976, because of

---

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

high exemption levels, only a small fraction of individuals had to file a tax return; consequently we must restrict our analysis to the top 0.1% of the income distribution. From 1976 on, we can analyze the top 10%. Complete details on the methodology and data sources are provided in the appendix to this chapter.

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

We define income as gross income before all deductions and including all income items reported on personal tax returns: salaries and pensions, self-employment and unincorporated business net income, dividends, interest, other investment income and other smaller income items. Only a fraction of realized capital gains is included in the tax base since 1989, and it is easy to satisfy the conditions for capital gains to go untaxed. In particular, gains from public debt bonds are exempted, as well as gains from stocks if kept for more than one year. Capital gains from real estate are also untaxed if the proceeds are used to purchase real estate property again. No information is available about the distribution of reported capital gains. They are presumably very small. Our income definition is before personal income taxes and personal payroll taxes but after employers' payroll taxes and corporate income taxes. A detailed description of the evolution of the income tax in Portugal between 1936 and 2003 concerning exemption thresholds, family allowances, tax deductions and marginal tax rates is provided in Table 5.J and Table 5.K in the appendix to this chapter.

Our main data consists of tables displaying the number of tax returns and the amounts reported (gross income, taxable income, tax paid) for a large number of income brackets. As the top tail of the income distribution is very well approximated by Pareto distributions, we use simple parametric interpolation methods to estimate the thresholds and average income levels for each fractile. The same method has been applied in the previous chapters. Details of the estimation technique and the adjustments made to the raw series are provided in the appendix to this chapter, respectively. We then estimate shares of income by dividing the income amounts accruing to each fractile by our series of personal income, defined ideally as total personal income reported on income tax returns had everybody been required to file a tax return.[15] The total income denominator, described in the appendix to this chapter, is mainly based on National Accounts statistics; the fact that only a small fraction of tax units file a tax return (especially until 1988) implies that the income denominator cannot be approximated by using income tax statistics only.[16]

Table 5.1 gives thresholds and average incomes for a selection of fractiles in Portugal in 2003. The average income is estimated primarily from National Accounts and hence is independent of tax statistics and hence not biased downwards because of tax evasion or avoidance.

5.2.2. Wages

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

---

[15] This methodology follows the same steps of previous chapters, and is based on the classical study of Kuznets, 1953 as well as on the studies presented in Atkinson and Piketty, 2007.

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

since 1989) and micro-data on administrative records on the other (*Quadros de Pessoal*, 1985-2004).

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

We provide estimates of shares of top wages based on micro-data from administrative records (*Quadros de Pessoal*), which are available between 1985 and 2004 (1990 and 2001 missing). Every year, employers are required by law to provide information about the firm and their employees. Civil service and domestic work are excluded. State-owned companies are included. Agriculture workers are included, although in practice the level of coverage is very low. Top groups are defined in terms of the total number of workers present in the records and the top shares are defined relative to the aggregate wages and salaries in the database. More details are provided in the appendix to this chapter. Table 5.H describes the size of the database for several groups of workers. More details about data sources and structure are provided in the appendix to this chapter.

5.3. Top Income Shares

Figure 5.1 displays the average personal income per adult and the average income per tax unit along with the consumer price index for the period 1936 to

2003. As Portugal stayed neutral during the Second World War, the impact of the conflict in terms of per capita GDP was relatively small; after the end of the war and up to 1950 growth was positive but low. The gap to the European core began to be partially abridged, though part of the recovery was due more to the negative effects of the war in the rest of the countries rather than to the improvements in Portugal. Rapid growth started in the 1950s and lasted until the beginning of the 1970s.[17] The slowing down of economic growth that followed is generally attributed to the aftermath of the revolution that ended the dictatorship in 1974 and to the oil shock. The country experienced a severe economic crisis in the first half of the 1980s but growth resumed again after Portugal's accession to the European Union in 1986, starting a period in which GDP per capita grew faster than the EU average; however, since 1999 the economy started to slow down and in early 2002 entered a recession.

Figure 5.2 displays the top 0.01% and the top 0.1% income shares between 1936 and 2003. The break between 1982 and 1988 reflects the unavailability of tax data during the five years before the change from the old to the new income tax. A number of important conclusions become apparent from this figure. First, the highest income concentration occurred in the 1930s and early 1940s. The top 0.1% share was above 4.5% (twice as high as in the recent period) and the top 0.01% share was around 2% (three times as high as in recent years). This strongly suggests that income concentration in Portugal in the 1930s was substantially higher than it is today. This pattern, also found in the case of Spain and in many of the studies gathered in Atkinson and Piketty, 2007 should not be unexpected as Portugal displayed a low average income and a high concentration of wealth.[18]

---

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

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

Second, the old income tax statistics display a large decrease in top shares in the first half of the 1940s. Indeed, the top 0.1% share went down from 5.2% in 1940 to 3.1% in 1946. This coincides with the Second World War and with a sharp increase in the statutory top marginal rates, which moved from 8.5% in 1945 to 30% in 1946. However, the income-weighted marginal rates augmented only from 5% to around 9%. If the drop in the top 0.1% income share was solely due to an increase in the tax evasion/avoidance following the increase in the (income-weighted) marginal tax rate, then the elasticity of high incomes with respect to one minus the marginal tax rate would have been exaggeratedly high.

Third, top income shares recovered partially after the end of the war, this improvement being concentrated in the top 0.1-0.01%. The share of the top 0.1% in 1950 was above the levels of 1945. However, such a recovery was almost non-existent for the top 0.01%: after 1946 top 0.01% shares never attained the values displayed before. Tax statistics providing the composition of reported top incomes show that taxpayers in 1946 (representing the top 0.3%) obtained about 37% of their income from returns on real estate and farm income, 7% from returns on financial assets, 26% from non-farm business income and about 30% from employment income (see Table 5.I in the appendix). This suggests that a significant portion of the very rich in Portugal were actually passive landowners deriving income from rents and farm business. Such facts are not astonishing in the light of the agricultural-based nature of the Portuguese economy by the middle of the twentieth century, and stand in contrast with Spain, where top income earners at that time were much more likely to be owners of financial assets and non-farm businesses, as discussed in Chapter 2.

Fourth, income concentration remained around 1.0-1.1% for the top 0.01% and around 3.5% for the top 0.1% from 1946 to 1960, suggesting that the high income growth started at the beginning of the 1950s did not produce important changes until the beginning of the following decade. Top 0.01% shares in 1962-1973 were again stable but lower than the levels observed in

1946-1961.[19] We conclude that the mild liberalization policies adopted by the government during the third quarter of the XXth century, and which are usually associated to the increase in growth rates, did not impact on the concentration of income to a great extent. By 1963 the composition of top incomes had not changed in a significant way compared to 1946 either. This reflects the slow changes in the economic structure of the country. The published statistics show that the participation of capital income lost some ground in favor of employment and business income (see Table 5.I).[20]

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

---

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

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

Top incomes in the last three decades

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

Figure 5.3 displays top income shares for three groups within the top decile: the bottom half of the top decile (top 10-5%), the next 4% (top 5-1%) and the top percentile. Three elements are worth noticing. Firstly, the decrease in income concentration, started very moderately at the beginning of the 1970s and which accelerated in 1974, reversed at the beginning of the 1980s. Second, although we cannot rigorously establish what happened between 1983 and 1988, the level of income concentration measured with the new income tax statistics in 1989 was higher than in 1982. Indeed, top shares in the early 1990s are similar to the levels of 1976-1977. This contrasts with the results, obtained from survey data, which point to a relative stable income distribution during the 1980s. Finally, the increase in top shares is higher the higher the fractile considered.

Figure 5.4 investigates the concentration pattern further by splitting the top 1% into three groups: the top 1-0.5%, the top 0.5-0.1% and the top 0.1%. Again, the higher the fractile, the higher the increase in the share from 1989 to 2003: the top 1-0.5% increases 25% from 2.5% to 3.2% while the top 0.1% increases 50% from 1.5% to 2.3%. This pattern was also found in the cases of Spain and Italy. We have already shown in Chapter 2 that the increase in income concentration that took place in Spain since 1981 has been a phenomenon concentrated within the top 1% of the distribution and in particular within the top 0.1%; the top 10-5% share declined. However, in Portugal, all groups within the top decile display important increases.

The break in the series between 1982 and 1989 hide the effects of important changes in the tax structure. Between those years, the top statutory marginal rates came down from 70% (80% for single individuals) to 40%. In 1988 the schedular tax on wages (with a marginal rate of 22% on the highest salaries) was removed. Figure 5.5 displays such a drop. The income weighted

marginal rate for the top 0.1% group dropped from around 62% in 1979 to 40% in 1989. The experience since 1989, when constant top marginal rates coexist with an increasing trend in top shares, suggest that the level of marginal tax rates at the top is not the primary determinant of the level of top reported incomes.

International Comparison

How does Portugal stand in relationship with other countries? Figure 5.6 and Figure 5.7 display the top 0.1% and top 0.01% income shares, respectively, in Portugal in comparison with a number of countries: Spain (from Chapter 2 and Alvaredo and Saez, 2007), Italy (Chapter 4), France (Piketty 2001 and Landais, 2007), the United States (Piketty and Saez, 2003), Switzerland (Dell, Piketty and Saez, 2007) and the United Kingdom (Atkinson, 2005). In the late 1930s, Portugal starts with a level of income concentration that is higher than Spain and similar to France and the United States. Nevertheless, income concentration in France and the United States falls more sharply than in Portugal during the Second World War. As a consequence, the level of concentration in Portugal between 1950 and 1975 remains high relative to the other the countries plot in the figures. Quite interestingly, between 1945 and the beginning of the 1960s the level of concentration in Portugal is comparable to that of Switzerland. Between 1960 and the first half of the 1970s, top income shares in Switzerland are higher, but the distance to Portugal narrows if we take into account the emigration flows analyzed in the next section. The large drop in top shares in the mid 1970s is noticeable not only in terms of the evolution of concentration in Portugal, but also from a comparative perspective. Nevertheless, it is clear from these figures that not all the drop should be attributed to the political turmoil or the economic policies of the revolutionary period: top shares in the UK and Switzerland also experienced important reductions in 1970-1975, even when the change in Portugal was definitely more radical. Finally, as in the cases of Spain and Italy, the increase in income concentration in the last years is small compared to the upsurge observed in the

United States and other Anglo-Saxon countries; Portugal's experience is closer to those of continental Europe countries.

<u>Emigration Flows and Sensitivity of the Results</u>

Emigration has been one the main features of the Portuguese socio-economic situation in Portugal during the XXth. century. It has provided a safety valve for open and disguised unemployment. According to official estimates, 1.8 million individuals left the country between 1950 and 1975, which is a significant number for a population that grew only from 8.5 million to 9.3 million between those dates.[21] We would like to assess the effects of such large-scale migrations on our top shares estimates. For instance, one of the results presented in the previous section -that the top 0.01% share has been fairly stable between 1946 and 1961 and also stable between 1962 and 1970 at a slightly lower level- could be driven by the dynamics of migrations flows. Other things equal, adding up all emigrants each year to our population control provides an *upper bound* for top shares.[22] Such a change increases our estimates in 1970 by 19% for the top 0.01% and by 21% for the top 0.1% (meaning that the share of the top 0.01% became 0.94% in place of 0.79%). The results are presented in Figure 5.8, where we plot the top 0.01% income share between 1946 and 1978 together with the counterfactual estimates.

5.4. Wage Concentration

Unfortunately, tax statistics do not allow for a dynamic analysis of income composition at the top as we did for Spain and Italy in previous chapters

---

[21] Valério, 2001.

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

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

As we did for overall personal income, Figure 5.9 displays top wage income shares between 1964 and 2000 for three groups within the top decile: the bottom half of the top decile (top 10-5%), the next 4% (top 5-1%) and the top percentile, while Figure 5.10 splits the top percentile in three groups: the top 1-0.5%, the top 0.5-0.1% and the top 0.1%. The information suggests that wage income concentration (top 1% and above) fell significantly during the last years of the authoritarian regime and the transition. Unlike the case of total income, the sharp decrease in top wages between 1970 and 1976 is clearly a phenomenon concentrated in the top 1% and especially in the top fractiles within the top 1%. Interestingly, despite important movements over the period, the level of concentration within the 1% by the end of the 1990s is comparable to the level of 1970 and slightly lower than the levels in 1964-1969. This suggests that the increase in overall income concentration over the last years has also been in Portugal extremely influenced by the evolution of top wages.

Figure 5.11 and Figure 5.12 describes the same shares but their results come form the micro-data on administrative records over 1985-2004. Two periods seem to be clearly identifiable: (i) until 1993-1994 the increase in earnings concentration is mostly condensed in the top 5-0.1%; the top 0.1% is stable or even decline between 1985 and 1986; (ii) since 1994-1995, the increase in concentration is mainly happening in the top 0.1%, which augments considerably from 1.4% in 1994 to 2.4 in 2004, that is, around 70%.[23]

These conclusions do not depend on the subset of workers included in the administrative records. Figure 5.13 compares the top 1-0.5%, the top 0.5-

---

[23] No significant differences are recorded for female and male workers at the top.

0.1% and the top 0.1% wage income shares from *Quadros de Pessoal* (already presented in Figure 5.12) with the series computed from income tax statistics (in which all workers filing a return are included, without distinction of sector of activity). Both set of series follow the same pattern, and the income tax statistics display even larger increases. Figure 5.14 compares shares within shares according to both sources.

Together with the estimates in Table 5.F, the presented evidence suggest that the patterns are not only coincident with the findings of Cardoso, 1998 for the period 1983-1992 but also that they have been reinforced between 1992 and 2004: a relatively compressed bottom and a stretched top can be highlighted as the main characteristics of the Portuguese earnings distribution. The high degree of inequality prevailing in the country's labor market is essentially due to the fact that high wages are very high relative to the rest of the distribution, and the gap has kept growing. Figure 5.15 plots the P90 and P10 fractile wage levels as a percentage of the median wage from 1985 to 2004 as another way of looking at the widening gap.

