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# House Price Cycles, Wealth Inequality and Portfolio Reshuffling

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**Abstract**

Business cycle dynamics can shape the wealth distribution through asset price changes, saving responses, or a combination of both. This paper studies the implications of housing booms and busts for wealth inequality, examining two episodes over the last four decades in Spain. I combine fiscal data with household surveys and national accounts to reconstruct the entire wealth distribution and develop a new asset-specific decomposition of wealth accumulation to disentangle the main forces behind wealth inequality dynamics (e.g., capital gains, saving rates). I find that the top 10% wealth share drops during housing booms, but the decreasing pattern reverts during busts. Differences in capital gains across wealth groups appear to be the main drivers of the decline in wealth concentration during booms. In contrast, persistent differences in saving rates across wealth groups and portfolio reshuffling towards financial assets among top wealth holders are the main explanatory forces behind the reverting evolution during housing busts. I show that the heterogeneity in saving responses is largely driven by differences in portfolio adjustment frictions across wealth groups and that tax incentives can exacerbate this differential behavior. Using a novel personal income and wealth tax panel, I explore the role of tax incentives exploiting quasi-experimental variation created by a large capital income tax reform in a differences-in-differences setting. I find that capital income tax cuts, largely benefiting top wealth holders, explain on average 60% of the increase in the top 10% wealth share during the recent housing bust. These results provide novel empirical evidence to enrich macroeconomic theories of wealth inequality over the business cycle.

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# I Introduction

The evolution and determinants of wealth inequality are currently at the center of the academic and political debate. This renewed interest is largely motivated by two well-established empirical facts. First, household wealth has grown faster than national income in the last four decades, with similar levels and trends across advanced economies (Piketty and Zucman [2014]). Second, wealth concentration trends have diverged over the same period of time, rising, for instance, much faster in the US than in continental Europe (Alvaredo et al. [2018b]). Despite this recent progress, little is known on the complex interaction between the evolution of aggregate household wealth and its distribution. These interactions are of particular importance during asset booms and busts. Wealth levels and portfolio composition along the distribution might significantly change—either mechanically through asset price changes, saving responses, or a combination of both—and consequently, trends in medium to long-term wealth inequality could revert. Wealth inequality matters in the determination of aggregates such as consumption (Carroll et al. [2014], Krueger et al. [2016]). Thus, understanding the determinants of wealth inequality dynamics at different phases of the economic cycle is of interest to gauge the risks of business cycles and set appropriate stabilization policies. The extent to which these dynamics are purely mechanical or respond to changes in saving behavior is still an open question.

The dynamics of wealth inequality are even more relevant during housing booms and busts. Housing is the main asset in most individual portfolios (Saez and Zucman [2016], Garbinti et al. [2018a]) and it forms the lion's share of total return on aggregate wealth (Jordà et al. [2019]). Moreover, the recent rise in household wealth to national income ratios has been mainly driven by capital gains on housing (Piketty and Zucman [2014], Artola Blanco et al. [2019]). Analyzing the implications of house price cycles for wealth inequality is, however, an empirical challenge. This is likely due to the difficulty of finding settings with multiple housing ups and downs episodes, that make it possible to generalize the results, and with sufficiently rich data sources. Evidence on the interaction between large house price fluctuations and wealth inequality has thus so far been elusive.

This paper breaks new grounds on these issues by studying how housing booms and busts shape the wealth distribution. I examine the Spanish context, an ideal laboratory since the country has experienced two housing booms (1985-1991, 1998-2007) and busts (1992-1995, 2008-2014) in the last forty years and it has reliable statistics on individual asset ownership going back to the 1980s. I combine individual tax returns, with household surveys and national accounts to reconstruct the entire wealth distribution. I then develop a novel asset-specific decomposition of wealth accumulation that I use to identify the key forces (e.g., capital gains, saving rates) behind the observed wealth inequality dynamics. This new decomposition is critical to better understand saving responses, which have attracted much less scrutiny than asset prices in the

analysis of wealth inequality dynamics over the business cycle (Kuhn et al. [2018]). Lastly, I examine several candidate explanations behind the observed saving dynamics: heterogeneity in portfolio adjustment frictions, real estate market dynamics and tax incentives. I explore the latter in more depth exploiting a novel personal income and wealth tax panel and quasi-experimental variation created by a large reform in the Spanish personal income tax during the recent house price cycle. In conjunction, these analyses provide novel ingredients to generate realistic wealth dynamics in quantitative models of wealth inequality (Achdou et al. [2017], Benhabib and Bisin [2018], De Nardi and Fella [2017], Gomez [2019], Hubmer et al. [2019]).

The backbone of this study is the measurement of the wealth distribution. In Spain, wealth tax returns only cover the very top of the wealth distribution and wealth surveys are only available since the 2000s. I thus rely on the capitalization method—recently used by Saez and Zucman [2016] to reconstruct the US wealth distribution—to recover the entire wealth distribution going back to the 1980s. This approach involves the application of a capitalization factor to the distribution of capital income from tax records to arrive at an estimate of the wealth distribution. Capitalization factors are computed for each asset in such a way as to map the total flow of taxable income to total wealth recorded in national accounts. To ensure full consistency with national accounts, I then account for assets and individuals that do not generate taxable income flows by means of household surveys, following the mixed capitalization-survey method recently developed by Garbinti et al. [2018a]. Wealth distribution series have been found to be sensitive to the assumption of constant capitalization factors by asset class in the US context (Smith et al. [2019]). I perform numerous robustness checks with wealth tax returns and household surveys to make sure that the mixed capitalization-survey method derives credible estimates in terms of levels, asset composition and trends of the Spanish wealth distribution. Overall, this series constitutes an ideal basis to understand the dynamics of wealth inequality during housing booms and busts.

The new wealth distribution series shows that the top 10% wealth share declines during housing booms—to the benefit of the bottom 50% wealth group and even more of the middle 40% wealth group—but the decreasing pattern reverts during housing busts. These findings hold in both episodes (1985-1995, 1998-2014). I also show that these results apply to the house price cycle of the early 2000s in France and the US using the wealth distribution series of Garbinti et al. [2018a] and Saez and Zucman [2016], respectively. The international resemblance in the dynamics is because of similar asset composition along the distribution. As in France and the US, bottom deciles in Spain own mostly financial assets in the form of cash and deposits, whereas primary residence is the main form of wealth for the middle of the distribution. As we move toward the top 10% and the top 1% of the distribution, unincorporated business assets, other owner-occupied and tenant-occupied housing gain importance, and financial assets—mainly equities—gradually

become the dominant form of wealth.

I develop a new asset-specific decomposition of wealth accumulation that I use in combination with the wealth distribution series to run simulation exercises and analyze whether the observed dynamics are purely mechanical—due to differences in asset prices—or driven by other forces. This is an extension of the standard wealth accumulation decomposition used by Saez and Zucman [2016] in which the three forces driving wealth inequality dynamics are differences in labor