5.5 Conclusion

This paper has attempted to analyze income and earnings concentration in Portugal from a long-run perspective using the best available statistical evidence. Our results suggest that income concentration was much higher during the 1930s and early 1940s (at levels comparable to other countries such as France, Spain or the United States) than it is today. Top income shares estimated from reported incomes deteriorated during the Second World War, even if Portugal did not take active participation in the conflict. However, the magnitude of the drop was less important than in other European countries. The level of concentration between 1950 and 1970 remained relatively high compared to countries such as Spain, France, UK or the United States. The decrease in income concentration, started very moderately by the end of the

1960s and which accelerated after the revolution of 1974, began to be reversed at the beginning of the 1980s. During the last fifteen years the shares above the top 10% have augmented steadily. The increase has been higher, the higher the fractile considered

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

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

TABLE 5.1.

Thresholds and Average Incomes in Top Income Groups in 2003

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

Notes: Computations based on income tax return statistics and National Accounts.

Income defined as annual gross income reported on tax returns,

before individual income taxes but net of all social contributions (employer and employee).

Amounts are expressed in 2004 Euros.

Column (2) reports the income thresholds corresponding to each of the percentiles in column (1). For example,

an annual income of at least 27,610 Euros is required to belong to the top 10% tax units, etc.
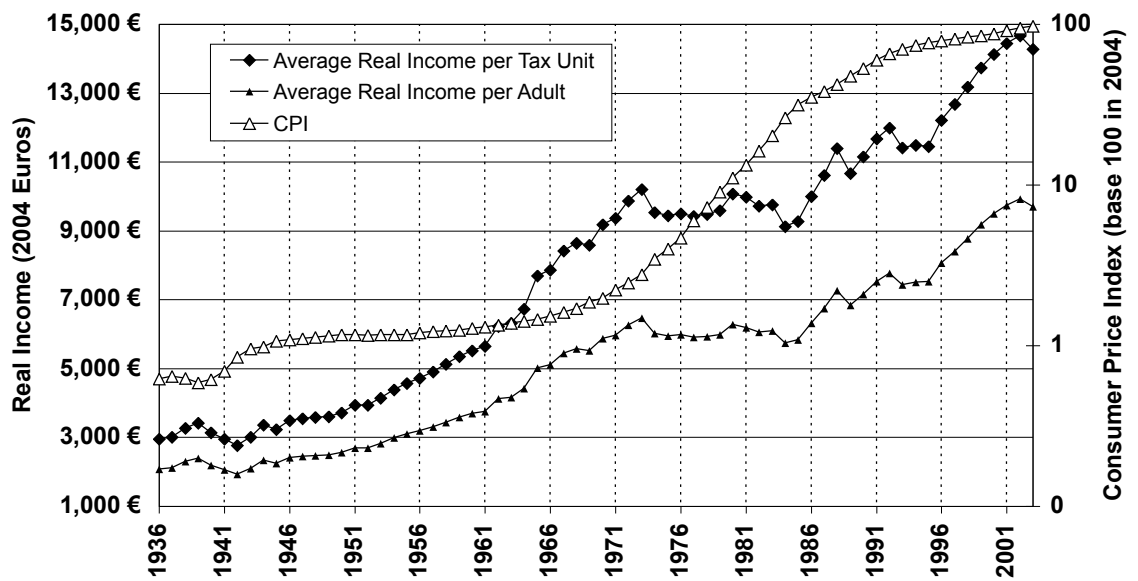
FIGURE 5.1.
Average Real Income and Consumer Price Index in Portugal, 1936-2003

Source: Table 5.A.
Figure reports the average real income per adult (aged 20 and above) and per tax unit, expressed in real 2004 Euros.
CPI index is equal to 100 in 2004.
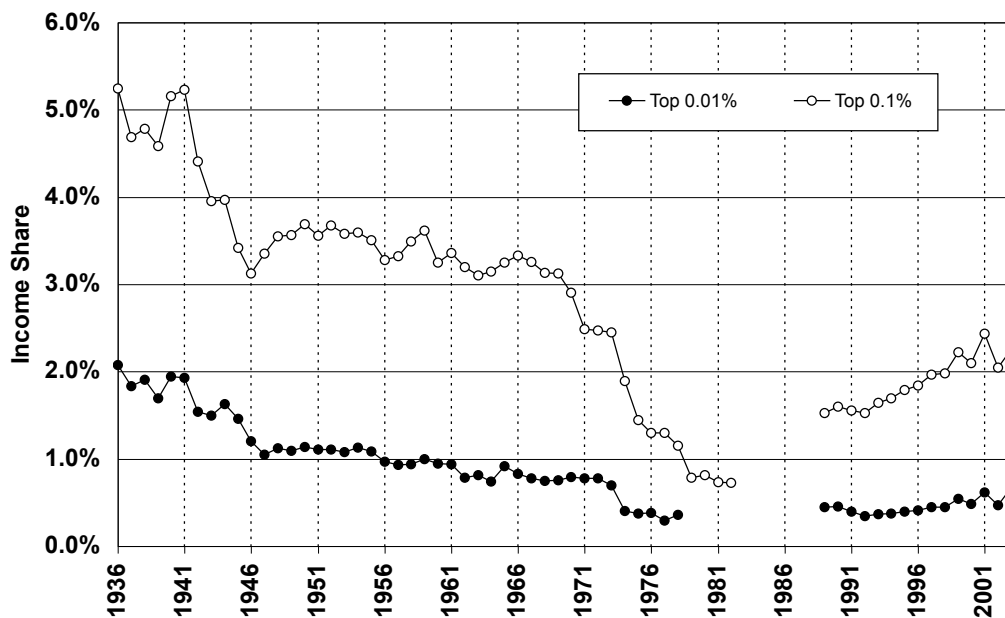
FIGURE 5.2
The Top 0.01% and 0.1% Income Shares in Portugal, 1936-2003

Source: Table 5.B, column Top 0.01% and column Top 0.1%.
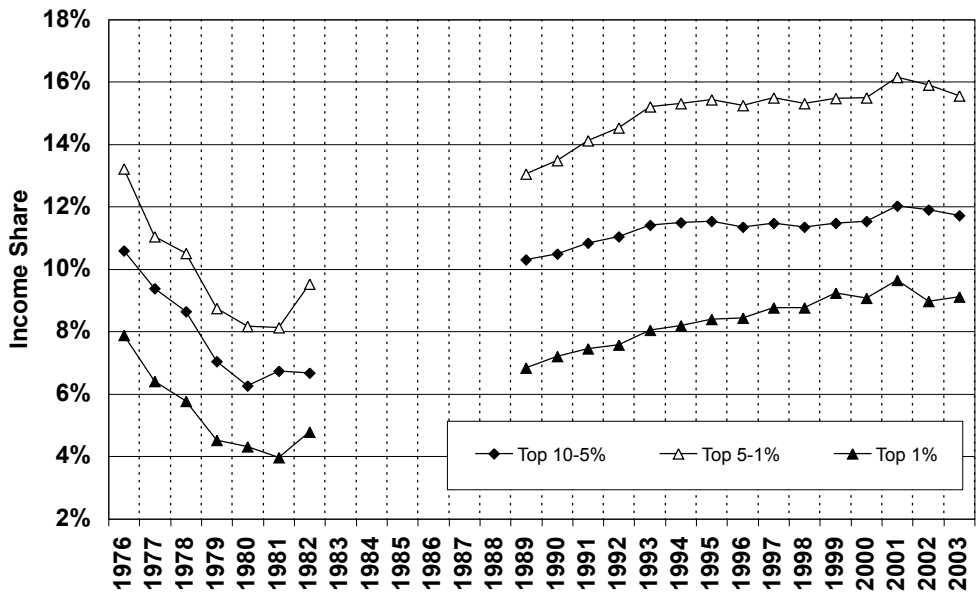
FIGURE 5.3
The Top 10-5%, Top 5-1%, and Top 1% Income Share in Portugal, 1976-2003

Source: Table 5.B, columns top 10-5%, top 5-1%, and top 1%.
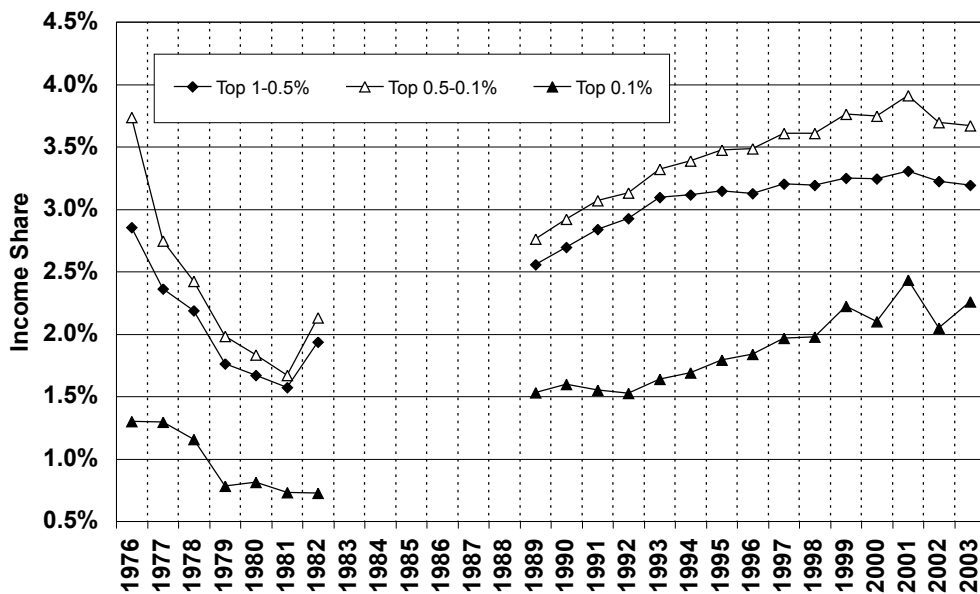
FIGURE 5.4
The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Income Share in Portugal, 1976-2003

Source: Table 5.B, columns top 1-0.5%, top 0.5-0.1%, and top 0.1%.
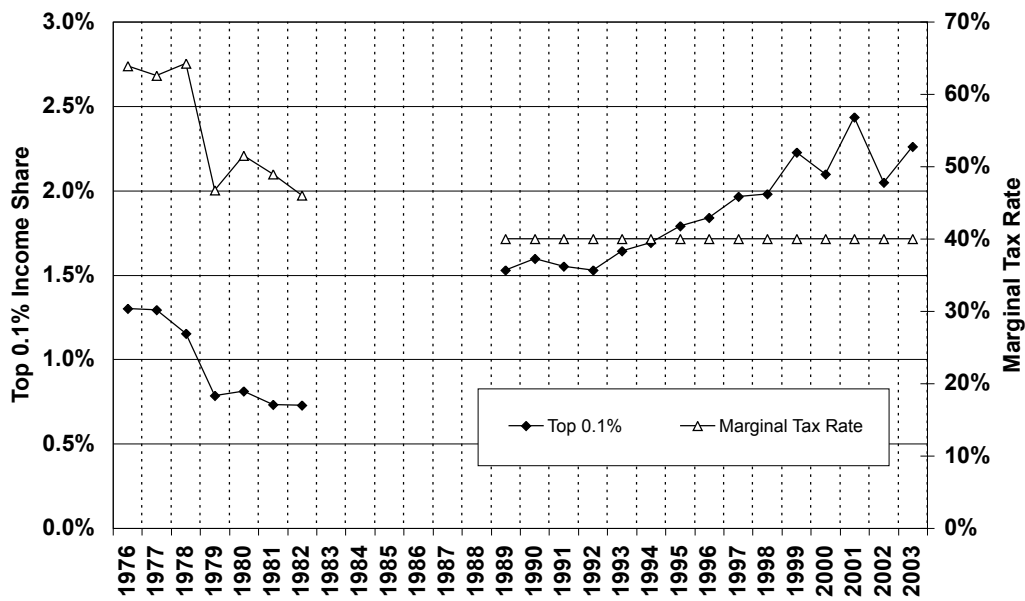
FIGURE 5.5
The top 0.1% Income Share in Portugal and Marginal Tax Rate, 1976-2003.

Source: Top 0.1% income share from Table 5.B (column top 0.1%).
Marginal tax rate: Own computations. Details in Appendix to Chapter 5.
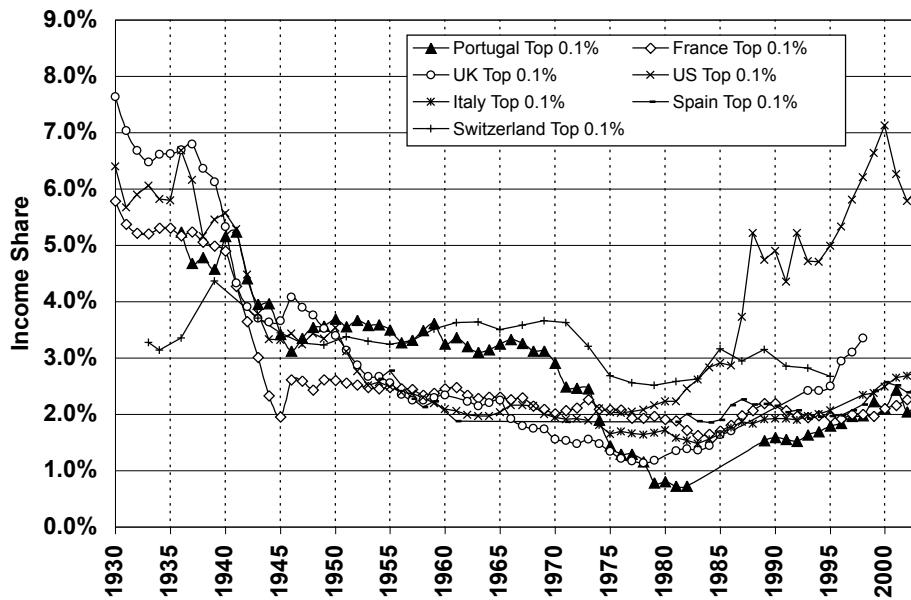
FIGURE 5.6
Top 0.1% share in Portugal, UK, Italy, France, Switzerland, United States and Spain

Sources: US: Piketty and Saez (2003); France: Piketty (2001) and Landais (2007);
Spain: Chapter 2 and Alvaredo and Saez (2007): Italy: Chapter 4; UK: Atkinson (2005);
Switzerland: Dell, Piketty and Saez (2007); Portugal: Table 5.B.
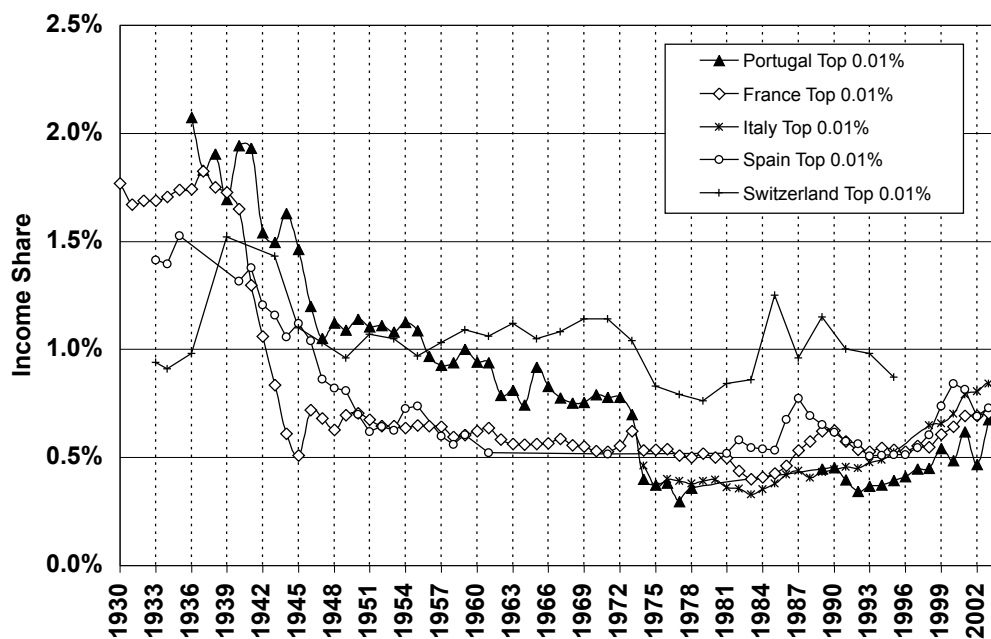
FIGURE 5.7
Top 0.01% share in Portugal, Italy, France, Switzerland and Spain

Sources: France: Piketty (2001) and Landais (2007);
Spain: Chapter 2 and Alvaredo and Saez (2007): Italy: Chapter 4;
Switzerland: Dell, Piketty and Saez (2007); Portugal: Table 5.B.
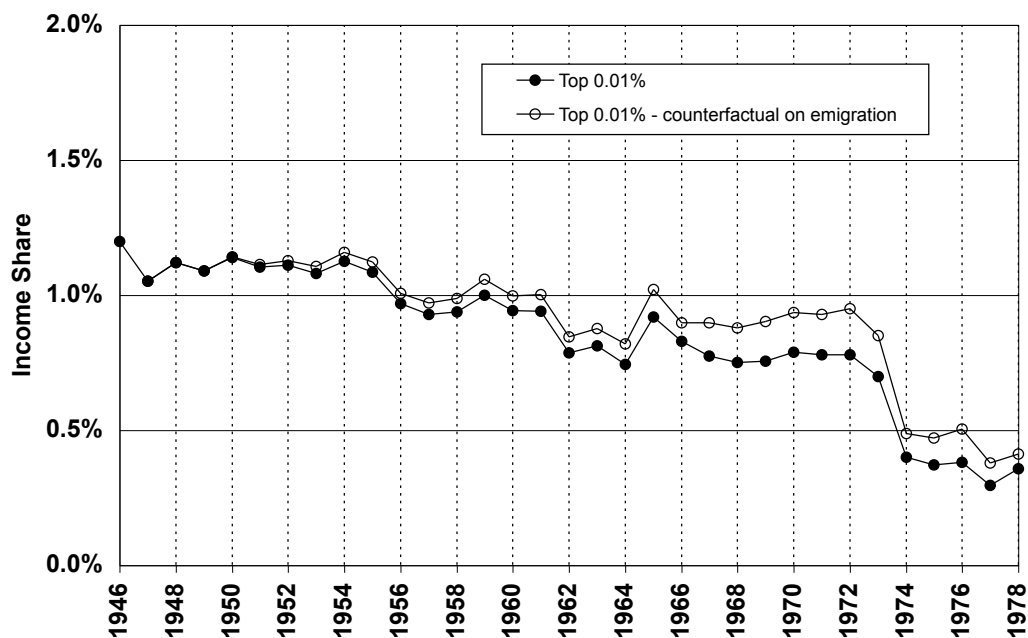
FIGURE 5.8
The Top 0.01% Income Share in Portugal and counterfactual effects of emigration
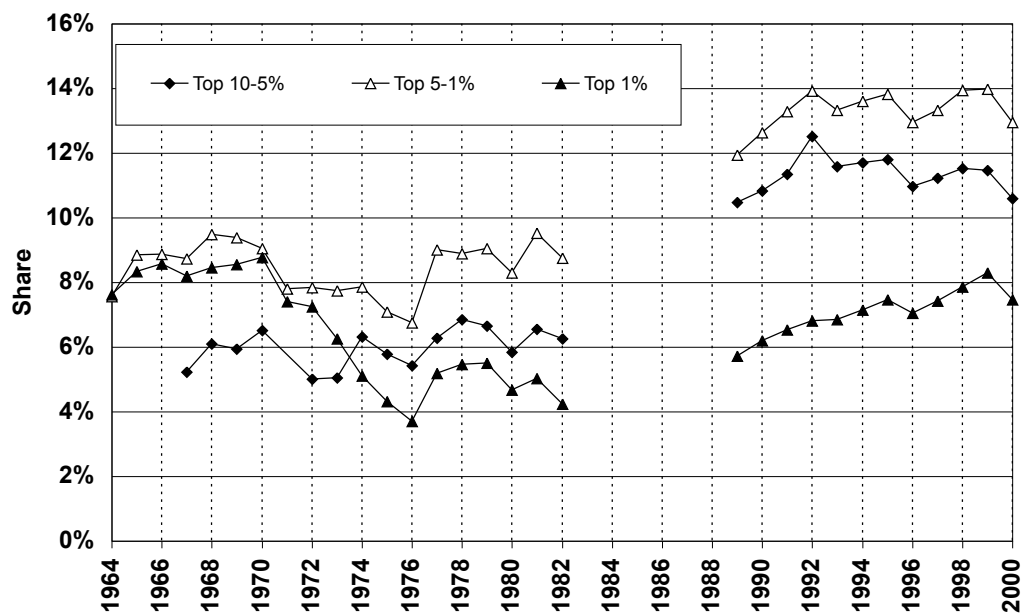
FIGURE 5.9
Top Wage Income Shares in Portugal from Tax Statistics, 1964-2000

Source: Table 5.E.1, columns Top 10-5%, Top 5-1%, Top 1%.
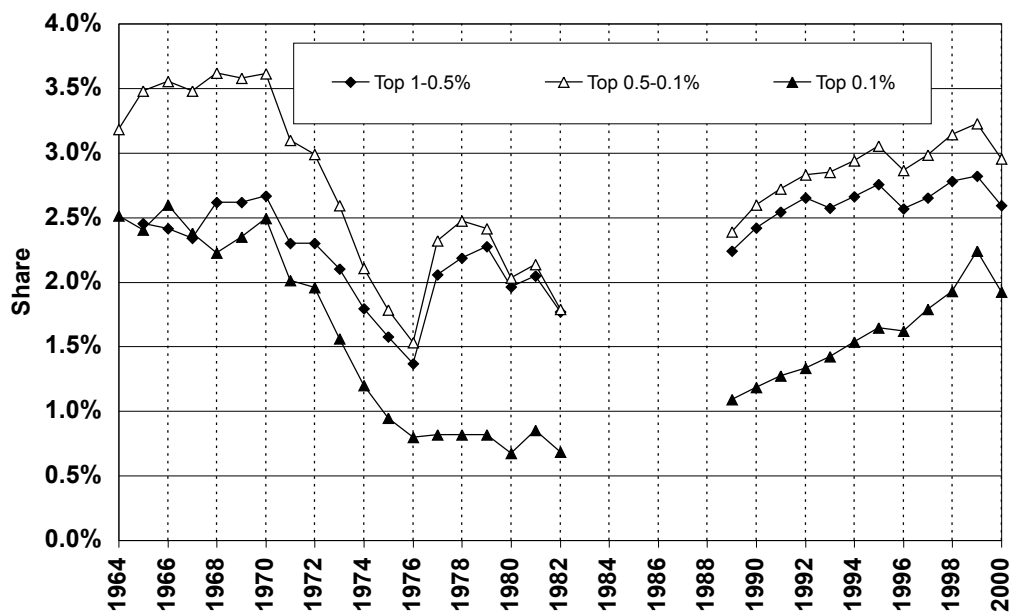
FIGURE 5.10
Top Wage Income Shares in Portugal from Tax Statistics, 1964-2000

Source: Table 5.E.1, columns Top 1-0.5%, Top 0.5-0.1%, Top 0.1%.
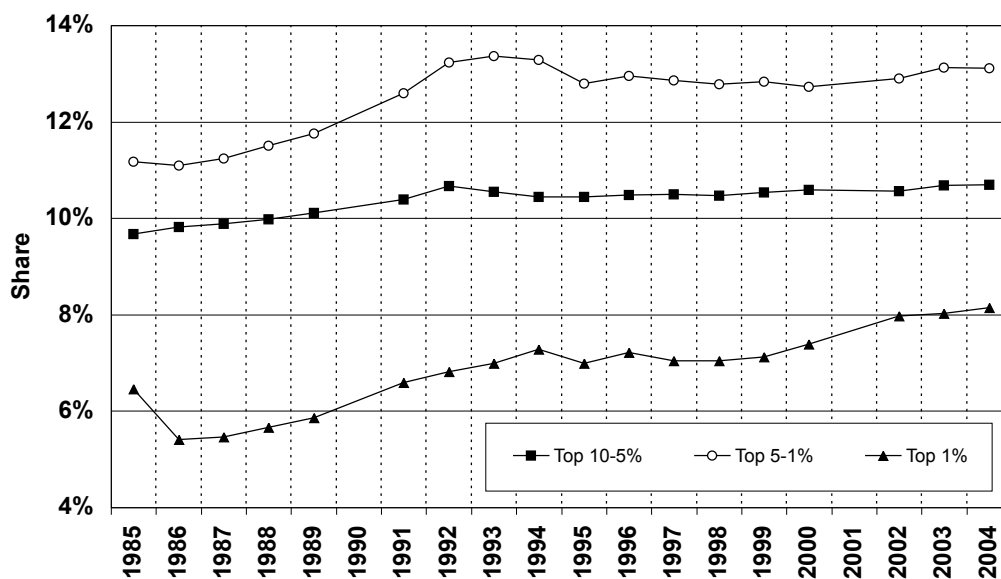
FIGURE 5.11
The Top 10-5%, Top 5-1%, and Top 1% Earnings Shares in Portugal, 1985-2004
from Administrative Records (Quadros de Pessoal)

Source: Table 5.F, columns top 10-5%, top 5-1%, and top 1%.
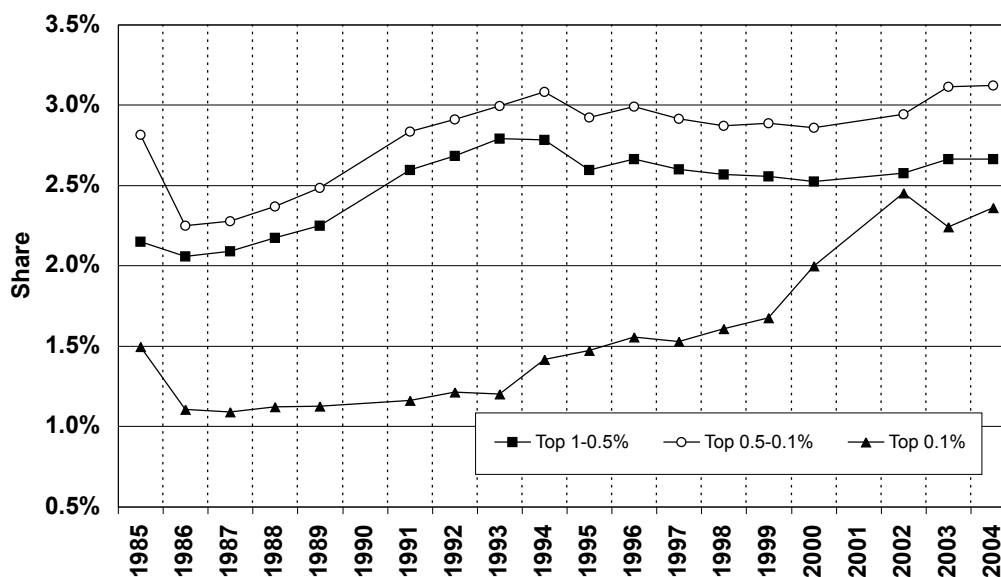
FIGURE 5.12
The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Earnings Shares in Portugal, 1985-2004
from Administrative Records (Quadros de Pessoal)

Source: Table 5.F, columns Top 1-0.5%, Top 0.5-0.1%, and Top 0.1%.
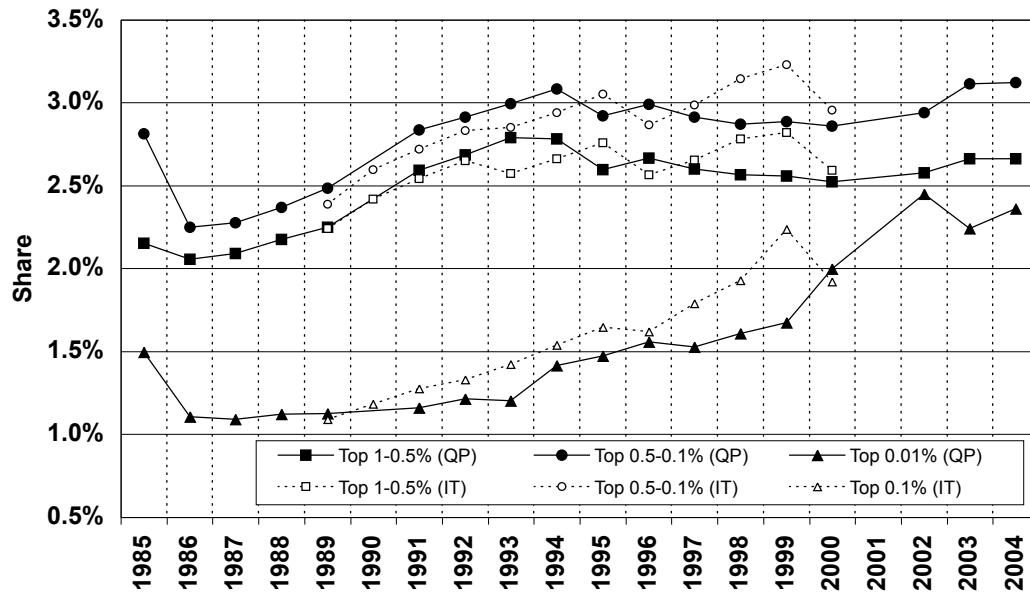
FIGURE 5.13
The Top 1-0.5%, Top 0.5-0.1%, and Top 0.1% Earnings Shares in Portugal, 1985-2004
Comparison between Administrative Records (Quadros de Pessoal) and Income Tax Statistics

Source: Table 5.E.1 and Table 5.F, columns top 1-0.5%, top 0.5-0.1%, and top 0.1%.
Notes: QP denotes results based on Quadros de Pessoal; IT denotes results based on income tax statistics
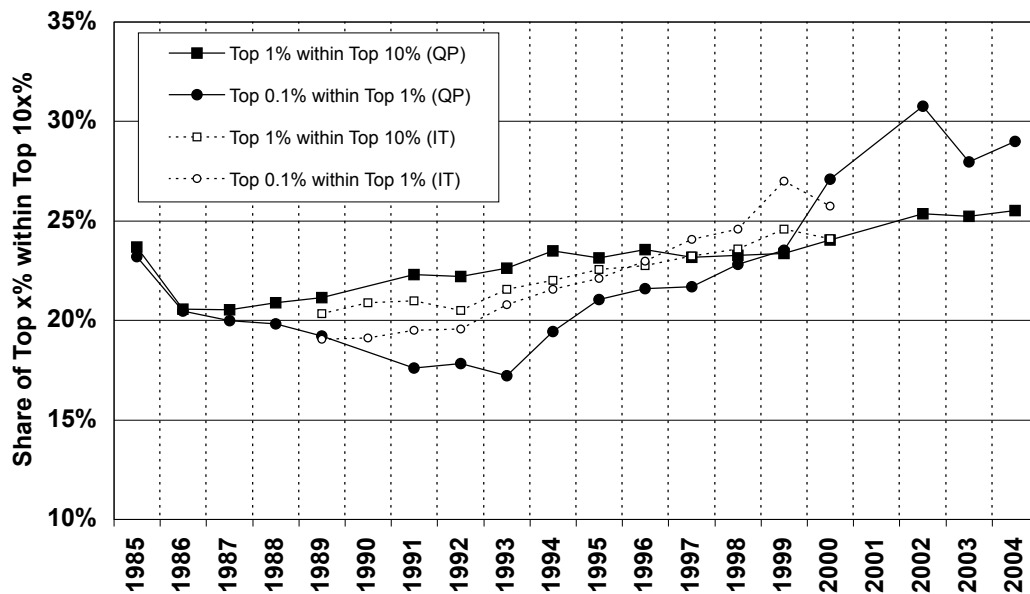
FIGURE 5.14
Shares within Shares
Comparison between Administrative Records (Quadros de Pessoal) and Income Tax Statistics

Source: Table 5.E.1 and Table 5.F.
Notes: QP denotes results based on Quadros de Pessoal; IT denotes results based on income tax statistics
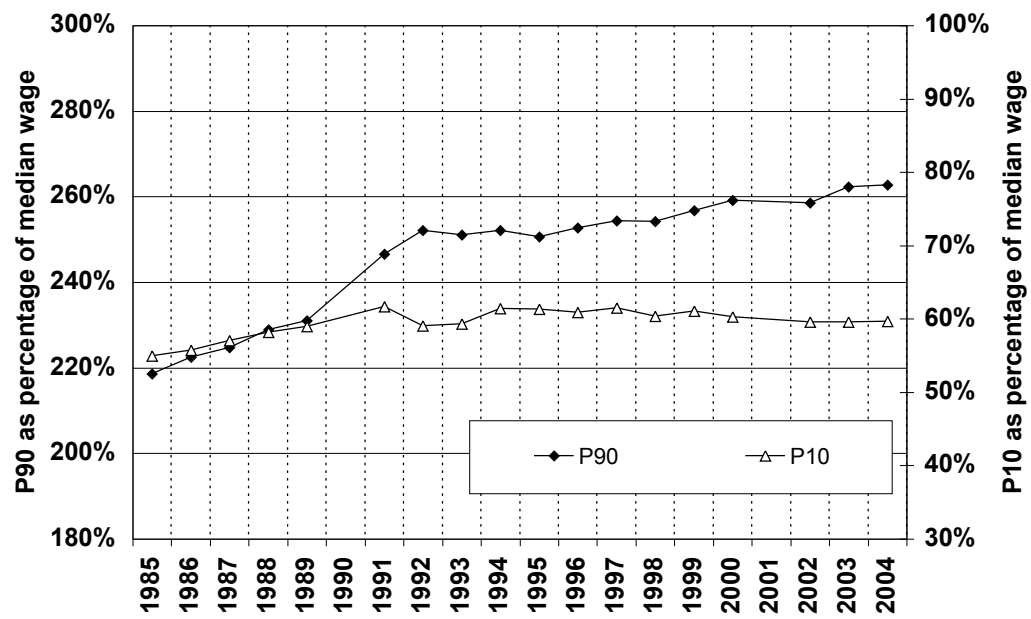
FIGURE 5.15
P10 and P90 earning levels as percentage of median wage in Portugal

Source: Table 5.G.

APPENDIX TO CHAPTER 5

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

5.A.1. The 'old' income tax

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

Table 5.J and Table 5.K summarize the main features of the evolution of the personal income tax in Portugal between 1922 and 2003. The first *personal* income tax (*Imposto Pessoal do Rendimento*) was enforced in 1922 (Law 1368/1922). It was defined as a tax levied on top incomes in addition to the traditional schedule taxes (at the time: *Contribuçao Industrial* on wages, business income and self-employment income, *Contribuçao Predial* on rents, *Imposto sobre a Aplicação de Capitais* on capital income); no provisions were made regarding capital gains. It was a truly independent personal overall income tax. However, several difficulties on its applicability, a high noncompliance rate and the turbulent macroeconomic environment of the First Republic forced its rapid substitution.

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

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

5.A.2. The 'modern' income tax

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

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

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

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

5.A.3. Schedule Tax on Wages

In 1929 the government created the *Imposto Profissional,* a schedular tax on wages and salaries (including agriculture) and self-employed liberal professionals; civil servants were excluded (Decree 16731 of 4/14/1929 and Decree 19,359 of 2/19/1931).[1] Initially there was a progressive tax scale with marginal tax rates from 2% to 8% affecting wage income, while self-employees were taxed with lump sums (variable across professions). Several reforms modified the scope of the tax, the exemption thresholds and the tax scales (Decree 19359 of 2/16/1931, Law 1952 of 3/10/1937, Decree-Law 33735 of 6/26/1944, Decree-Law 34353 of 12/30/1944). A detailed description of the *Imposto Profissional* during the first half of the XXth. century can be found in Mouteira Guerreiro, 1947. After the fiscal reform of 1962-1964 (Decree-Laws 44305 of 4/27/1962, 45400 of 11/30/1963, 45676 of 4/24/1964, 45977 of 10/19/1964), statutory top marginal tax rates were successively increased to 15% in 1964-1972, 20% in 1973-1975 and 22% in 1976-1988. The number of tax brackets also rose considerably. The tax was abolished in 1988 with the introduction of the modern income tax in 1989.

5.B. References on Data Sources for Portugal

5.B.1. Income Tax Statistics

---

[1] Before 1929, a fraction of wage earners was already taxed under the *Contribuiçao Industrial.*

Available statistical information about the *Imposto Pessoal do Rendimento* appears in República Portuguesa, Ministério das Finanças, Direcção Geral de Estatística, Ia. Repartiçao, <u>Estatística das Contribuïções e Impostos, Liquidaçaõ e Cobrança nas gerências de 1922-1923 a 1924-1925</u> and República Portuguesa, Ministério das Finanças, Direcção Geral de Estatística, Ia. Repartiçao, <u>Liquidaçaõ e Cobrança na Gerência de 1925-1926</u>. However, these publications only display total tax collections with no data about the distribution of income or tax paid by brackets; consequently this information, if interesting from the historical point of view, has not been used for our estimations of top income shares.

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

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

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

1963-1982: The published statistics are organized by range of taxable income (gross income net of deductions), and they provide the distribution of the number of taxpayers and the taxable income by brackets. The data also provide information on total deductions. Instituto Nacional de Estatística, <u>Anuário Estatístico das Contribuïções e Impostos, 1964, 1965, 1966</u> and Portugal, Instituto Nacional de Estatística, <u>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</u>.

1983-1988: Unfortunately, during the transition period from the *Imposto Complementar* to the new *Imposto sobre o Rendimento das Pessoas Singolares*, 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, <u>Estatísticas das Contribuições e Impostos, Continente e Ilhas Adjacentes, 1983-1988</u>. Consequently our series have a gap in those years.

1989-2003: Finally, the fiscal reform of 1988 and the increasing managerial capabilities of the tax agency implied an improvement in the amount and quality of available information on individuals' income. Since then, the published

statistics, by brackets of gross income, display taxable income, gross income, tax paid and a thorough detail of deductions. No information is provided about the composition of income. Individual are classified in two groups: those having income from wages and pension only, on the one side, and those having income also from other sources. Portugal, Instituto Nacional de Estatística, <u>Estatísticas das Receitas Fiscais, 1989-1992, 1993-1995, 1996, 1997, 1998, 1999, 2000</u>. Tabulations for 2001, 2002 and 2003 were provided by the tax agency of Portugal, based on internal reports.

5.B.2. Statistics on Wages and Salaries

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

The tabulations from the *Imposto Profissional* are organized by intervals of tax collections, and they display the number of taxed workers and the total tax paid by brackets. The published information covers 1936-1982; however we can only offer homogeneous estimates for the period 1964-1982. We used the tax code to recover the brackets of earnings from the brackets of tax paid, and the earnings by brackets from the tax collections by brackets.
Instituto Nacional de Estatística, <u>Anuário Estatístico das Contribuïções e Impostos,</u> <u>1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945</u>; Instituto Nacional de Estatística, <u>Anuário Estatístico das Contribuïções e Impostos,</u> <u>1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963</u>Instituto Nacional de Estatística, <u>Anuário Estatístico das Contribuïções e Impostos, 1964, 1965, 1966</u>. Portugal, Instituto Nacional de Estatística, <u>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</u>.

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, <u>Estatísticas das Receitas Fiscais, 1989-1992, 1993-1995, 1996, 1997, 1998, 1999, 2000</u>.

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

Every year, employers are required by law to provide information about the firm (location, economic activity, employment, sales, legal setting) and their employees (individual basic wages, overtime, bonuses, gender, level of education, skills, duration of work (full-time/part-time), date of latest promotion, tenure). The information corresponds to March for years 1985-1993, and October for years 1994-2004. Civil service and domestic work are excluded.

State-owned companies are included. Agriculture workers are included, although in practice the level of coverage is very low. For manufacturing, a thorough evaluation of the coverage of *Quadros de Pessoal* can be made, since a census of manufacturing is available. As argued in Cardoso, 1998, comparison of the two sets reveals that the *Quadros de Pessoal* covers more workers than the census itself, despite the fact that the census includes very small productive units that are not a part of the population covered by the *Quadros de Pessoal* (mainly firms with no wage earners). The Direcçao-Geral de Estudos, Estatística e Planeamento (DGEEP) publishes regularly a report with the main results, *Estatísticas em Síntese* (available on line). The data were first collected in 1982 but micro-data starts in 1985. All results based on *Quadros de Pessoal* were computed from the micro-data for 1985-1989 (1990 missing), 1991-2000 (2001 missing) and 2002-2004. Table 5.H describes the size of the database and classifies individuals according the following categories: employers, family employees without salaries, employees, cooperative workers and unknown/not classified individuals.

5.C. Income and Earnings Denominators

5.C.1. Total Income Denominator

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

For the period 1989-2003, total income is defined as wages and salaries from National Accounts net of effective social security contributions, plus 50% of social transfers, plus 66% of unincorporated business income plus all non-business, non labor income reported on tax returns. This methodology generates an income denominator that fluctuates around 60% of Portuguese GDP, which is slightly lower than the ratio found for Spain (see Chapter 2) and similar to that used for France (see Piketty, 2001). For the period 1936-1983, we use as denominator 60% of the Portuguese GDP from the sources listed above.

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

5.C.2. Total Wage Denominator

Total wages are defined as wages and salaries from national accounts net of effective social contributions paid by employers. As in the income denominator case, the information between 1953 and 1995 has been taken from Banco de Portugal, Séries Longas para a Economia Portuguesa. Pós II Guerra Mundial. Vol I and Vol II (series Remunerações do Trabalho no Território, Ordenados e Salários and Contribuções Sociais Efectivas dos Empregadores). For the years following 1996, the information comes from Portugal, Instituto Nacional de Estatística (2003) Contas Nacionais Anuais Definitivas Base 1995 and Portugal, Instituto Nacional de Estatística (2005) Contas Nacionais Anuais Definitivas Base 2000. For 1936-1952 we assume that the growth rate of total wages equals the nominal GDP growth rate.

5.C.3. Prices

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

5.C.4. Total Number of Individuals and Tax Units

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

5.C.5. Total Number of Employees

The number of employees comes from (a) Banco de Portugal, Séries Longas para a Economia Portuguesa. Pós II Guerra Mundial. Vol I and Vol II (1953-1995), (b) Portugal, Instituto Nacional de Estatística (2003) Contas Nacionais Anuais Definitivas Base 1995 and Portugal, Instituto Nacional de Estatística

(2005) <u>Contas Nacionais Anuais Definitivas Base 2000</u> (1996-2004); (c) the national census of 1930, 1940 and 1950. Missing years have been linearly interpolated.

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

5.C.6. Data on Emigration Flows

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

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

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

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

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

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

5.D. Estimating Top Shares

5.D.1. Basic Pareto Interpolation

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

The first step consists then in estimating the income thresholds corresponding to each of the percentiles P90, P95, P99, …, P99.99, that define our top income groups. For each percentile p, we look first for the published income bracket [s,t] containing the percentile p. We estimate then the parameters a and k of the Pareto distribution by solving the two equations: $k=s\ p^{(1/a)}$ and $k=t\ q^{(1/a)}$ where p is the fraction of tax returns above s and q the

fraction of tax returns above t.[2] Note that the Pareto parameters k and a may vary from bracket to bracket. Once the density distribution on [s,t] is estimated, it is straightforward to estimate the income threshold, say y_p, corresponding to percentile p.

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

The second step consists of estimating the amounts of income reported above income threshold y_p. We estimate the amount reported between income y_p and t (the upper bound of the published bracket [s,t] containing y_p) using the estimated Pareto density with parameters a and k. We then add to that amount the amounts in all the published brackets above t.

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

Results are presented in Table 5.B (top income shares between 1936 and 2003), Table 5.C (top fractiles income levels between 1989 and 2003), Table 5.E.1 (top wage income shares between 1964 and 2000) and Table 5.E.2 (fractiles of earnings between 1964 and 2000).

5.D.2. Adjustments to Raw Pareto Interpolations

1936-1945: The statistics are organized by ranges of tax paid. We estimate the ranges of income and the total income in those ranges by applying the statutory tax scale and the taxable thresholds given in Table 5.J and in Table 5.K. Total assessed income is reported in aggregate in the statistics. Consequently we can check that our estimation of assessed income by brackets is accurate.

1964-1982: The statistics are organized by range of taxable income and they provide information on taxable income. Total income equals taxable income plus family deductions (which were introduced in 1964) plus other deductions. The evolution of family deductions is described in Table 5.K. We add back those deductions to our income estimates in order to estimate shares based on income before those deductions. As family deductions are reported only in aggregate, we impute the family deductions to each bracket by assuming that on average each tax filer is entitled to the same amount of deductions. The information on non-family based deduction is also reported in aggregate. We imputed these deductions proportionally to the reported taxable income according to the general rules of the tax code.

---

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

5.D.3 Estimating Top Shares from Administrative Records on Earnings

We also computed shares of top wages using micro-data from *Quadros de Pessoal* between 1985 and 2004 (1990 and 2001 missing). The number of individual observations ranges from 1,898,675 in 1985 to 2,912,304 in 2004. However, not all of them refer to workers. Individuals are classified as employers, family employees with no salary, employees and cooperative workers. In our estimations we only consider individuals with non zero wages in the last two groups. Shares of top wages are presented in Table 5.F, where we also provide estimations for the left part of the distribution. Original amounts corresponds to the monthly level. Table 5.G show income levels of selected fractiles, where we annualize the amounts by up-scaling monthly earnings by a factor of 14 (employees generally receive 14 months' pay for 11 months' work; the extra three months' pay is for a Christmas bonus, a vacation subsidy and a period of annual leave).

5.D.4. Estimating Marginal Tax Rates

Average marginal tax rates (income weighted) used in Figure 5.5 have been computed as follows. We consider each of the income thresholds P99, P999, etc. estimated from the interpolation methods described in this Appendix. We subtract from the raw income the average level of deductions and average level of allowances (for example, for the income threshold P99, we identify the bracket in the tax tabulations to which this level of income belongs and subtract the average deductions and allowances in that bracket). This gives the net taxable income. Tax liability is obtained by applying the tax schedules in Table 5.J (from which the marginal tax rate for any taxable income can be obtained) to the taxable income.

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

[Share P99.9-99.99 x MTR 99.95 + Share 99.99-100 x (MTR 99.99+MTR99.999)/2]/
[Share P99.9-99.99+Share P99.99-100]

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

References

Albuquerque, R. and M. Gouveia (1994). 'Distribuçõ dos Salarios em Portugal 1980 e 1990', Relatório Anual, Banco de Portugal.

Atkinson, A. (2005). 'Top Incomes in the United Kingdom over the Twentieth Century', *Journal of the Real Statistical Society*, Series A, 168(2): 325-343.

Atkinson, A. B. and T. Piketty (2007). *Top Incomes over the Twentieth Century: A Contrast Between European and English Speaking Countries*, Oxford: Oxford University Press.

Atkinson, A. B., L. Rainwater and T. Smeeding (1994). 'Income Distribution in European Countries', Luxembourg Income Study Working Paper n. 121.

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

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

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

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

Baklanoff, E. (1992). 'The Political Economy of Portugal's Later Estado Novo: A Critique of the Stagnation Thesis', *Luso-Brazilian Review*, 29(1): 1-17.

Barreto, A. (1983). *Memórias da Reforma Agrária*, Lisboa: Publicações Europa-América.

Barreto, A. (1987). *Anatomia de uma Revoluçao*, Lisboa: Publicações Europa-América.

Barreto, A. (1988). 'Reforma Agraria y Revolución en Portugal, 1974-76', *Revista de Estudios Políticos (Nueva Epoca)*, 60-61, Abril-Septiembre, pp. 413-429.

Batista, C. (2002). 'Skill Premium in Portugal: Some Evidence on the Capital-Skill Complementarity Hypothesis', mimeo.

Batista, C. (2005). 'Will the East Follow Portugal?' mimeo.

Batista, D., C. Martins, M. Pinheiro and J. Reis (1997). 'New Estimates for Portugal's GDP 1910-1958', *História Económica*, 7, Banco de Portugal.

Bermeo, N. (1997). 'Myths of Moderation: Confrontation and Conflict during Democratic Transitions', *Comparative Politics*, 29(3): 305-322.

Bover, O., P. García-Perea and P. Portugal (1998). 'A Comparative Study of the Portuguese and Spanish Labor Markets', Bank of Spain Working Paper 9807.

Budría, S and P. Pereira (2008). 'Education and Wage Dispersion: New Evidence for Europe', forthcoming in P. Dolton, R. Asplund and E. Barth (eds.) *Education and Inequality Across Europe*, Edward Elgar.

Budría, S. (2007). 'Economic Inequality in Portugal: A Picture in the Beginnings of the 21st. Century', Munich Personal RePEc Archive Working Paper n. 1784.

Budría, S. and C. Nunes (2005). 'Education and Wage Inequality in Portugal', in R. Asplund and E. Barth (eds.) *Education and Wage Inequality in Europe: A Literature Review*. ETLA, Series B209, Helsinki.

Budría, S. and P. Pereira (2007). 'The Wage Effects of Training in Portugal: Differences across Skill Groups, Genders, Sectors, and Training Types', *Applied Economics*, 39(6): 787-807.

Cantó, O., A. Cardoso and J. Jimeno (2002). 'Earnings Inequaliy in Portugal and Spain: Contrasts and Similarities', in D. Cohen, T. Piketty and G. Saint-Paul (eds.) *The Economics of Rising Inequalities*, Oxford: Oxford University Press, pp. 55-73.

Cardoso, A. (1994). 'Regional Wage Inequality in Portugal', *Estudos de Economia*, 14(4): 429-450.

Cardoso, A. (1998a). 'Earnings Inequality in Portugal: High and Rising?' *Review of Income and Wealth*, 44(3): 325-343.

Cardoso, A. (1998b). 'Workers or Employers: Who is Shaping Wage Inequality?' *Oxford Bulletin of Economics and Statistics*, 59: 523-547.

Cardoso, A. (1999). 'Firms' Wage Policies and the Rise in Labor Market Inequality: The Case of Portugal', *Industrial and Labor Relations Review*, 53: 87-102.

Cardoso, A. (2006). 'Wage Mobility: Do Institutions Make a Difference? A Replication Study Comparing Portugal and the UK', *Labour Economics*, 13(3): 387-404.

Cardoso. F. and V. Cunha (2005). 'Household Wealth in Portugal: 1980-2004', Banco de Portugal Working Paper 4.

Carneiro, P. (2008). 'Equality of Opportunity and Educational Achievement in Portugal', *Portuguese Economic Journal*, forthcoming.

Castanheira, M. and M. Carvalho (1997). 'Desigualdade na Distribução do Rendimento e Disparidades Regionais', *Prospectiva e Planeamento*, 3-4: 267-278.

Castanheira, M. and M. Ribeiro (1977). 'A Repartição Pessoal do Rendimento em Portugal', *Análise Social*, (13).

Conim, C. (1976). 'Algumas Considerações sobre a Situação Demográfica Portuguesa de 1960 a 1975', in Instituto Nacional de Estatística, Revista do Centro de Estudos Demográficos, 22: 171-239.

Costa A. (1994). 'The Measurement of Poverty in Portugal', *Journal of the European Social Policy*, 4(2): 95-115.

Dell, F., Piketty, T. and Saez, E. (2007). 'Income and Wealth Concentration in Switzerland over the Twentieth Century', in A.B. Atkinson and T. Piketty, 2007, op. cit.

Direcçao-Geral dos Impostos (1998a). *Sistema Fiscal Português*, Centro de Estudos Fiscais, Editora Rei dos Livros.

Direcçao-Geral dos Impostos (1998b). 'Relatório da Comissão para o Desenvolvimento da Reforma Fiscal', Chapter 13.

Direcçao-Geral dos Impostos (2005). 'Simplificação do Sistema Fiscal Português. Relatório do Grupo de Trabalho criado por Despacho do Ministro de Estado e das Finanças', Cadernos Ciência e Técnica Fiscal, n. 201.

Downs, C. (1983). 'Residents' Commissions and Urban Struggles in Revolutionary Portugal', in L. Graham and D. Wheeler (eds.) *In Search of Modern Portugal. The Revolution and its Consequences*, Madison: The University of Wisconsin Press, pp. 151-179.

Feenberg, D. and J. Poterba (1993). 'Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns', in J. Poterba (ed.) *Tax Policy and the Economy*, vol. 7, Cambridge: MIT Press.

Ferreira, L. (1992). 'Pobreza em Portugal. Variação e Decomposição de Medidas de Pobreza a Partir dos Orçamentos Familiares de 1980-1981 e 1989-1990', *Estudos de Economia*, 12(4): 377-393.

Gallaher, T. (1983). *Portugal: A Twentieth-Century Interpretation*, Manchester: Manchester University Press.

Gouveia, M. and C. Rodrigues (2002). 'The Impact of Guaranteed Minimum Income Program in Portugal', *Public Finance and Management*, 2(2).

Gouveia, M. and J. Tavares (1995). 'The Distribution of Household Income and Expenditure in Portugal: 1980 and 1990', *Review of Income and Wealth*, 41: 1-17.

Harsgor, M. (1976). 'Portugal in Revolution', The Washington Papers, 3, n. 33, Beverly Hills, CA: Sage Publications.

Hartog, J., P. Pereira and J. Vieira (1999). 'Inter-Industry Wage Dispersion in Portugal: High but Falling', IZA Discussion Paper n. 53.

Hartog, J., P. Pereira and J. Vieira (2001). 'Changing Returns to Education in Portugal during the 1980s and the early 1990s: OLS and Quantile Regression Estimators', *Applied Economics*, 33: 1021-1037.

Hudson, M. (1989). 'Portugal to 1993: Investing in a European Future', London: The Economist Intelligence Unit, Special Report 1157.

Instituto Nacional de Estatística (1985). *Portugal 50 anos, 1935-1985*, Lisboa.

International Labor Organization ILO (1979). 'Employment and Basic Needs in Portugal', Annex I: 'The Economic and Social Development of Portugal to 1975'.

Jimeno, J., O. Cantó, A. Rute, M. Izquierdo and C. Rodrigues (2000). 'Integration and Inequality: Lessons from the Accessions of Portugal and Spain to the EU', FEDEA.

Lains, P. (2003a) 'Catching Up to the European Core: Portuguese Economic Growth, 1910-1990'. *Explorations in Economic History*, 40(4): 396-386.

Lains, P. (2003b). 'Portugal's Growth Paradox 1870-1950', Working Paper n. 135, Faculdade de Economia, Universidade do Porto.

Lains, P. (2003c). 'New Wine in Old Bottles: Output and Productivity Trends in Portuguese Agriculture 1850-1950', European Review of Economic History, 7(1): 1-30.

Landais, C. (2007). 'Les Hauts Revenus en France (1998-2006): Une Explosion des Inegalités?', Paris School of Economics Working Paper, June.

Lopes, L. (1994). 'Manufacturing Productivity in Portugal in a Comparative Perspective'. *Notas Económicas*, 4: 55-76.

Lopes, L. (1996). *A Economia Portuguesa desde 1960*. Lisboa: Gradiva.

Machado, J. and J. Mata (2001). 'Earnings Functions in Portugal 1982-1994: Evidence from Quantile Regressions', *Empirical Economics*, 26: 115-134.

Maddison, A. (2001). *The World Economy. A Millennial Perspective.* Paris: OECD.

Maddison, A. (2003). *The World Economy. Historical Statistics.* Paris: OECD.

Makler, H. (1969). *A "Elite" Industrial Portuguesa.* Lisbon: Instituto Gulbenkian de Ciencia.

Makler, H. (1974). 'Education Levels of the Portuguese Industrial Elite', *International Studies of Management and Organization*, 4 (1-2).

Makler, H. (1976). 'The Portuguese Industrial Elite and Its Corporative Relations: A Study of Compartmentalization in an Authoritarian Regime,' *Economic Development and Cultural Change*, 24(3): 495-526.

Martins, M. and J. Chaves Rosa (1979). *O Grupo Estado: Análise e Listagem Completa das Sociedades de Sector Publico Empresarial.* Lisbon: Edições Journal Expresso.

Martins, P. and P. Pereira (2004). 'Does Education Reduce Wage Inequality? Quantile Regressions Evidence from Sixteen European Countries', *Labour Economics*, 11(3): 355-371.

Ministério do Emprego e da Segurança Social, Departamento de Estudos e Planeamento (1992). Relatório de Cojuntura anual de 1989, Relatórios e Análises, 44.

Mouteira Guerreiro, A. (1947). *Imposto Profissional*, Biblioteca Fiscal Atlântida, Coimbra: Livraria Editora Lda.

Murray, A. and H. Steedman (1998). 'Growing Skills in Europe: The Changing Skills Profiles of France, Germany, the Netherlands, Portugal, Sweden and the UK', CEP Discussion Paper n. 399, London School of Economics.

Nunes, A., E. Mata and N. Valério (1989). 'Portuguese Economic Growth 1833-1985', *Journal of European Economic History*, 18: 291-300.

OECD (Organization for Economic Co-operation and Development (1992). 'Earnings Inequality: Changes in the 1980s', in Employment Outlook, July, pp. 157-184.

Payne, S. (1972). *A History of Spain and Portugal*, Vol. 2, Madison: The University of Wisconsin Press.

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

Piketty, T. (2001). *Les Hauts Revenus en France au 20eme Siècle – Inegalités et Redistributions, 1901-1998*, Paris: Editions Grasset.

Piketty, T., and E. Saez (2003), 'Income Inequality in the United States, 1913-1998', *Quarterly Journal of Economics*, 118(1): 1-39.

Robinson, R. (1979). *Contemporary Portugal*, London: George Allen & Unwin.

Rodrigues, C. (1988). 'Estudo Comparativo da Desigualdade das Famílias Portuguesas 1973/74-1980/81', CISEP Working Paper, Instituto Superior de Economia e Gestão, Lisboa.

Rodrigues, C. (1993). 'The Measurement and Decomposition of Inequality in Portugal 1980/1981-1989/1990', Microsimulation Unit Discussion Paper MU9302, Department of Applied Economics, Cambridge University.

Rodrigues, C. (1994). 'Repartição do Rendimento e Disigualade: Portugal nos Anos 80', *Estudos de Economia*, 14(4), pp. 399-427.

Rodrigues, C. (1996). 'Medição e Decomposição da Desigualdade em Portugal 1980-1990', *Revista de Estatística*, 1(3).

Rodrigues, C. (1999). 'Income Distribution and Poverty in Portugal 1994/1995, A Comparison between the European Community Household Panel and the Household Budget Survey', Working Paper CISEP, ISEG/Universidade Técnica de Lisboa, June. Portuguese version: 'Repartição do Rendimento e Pobreza em Portugal 1994/1995-Uma Comparação entre o Painel dos Agregados Familiares e o Inquérito aos Orçamentos Familiares', *Revista de Estatística*, 5(1): 117-142.

Rodrigues, C. (2005). Distribução do Rendimento, Desigualdade e Pobreza: Portugal son anos 90, PhD Thesis, Universidade Técnica de Lisboa.

Rodrigues, C. (2008). *Distribuição do Rendimento, Desigualdade e Pobreza: Portugal nos anos 90*, Coimbra: Editora Almedina.

Rodrigues, C. and J. Albuquerque (2000). 'Pobreza e Exclusão Social: Percursos e Perspectivas da Investigação em Portugal', in Actas do Seminário Pobreza e

Exclusão Social: Percursos e Perspectivas da Investigação em Portugal, CESIS, Lisboa.

Salazar, A. (1939). *Doctrine and Action: Internal and Foreign Policy of the New Portugal 1928-1939*, London: Faber & Faber Ltd.

Santos, J. (1983). 'A Distribuçao Lognormal: Sua Aplicação a dados Portugueses de Distribução do Rendimento', *Estudos de Economia*, 3(2): 201-218.

Silva, M. (1971). 'O Nivel das Receitas das Famílias Portuguesas', Monografias, Brotéria, Porto.

Silva, M. (1982). 'Crescimento Económico e Pobreza em Portugal (1950-1970)', *Análise Social*, 18(72/73/74).

Teekens, R. (1990). 'Inequality and Poverty. Portugal Compared with Greece, Ireland and Spain', *Estudos de Economia*, 10(2): 111-142.

Valério, N. (2001). *Estatísticas Históricas Portuguesas*, Lisboa: Instituto Nacional de Estatística.

Vieira, J. (1999). The Evolution of Wage Structure in Portugal 1982-1992, PhD. Thesis, Tinbergen Institute, Amsterdam.

Vieira, J., J. Couto and M. Tiago (2006). 'Inter-Regional Wage Dispersion in Portugal, Regional and Sectoral Economic Studies', *Euro-American Association of Economic Development*, 6(1).

Wheeler, D. (1990). 'Review of Portugal to 1993', *Portuguese Studies Newsletter*, 22: 44-45.

TABLE 5.A. Reference Totals for Population, Income and Inflation, 1936-2003

	Tax Units				Total Income			Inflation	Taxes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Adults	Tax Units	Number of tax returns	(3)/(2) (%)	Total income (millions)	Average income per adult	Average income per tax unit	CPI (2000 base)	Top Marginal Tax Rate
	('000s)	('000s)	('000s)		(2000 Euros)	(2000 Euros)	(2000 Euros)		(%)
1936	4,298	3,025	43	1.44	7,834	1,823	2,590	0.71	8.5
1937	4,357	3,062	45	1.47	8,048	1,847	2,629	0.74	8.5
1938	4,418	3,099	48	1.53	8,869	2,008	2,862	0.71	8.5
1939	4,479	3,136	50	1.60	9,396	2,098	2,996	0.67	8.5
1940	4,541	3,174	54	1.72	8,701	1,916	2,741	0.70	8.5
1941	4,604	3,213	58	1.81	8,292	1,801	2,581	0.79	8.5
1942	4,668	3,252	62	1.91	7,891	1,691	2,427	0.97	8.5
1943	4,732	3,291	67	2.05	8,686	1,835	2,639	1.09	8.5
1944	4,798	3,331	74	2.21	9,784	2,039	2,937	1.12	8.5
1945	4,865	3,372	97	2.88	9,538	1,961	2,829	1.22	8.5
1946	4,932	3,412	11	0.34	10,420	2,113	3,054	1.24	30
1947	5,000	3,454	14	0.42	10,710	2,142	3,101	1.26	30
1948	5,070	3,496	16	0.45	10,963	2,163	3,136	1.29	30
1949	5,140	3,538	18	0.52	11,158	2,171	3,154	1.31	30
1950	5,211	3,581	22	0.62	11,666	2,239	3,258	1.34	30
1951	5,254	3,600	25	0.70	12,407	2,362	3,446	1.34	30
1952	5,296	3,619	25	0.68	12,497	2,360	3,453	1.33	30
1953	5,339	3,638	27	0.75	13,165	2,466	3,618	1.34	30
1954	5,383	3,658	28	0.76	14,058	2,612	3,843	1.33	30
1955	5,426	3,677	29	0.79	14,720	2,713	4,003	1.33	30
1956	5,470	3,697	35	0.94	15,249	2,788	4,125	1.37	30
1957	5,515	3,716	38	1.01	15,959	2,894	4,294	1.39	30
1958	5,560	3,736	40	1.08	16,751	3,013	4,484	1.41	30
1959	5,605	3,756	35	0.93	17,597	3,140	4,686	1.43	30
1960	5,650	3,776	34	0.90	18,264	3,232	4,837	1.46	30
1961	5,633	3,747	34	0.92	18,525	3,289	4,944	1.50	30
1962	5,616	3,718	37	0.99	20,258	3,607	5,448	1.54	30
1963	5,599	3,690	44	1.19	20,392	3,642	5,526	1.58	45
1964	5,582	3,662	29	0.80	21,567	3,864	5,889	1.62	45
1965	5,565	3,634	44	1.22	24,446	4,393	6,726	1.66	45
1966	5,548	3,607	45	1.25	24,837	4,477	6,886	1.74	45
1967	5,531	3,579	53	1.48	26,368	4,767	7,367	1.84	45
1968	5,514	3,552	58	1.63	26,884	4,876	7,568	1.95	45
1969	5,497	3,525	64	1.81	26,506	4,822	7,519	2.13	55
1970	5,480	3,498	75	2.13	28,117	5,130	8,037	2.26	55
1971	5,565	3,543	87	2.47	29,067	5,223	8,204	2.53	55
1972	5,650	3,588	106	2.97	30,968	5,481	8,631	2.80	55
1973	5,737	3,634	125	3.45	32,428	5,652	8,924	3.16	80
1974	5,825	3,680	149	4.04	30,686	5,268	8,338	3.96	80
1975	5,915	3,727	128	3.43	30,825	5,211	8,270	4.56	80
1976	6,006	3,775	684	18.13	31,401	5,228	8,319	5.36	80
1977	6,098	3,823	559	14.62	31,530	5,170	8,248	6.86	80
1978	6,192	3,872	548	14.15	32,123	5,188	8,297	8.32	80
1979	6,287	3,921	702	17.90	32,887	5,231	8,388	10.34	80
1980	6,384	3,971	837	21.07	35,040	5,489	8,824	12.61	70(married) 80 (single)
1981	6,482	4,022	1,112	27.65	35,095	5,414	8,727	15.13	70(married) 80 (single)
1982	6,548	4,078	1,333	32.68	34,677	5,296	8,503	18.51	70(married) 80 (single)
1983	6,614	4,135	1,389	33.58	35,297	5,337	8,535	23.24	70(married) 80 (single)
1984	6,681	4,194	1,385	33.03	33,521	5,017	7,993	30.04	70
1985	6,749	4,252	1,189	27.95	34,483	5,109	8,109	35.85	50(married) 60 (single)
1986	6,817	4,312	1,259	29.20	37,739	5,536	8,752	40.04	50(married) 60 (single)
1987	6,886	4,373	1,436	32.84	40,645	5,902	9,295	43.80	50(married) 60 (single)
1988	6,956	4,434	542	12.22	44,237	6,359	9,976	48.04	50(married) 60 (single)
1989	7,027	4,497	2,104	46.79	42,013	5,979	9,343	54.12	40
1990	7,098	4,560	2,606	57.15	44,495	6,269	9,758	60.95	40
1991	7,170	4,624	2,642	57.14	47,219	6,586	10,212	68.33	40
1992	7,251	4,697	2,781	59.21	49,309	6,801	10,498	74.78	40
1993	7,332	4,771	2,734	57.31	47,677	6,502	9,993	79.87	40
1994	7,415	4,847	2,897	59.78	48,750	6,575	10,059	84.13	40
1995	7,498	4,923	2,882	58.54	49,370	6,584	10,028	87.63	40
1996	7,583	5,001	3,046	60.90	53,469	7,051	10,692	90.31	40
1997	7,668	5,080	3,215	63.29	56,349	7,348	11,092	92.44	40
1998	7,754	5,160	3,312	64.18	59,542	7,678	11,538	95.03	40
1999	7,842	5,242	3,425	65.35	63,042	8,039	12,027	97.22	40
2000	7,930	5,325	3,662	68.78	65,862	8,305	12,369	100.00	40
2001	8,019	5,409	3,869	71.53	68,351	8,523	12,637	104.35	40
2002	8,110	5,494	3,969	72.24	70,502	8,693	12,832	108.10	40
2003	8,201	5,581	3,979	71.29	69,688	8,497	12,486	111.63	40

Table 5.B. Top Income Shares in Portugal, 1936-2003

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

Table 5.C. Top fractiles income levels in Portugal, 1989-2003

(fractiles defined by total income; incomes expressed in Euros 2000)

| | P90-100 | P95-100 | P99-100 | P99.5-100 | P99.9-100 | P99.99-100 | P90-95 | P95-99 | P99-99.5 | P99.5-99.9 | P99.9-99.99 | P90 | P95 | P99 | P99.5 | P99.9 | P99.99 |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1989	28,218	37,166	63,931	80,131	142,850	416,621	19,269	30,475	47,732	64,451	112,431	16,206	23,300	43,313	53,638	86,380	195,622
1990	30,437	40,394	70,392	88,147	155,751	443,203	20,480	32,895	52,636	71,246	123,812	17,204	24,888	47,545	59,282	95,381	226,107
1991	33,118	44,088	76,150	94,361	158,523	403,929	22,149	36,072	57,939	78,321	131,256	18,485	27,140	52,374	65,334	102,902	231,966
1992	34,805	46,429	79,615	97,769	160,303	362,032	23,182	38,133	61,460	82,136	137,889	19,284	28,504	55,358	68,806	108,269	231,623
1993	34,655	46,482	80,491	99,126	163,983	366,548	22,828	37,979	61,857	82,911	141,475	18,868	28,239	55,573	68,969	109,703	237,693
1994	35,219	47,297	82,418	102,119	170,167	374,093	23,140	38,517	62,718	85,107	147,509	19,133	28,579	56,332	70,250	113,034	246,021
1995	35,481	47,815	84,310	105,563	179,501	395,073	23,147	38,691	63,058	87,078	155,548	19,156	28,551	56,944	71,360	118,002	259,717
1996	37,497	50,700	90,333	113,867	196,702	440,219	24,294	40,792	66,798	93,159	169,645	20,051	30,142	59,957	76,129	127,884	286,204
1997	39,662	53,845	97,358	123,651	217,950	495,015	25,480	42,967	71,065	100,077	187,165	20,986	31,645	63,356	81,308	140,303	318,660
1998	40,902	55,603	101,274	128,943	228,283	519,038	26,200	44,185	73,605	104,108	195,977	21,545	32,567	65,338	83,994	146,849	333,884
1999	43,514	59,429	111,044	143,936	267,531	650,723	27,600	46,526	78,152	113,037	224,954	22,680	34,309	69,265	89,374	164,258	399,530
2000	44,683	60,801	112,388	144,583	259,671	600,211	28,565	47,904	80,192	115,811	221,833	23,556	35,479	71,477	92,075	165,181	381,805
2001	47,810	65,197	121,948	160,373	307,588	780,939	30,424	51,009	83,522	123,570	254,993	25,004	37,459	74,743	95,522	183,123	464,933
2002	47,189	63,834	115,092	147,416	263,001	602,071	30,545	51,019	82,768	118,520	225,327	25,088	37,493	74,302	94,392	168,402	385,512
2003	45,468	61,662	113,940	148,129	282,366	843,385	29,273	48,593	79,751	114,569	220,031	24,164	36,072	71,973	92,056	160,770	431,870

Source: Computations based on tax statistics.

Notes: P99 denotes the income threshold required to belong to the top 1% of tax units; P99-100 is the average income of the top 1%;

P99-99.5 denotes the average income in the bottom half of the top percentile.

TABLE 5.D. Reference Totals for Workers, Portugal, 1936-2004

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

Source: See Appendix to Chapter 5.

Table 5.E.1. Top Earnings Shares in Portugal, 1964-2000, from Wage Tax information

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

Notes: Wage information taken from tabulations of the Imposto Profissional 1964-1982, and from tabulations of the Imposto sobre Rendimiento das Pessoas Singulares 1989-2000.
The results for 1964-1982 excludes Public Administration employees.

Table 5.E.2. Fractiles of Earnings in Portugal from tax statistics, 1989-2000

(amounts in 2000 Euros)

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

Source: withholdings at the source, income tax.

Table 5.F. Top Earnings Shares in Portugal from Administrative Records, 1985-2004

	Top 10%	Top 5%	Top 1%	Top .5%	Top .1%	Top .01%	Top 10-5%	Top 5-1%	Top 1-.5%	Top .5-1%	Top .1-.01%	Top .01%
	(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: Micro-data from Quadros de Pessoal

Table 5.F (continued). Earnings Shares in Portugal from Administrative Records, 1985-2004

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

Source: Micro-data from Quadros de Pessoal

Table 5.G. Fractiles of Earnings in Portugal from Administrative Records, 1985-2004

(amounts in 2000 Euros)

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

Source: Micro-data from Quadros de Pessoal

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

Table 5.G (continued). Fractiles of Earnings in Portugal from Administrative Records, 1985-2004

(amounts in 2000 Euros)

	Median Wage (1)	P10 (2)	P20 (3)	P30 (4)	P40 (5)	P50 (6)	P60 (7)	P70 (8)	P80 (9)	P90 (10)	P10-100 (11)	P20-100 (12)	P30-100 (13)	P40-100 (14)	P50-100 (15)	P60-100 (16)	P70-100 (17)	P80-100 (18)	P90-100 (19)	P10-20 (20)	P20-30 (21)	P30-40 (22)	P40-50 (23)	P50-60 (24)	P60-70 (25)	P70-80 (26)	P80-90 (27)
1985	5,270	2,897	3,740	4,139	4,674	5,270	5,955	7,039	8,673	11,520	7,199	7,671	8,204	8,836	9,608	10,607	11,991	14,087	18,231	3,428	3,931	4,407	4,970	5,605	6,447	7,791	9,932
1986	5,525	3,079	3,925	4,378	4,936	5,525	6,279	7,413	9,225	12,293	7,519	8,000	8,543	9,191	9,985	11,010	12,419	14,491	18,370	3,675	4,203	4,660	5,229	5,895	6,787	8,286	10,625
1987	5,782	3,297	4,097	4,655	5,153	5,782	6,540	7,803	9,777	12,996	7,931	8,440	9,017	9,707	10,556	11,657	13,177	15,402	19,567	3,850	4,403	4,874	5,456	6,149	7,089	8,722	11,230
1988	5,815	3,382	4,099	4,652	5,157	5,815	6,587	7,850	9,907	13,310	8,064	8,590	9,189	9,905	10,789	11,938	13,530	15,890	20,342	3,855	4,407	4,890	5,497	6,194	7,170	8,815	11,448
1989	5,807	3,425	4,052	4,549	5,149	5,807	6,574	7,831	9,814	13,419	8,083	8,617	9,227	9,962	10,868	12,042	13,665	16,109	20,830	3,814	4,345	4,821	5,436	6,171	7,176	8,779	11,394
1990																											
1991	6,132	3,781	4,323	4,856	5,416	6,132	7,147	8,585	10,833	15,120	9,008	9,621	10,340	11,209	12,294	13,712	15,687	18,712	24,760	4,101	4,586	5,130	5,785	6,614	7,787	9,634	12,661
1992	6,443	3,807	4,437	5,015	5,603	6,443	7,470	9,011	11,464	16,248	9,587	10,263	11,054	12,011	13,212	14,788	16,999	20,428	27,351	4,177	4,725	5,330	5,993	6,915	8,147	10,142	13,508
1993	6,558	3,891	4,459	5,106	5,733	6,558	7,607	9,181	11,756	16,463	9,797	10,498	11,313	12,298	13,532	15,153	17,423	20,947	28,119	4,176	4,787	5,401	6,132	7,037	8,346	10,363	13,769
1994	6,665	4,092	4,581	5,213	5,839	6,665	7,725	9,347	12,063	16,803	10,021	10,739	11,573	12,581	13,843	15,511	17,857	21,496	28,873	4,280	4,926	5,546	6,295	7,200	8,506	10,624	14,175
1995	6,751	4,144	4,710	5,267	5,928	6,751	7,787	9,403	12,110	16,923	9,998	10,703	11,518	12,506	13,743	15,373	17,659	21,169	28,119	4,344	4,996	5,585	6,321	7,219	8,515	10,632	14,214
1996	6,935	4,222	4,844	5,413	6,101	6,935	7,968	9,659	12,441	17,528	10,351	11,084	11,932	12,963	14,256	15,967	18,375	22,102	29,531	4,442	5,138	5,717	6,472	7,384	8,707	10,878	14,615
1997	6,967	4,283	4,910	5,478	6,130	6,967	8,027	9,728	12,586	17,721	10,399	11,133	11,980	13,010	14,303	16,014	18,414	22,111	29,400	4,508	5,197	5,799	6,540	7,459	8,808	11,017	14,817
1998	7,172	4,328	5,072	5,648	6,335	7,172	8,302	10,068	12,967	18,233	10,716	11,467	12,341	13,403	14,734	16,497	18,961	22,739	30,233	4,700	5,368	5,985	6,767	7,707	9,131	11,437	15,288
1999	7,211	4,403	5,123	5,721	6,419	7,211	8,397	10,085	13,001	18,515	10,850	11,607	12,490	13,565	14,914	16,700	19,208	23,102	30,828	4,755	5,430	6,050	6,831	7,785	9,188	11,439	15,399
2000	7,395	4,455	5,237	5,817	6,549	7,395	8,572	10,367	13,317	19,162	11,145	11,930	12,846	13,959	15,358	17,207	19,807	23,867	31,851	4,858	5,509	6,158	6,960	7,959	9,399	11,678	15,872
2001																											
2002	7,561	4,507	5,310	5,930	6,653	7,561	8,811	10,618	13,645	19,555	11,496	12,320	13,277	14,444	15,914	17,856	20,593	24,895	33,563	4,887	5,604	6,263	7,078	8,130	9,626	11,964	16,194
2003	7,507	4,472	5,255	5,884	6,591	7,507	8,758	10,509	13,547	19,686	11,467	12,295	13,256	14,428	15,905	17,862	20,631	25,009	33,828	4,821	5,554	6,209	7,025	8,061	9,530	11,849	16,152
2004	7,506	4,480	5,232	5,854	6,617	7,506	8,786	10,544	13,578	19,717	11,520	12,354	13,326	14,512	16,004	17,974	20,765	25,184	34,121	4,833	5,546	6,217	7,047	8,126	9,601	11,927	16,248

Source: Micro-data from Quadros de Pessoal

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

Table 5.H. Sample Size of Administrative Records on Earnings (Quadros de Pessoal)

	Total	employers		family employees with no salary		employees				cooperative workers				not classified/unknown	
						male		female		male		female			
		male	female	male	female	with wage>0	with wage=0	with wage>0	with wage=0	with wage>0	with wage=0	with wage>0	with wage=0	male	female
1985	1,898,675	82,663	19,027	976	1,356	1,104,845	79,250	528,009	64,493	9,490	2,983	2,580	1,236	1,254	513
1986	1,897,785	83,892	19,817	860	1,290	1,094,060	77,133	550,834	52,262	8,188	3,366	2,327	1,166	1,750	840
1987	1,936,801	85,253	21,141	662	1,097	1,105,821	78,564	573,813	55,463	6,806	2,575	2,438	1,099	1,262	807
1988	1,996,802	93,432	24,136	686	1,047	1,121,151	80,378	606,739	55,665	6,882	2,142	2,012	888	1,028	616
1989	2,169,830	101,460	27,651	724	1,145	1,198,466	83,661	680,583	57,940	6,217	1,615	2,365	647	4,597	2,759
1990															
1991	2,233,237	90,878	27,058	637	873	1,195,350	103,478	727,548	71,625	2,620	1,078	1,077	299	6,676	4,040
1992	2,268,151	95,443	29,406	621	679	1,198,749	103,558	751,613	74,201	1,826	513	867	266	6,018	4,391
1993	2,215,481	103,500	32,352	624	719	1,171,876	88,442	742,880	63,605	1,878	225	673	158	5,119	3,430
1994	2,202,609	117,618	38,950	596	961	1,145,881	64,264	770,379	53,823	1,775	263	882	164	4,353	2,700
1995	2,232,548	122,864	41,819	426	701	1,152,821	64,979	787,793	56,912	1,937	578	799	259	373	287
1996	2,233,713	124,219	42,207	361	544	1,147,364	65,979	790,255	58,996	1,470	357	527	244	718	472
1997	2,350,782	131,153	47,232	411	494	1,213,279	43,980	869,752	41,982	1,179	94	635	61	271	259
1998	2,430,691	129,395	47,812	468	624	1,235,909	58,428	897,502	58,505	785	105	377	74	396	311
1999	2,568,456	137,240	51,352	505	865	1,290,837	63,948	955,045	65,844	1,077	63	553	35	742	350
2000	2,688,957	159,716	59,846	605	1,204	1,330,450	63,465	1,004,942	65,905	1,182	64	466	63	587	462
2001															
2002	2,820,772	181,613	69,180	615	961	1,409,744	55,294	1,043,322	56,606	1,100	87	433	26	1,048	743
2003	2,855,599	165,553	65,505	584	857	1,429,443	49,693	1,086,496	52,420	1,165	81	640	27	1,817	1,318
2004	2,912,304	155,817	63,507	811	1,090	1,471,350	45,106	1,119,361	50,829	909	69	425	68	1,767	1,195

Source: Micro-data from Quadros de Pessoal.

Table 5.I. Composition of Top Incomes under Old Income Tax 1946-1963

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

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

Table 5.J. Tax Scale. Portugal: 1922-1932

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

Table 5.J (continued). Tax Scale Imposto Complementar 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 (%)
10,000	11,000	0.18	61,000	62,000	2.14	112,000	113,000	3.46	163,000	164,000	4.36
11,000	12,000	0.33	62,000	63,000	2.49	113,000	114,000	3.48	164,000	165,000	4.38
12,000	13,000	0.46	63,000	64,000	2.52	114,000	115,000	3.50	165,000	166,000	4.40
13,000	14,000	0.57	64,000	65,000	2.54	115,000	116,000	3.52	166,000	167,000	4.42
14,000	15,000	0.67	65,000	66,000	2.56	116,000	117,000	3.53	167,000	168,000	4.43
15,000	16,000	0.78	66,000	67,000	2.58	117,000	118,000	3.55	168,000	169,000	4.45
16,000	17,000	0.88	67,000	68,000	2.60	118,000	119,000	3.57	169,000	170,000	4.47
17,000	18,000	0.97	68,000	69,000	2.62	119,000	120,000	3.58	170,000	171,000	4.49
18,000	19,000	1.05	69,000	70,000	2.64	120,000	121,000	3.60	171,000	172,000	4.51
19,000	20,000	1.12	70,000	71,000	2.66	121,000	122,000	3.62	172,000	173,000	4.52
20,000	21,000	1.19	71,000	72,000	2.68	122,000	123,000	3.64	173,000	174,000	4.54
21,000	22,000	1.25	72,000	73,000	2.70	123,000	124,000	3.66	174,000	175,000	4.56
22,000	23,000	1.30	73,000	74,000	2.72	124,000	125,000	3.68	175,000	176,000	4.57
23,000	24,000	1.35	74,000	75,000	2.73	125,000	126,000	3.70	176,000	177,000	4.59
24,000	25,000	1.40	75,000	76,000	2.76	126,000	127,000	3.72	177,000	178,000	4.61
25,000	26,000	1.44	76,000	77,000	2.78	127,000	128,000	3.73	178,000	179,000	4.62
26,000	27,000	1.48	77,000	78,000	2.80	128,000	129,000	3.75	179,000	180,000	4.64
27,000	28,000	1.52	78,000	79,000	2.82	129,000	130,000	3.77	180,000	181,000	4.66
28,000	29,000	1.55	79,000	80,000	2.84	130,000	131,000	3.79	181,000	182,000	4.68
29,000	30,000	1.58	80,000	81,000	2.86	131,000	132,000	3.80	182,000	183,000	4.69
30,000	31,000	1.63	81,000	82,000	2.88	132,000	133,000	3.82	183,000	184,000	4.71
31,000	32,000	1.67	82,000	83,000	2.90	133,000	134,000	3.84	184,000	185,000	4.73
32,000	33,000	1.71	83,000	84,000	2.92	134,000	135,000	3.85	185,000	186,000	4.75
33,000	34,000	1.75	84,000	85,000	2.94	135,000	136,000	3.87	186,000	187,000	4.76
34,000	35,000	1.79	85,000	86,000	2.96	136,000	137,000	3.89	187,000	188,000	4.78
35,000	36,000	1.82	86,000	87,000	2.98	137,000	138,000	3.91	188,000	189,000	4.80
36,000	37,000	1.85	87,000	88,000	2.99	138,000	139,000	3.93	189,000	190,000	4.82
37,000	38,000	1.88	88,000	89,000	3.01	139,000	140,000	3.95	190,000	191,000	4.83
38,000	39,000	1.91	89,000	90,000	3.03	140,000	141,000	3.96	191,000	192,000	4.85
39,000	40,000	1.94	90,000	91,000	3.05	141,000	142,000	3.98	192,000	193,000	4.86
40,000	41,000	1.96	91,000	92,000	3.07	142,000	143,000	4.00	193,000	194,000	4.88
41,000	42,000	1.99	92,000	93,000	3.09	143,000	144,000	4.02	194,000	195,000	4.90
42,000	43,000	2.01	93,000	94,000	3.11	144,000	145,000	4.03	195,000	196,000	4.91
43,000	44,000	2.03	94,000	95,000	3.13	145,000	146,000	4.05	196,000	197,000	4.93
44,000	45,000	2.06	95,000	96,000	3.15	146,000	147,000	4.07	197,000	198,000	4.94
45,000	46,000	2.09	96,000	97,000	3.17	147,000	148,000	4.08	198,000	199,000	4.96
46,000	47,000	2.12	97,000	98,000	3.19	148,000	149,000	4.10	199,000	200,000	4.97
47,000	48,000	2.15	98,000	99,000	3.21	149,000	150,000	4.12			
48,000	49,000	2.17	99,000	100,000	3.22	150,000	151,000	4.14	For income above 200,000 escudos		
49,000	50,000	2.20	100,000	101,000	3.24	151,000	152,000	4.15	the tax rate = 8.5-705/(income/1,000)		
50,000	51,000	2.23	101,000	102,000	3.26	152,000	153,000	4.17			
51,000	52,000	2.25	102,000	103,000	3.28	153,000	154,000	4.19			
52,000	53,000	2.27	103,000	104,000	3.29	154,000	155,000	4.21			
53,000	54,000	2.30	104,000	105,000	3.31	155,000	156,000	4.23			
54,000	55,000	2.32	105,000	106,000	3.33	156,000	157,000	4.24			
55,000	56,000	2.34	106,000	107,000	3.35	157,000	158,000	4.26			
56,000	57,000	2.36	107,000	108,000	3.37	158,000	159,000	4.28			
57,000	58,000	2.38	108,000	109,000	3.39	159,000	160,000	4.30			
58,000	59,000	2.40	109,000	110,000	3.41	160,000	161,000	4.31			
59,000	60,000	2.42	110,000	111,000	3.43	161,000	162,000	4.33			
60,000	61,000	2.44	111,000	112,000	3.45	162,000	163,000	4.35			

Table 5.J (continued). Tax Scale Imposto Complementar 1946-1978

1946-1963			1964-1968			1969-1972			1973-1974			1975-1978		
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 (%)
50,000	100,000	3.0	50,000	100,000	3.0		50,000	3.0		50,000	3.0		50,000	4.0
100,000	150,000	4.0	100,000	150,000	4.0	50,000	100,000	4.0	50,000	100,000	4.5	50,000	100,000	6.0
150,000	200,000	5.0	150,000	200,000	5.0	100,000	150,000	5.0	100,000	150,000	6.0	100,000	200,000	8.0
200,000	250,000	6.0	200,000	250,000	6.0	150,000	200,000	6.0	150,000	200,000	8.0	200,000	300,000	14.0
250,000	300,000	7.0	250,000	300,000	7.0	200,000	250,000	7.0	200,000	250,000	10.0	300,000	400,000	20.0
300,000	350,000	8.0	300,000	350,000	8.0	250,000	300,000	8.5	250,000	300,000	12.0	400,000	500,000	26.0
350,000	400,000	9.0	350,000	400,000	9.0	300,000	350,000	10.0	300,000	350,000	14.0	500,000	600,000	34.0
400,000	450,000	10.0	400,000	450,000	10.0	350,000	400,000	11.5	350,000	400,000	17.0	600,000	700,000	42.0
450,000	500,000	11.0	450,000	500,000	11.0	400,000	450,000	13.0	400,000	450,000	20.0	700,000	800,000	50.0
500,000	550,000	12.0	500,000	550,000	12.0	450,000	500,000	14.5	450,000	500,000	23.0	800,000	900,000	60.0
550,000	600,000	13.0	550,000	600,000	13.0	500,000	550,000	16.0	500,000	550,000	26.0	900,000	1,000,000	70.0
600,000	650,000	14.0	600,000	650,000	14.0	550,000	600,000	17.5	550,000	600,000	29.0	1,000,000		80.0
650,000	700,000	15.0	650,000	700,000	15.0	600,000	650,000	19.0	600,000	650,000	32.0			
700,000	750,000	16.0	700,000	750,000	16.0	650,000	700,000	21.0	650,000	700,000	35.0			
750,000	800,000	17.0	750,000	800,000	17.0	700,000	750,000	23.0	700,000	750,000	38.0			
800,000	850,000	18.0	800,000	850,000	18.0	750,000	800,000	25.0	750,000	800,000	41.0			
850,000	900,000	19.0	850,000	900,000	19.0	800,000	850,000	27.0	800,000	850,000	44.0			
900,000	950,000	20.0	900,000	950,000	20.0	850,000	900,000	29.0	850,000	900,000	48.0			
950,000	1,000,000	21.0	950,000	1,000,000	21.0	900,000	950,000	31.0	900,000	950,000	52.0			
1,000,000	1,050,000	22.0	1,000,000	1,050,000	22.0	950,000	1,000,000	33.0	950,000	1,000,000	56.0			
1,050,000	1,100,000	23.0	1,050,000	1,100,000	23.0	1,000,000	1,050,000	35.0	1,000,000	1,050,000	60.0			
1,100,000	1,150,000	24.0	1,100,000	1,150,000	24.0	1,050,000	1,100,000	37.0	1,050,000	1,100,000	64.0			
1,150,000	1,200,000	25.0	1,150,000	1,200,000	25.0	1,100,000	1,150,000	39.0	1,100,000	1,150,000	68.0			
1,200,000	1,250,000	26.0	1,200,000	1,250,000	26.0	1,150,000	1,200,000	41.0	1,150,000	1,200,000	72.0			
1,250,000	1,300,000	27.0	1,250,000	1,300,000	27.0	1,200,000	1,250,000	43.0	1,200,000	1,250,000	76.0			
1,300,000	1,350,000	28.0	1,300,000	1,400,000	28.0	1,250,000	1,300,000	45.0	1,250,000		80.0			
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		30.0	1,500,000	1,600,000	30.0	1,350,000	1,400,000	49.0						
			1,600,000	1,700,000	31.0	1,400,000	1,450,000	51.0						
			1,700,000	1,800,000	32.0	1,450,000	1,500,000	53.0						
			1,800,000	1,900,000	33.0	1,500,000		55.0						
			1,900,000	2,000,000	34.0									
			2,000,000	2,100,000	35.0									
			2,100,000	2,200,000	36.0									
			2,200,000	2,300,000	37.0									
			2,300,000	2,400,000	38.0									
			2,400,000	2,500,000	39.0									
			2,500,000	2,600,000	40.0									
			2,600,000	2,700,000	41.0									
			2,700,000	2,800,000	42.0									
			2,800,000	2,900,000	43.0									
			2,900,000	3,000,000	44.0									
			3,000,000		45.0									

Table 5.J (continued). Tax Scale Imposto Complementar 1979-1982

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

Table 5.J (continued). Tax Scale Imposto Complementar 1983-1988

for married couples

1983 Range (escudos)		1983 Rates (%)	1984 Range (escudos)		1984 Rates (%)	1985 Range (escudos)		1985 Rates (%)	1986-1987 Range (escudos)		1986-1987 Rates (%)	1988 Range (escudos)		1988 Rates (%)
	220,000	4.0		280,000	4.0		320,000	4.0		350,000	4.0		375,000	4.0
220,000	440,000	6.0	280,000	550,000	6.0	320,000	630,000	6.0	350,000	690,000	6.0	375,000	740,000	6.0
440,000	720,000	8.0	550,000	900,000	8.0	630,000	1,040,000	8.0	690,000	1,140,000	8.0	740,000	1,220,000	8.0
720,000	1,080,000	14.0	900,000	1,350,000	14.0	1,040,000	1,550,000	12.0	1,140,000	1,700,000	12.0	1,220,000	1,820,000	12.0
1,080,000	1,300,000	20.0	1,350,000	1,650,000	20.0	1,550,000	1,900,000	18.0	1,700,000	2,070,000	18.0	1,820,000	2,215,000	18.0
1,300,000	1,900,000	26.0	1,650,000	2,350,000	26.0	1,900,000	2,700,000	24.0	2,070,000	2,950,000	24.0	2,215,000	3,160,000	24.0
1,900,000	2,500,000	34.0	2,350,000	3,100,000	34.0	2,700,000	3,530,000	30.0	2,950,000	3,850,000	30.0	3,160,000	4,120,000	30.0
2,500,000	3,100,000	42.0	3,100,000	3,900,000	42.0	3,530,000	4,450,000	36.0	3,850,000	4,850,000	36.0	4,120,000	5,190,000	36.0
3,100,000	3,700,000	50.0	3,900,000	4,600,000	50.0	4,450,000	5,250,000	42.0	4,850,000	5,720,000	42.0	5,190,000	6,120,000	42.0
3,700,000	4,300,000	60.0	4,600,000	5,300,000	60.0	5,250,000	6,050,000	48.0	5,720,000	6,590,000	48.0	6,120,000	7,050,000	48.0
4,300,000	-	70.0	5,300,000	-	70.0	6,050,000	-	50.0	6,590,000	-	50.0	7,050,000	-	50.0

for single individuals

1983 Range (escudos)		1983 Rates (%)	1984 Range (escudos)		1984 Rates (%)	1985 Range (escudos)		1985 Rates (%)	1986-1987 Range (escudos)		1986-1987 Rates (%)	1988 Range (escudos)		1988 Rates (%)
	180,000	4.8		230,000	4.8		270,000	4.8		295,000	4.8		315,000	4.8
180,000	360,000	7.2	230,000	450,000	7.2	270,000	520,000	7.2	295,000	570,000	7.2	315,000	610,000	7.2
360,000	600,000	9.6	450,000	750,000	9.6	520,000	870,000	9.6	570,000	950,000	9.6	610,000	1,015,000	9.6
600,000	840,000	14.4	750,000	1,050,000	14.4	870,000	1,210,000	14.4	950,000	1,320,000	14.4	1,015,000	1,415,000	14.4
840,000	1,080,000	21.6	1,050,000	1,350,000	21.6	1,210,000	1,560,000	21.6	1,320,000	1,700,000	21.6	1,415,000	1,820,000	21.6
1,080,000	1,580,000	31.2	1,350,000	1,950,000	31.2	1,560,000	2,240,000	28.8	1,700,000	2,440,000	28.8	1,820,000	2,610,000	28.8
1,580,000	2,080,000	40.8	1,950,000	2,600,000	40.8	2,240,000	2,960,000	36.0	2,440,000	3,230,000	36.0	2,610,000	3,465,000	36.0
2,080,000	2,580,000	50.4	2,600,000	3,200,000	50.4	2,960,000	3,650,000	43.2	3,230,000	3,980,000	43.2	3,465,000	4,260,000	43.2
2,580,000	3,080,000	60.0	3,200,000	3,850,000	60.0	3,650,000	4,400,000	50.4	3,980,000	4,800,000	50.4	4,260,000	5,135,000	50.4
3,080,000	3,580,000	72.0	3,850,000	4,450,000	64.8	4,400,000	5,000,000	57.6	4,800,000	5,450,000	57.6	5,135,000	5,830,000	57.6
3,580,000	-	80.0	4,450,000	-	70.0	5,000,000	-	60.0	5,450,000	-	60.0	5,830,000	-	60.0

Table 5.J (continued). Tax Scale Imposto sobre a Renda das Pessoas Fisicas 1989-2003

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

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

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

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

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

Table 5.K. Income Tax in Portugal 1922-2003

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

Table 5.K. Income Tax in Portugal 1922-2003

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

Table 5.K. Income Tax in Portugal 1922-2003

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

Table 5.K. Income Tax in Portugal 1922-2003

Tax Denomination	Period	Exempted income (escudos until 2001, euros since 2002)	Main Deductions from Gross Income (escudos until 2001, euros since 2002)	Main deductions from tax (escudos until 2001, euros since 2002)	Joint Filing
	2003	after-tax wage income cannot be below 120% of the highest national minimum wage	72% of the highest minimum wage mortgage interests to purchase main residence education expenses, life and other insurances pension up to 7,961.71	pension up to 7,805.60 single: 60% of monthly minimum wage married: 50% of monthly minimum wage x2 dependant: 40% of monthly minimum wage each	mandatory splitting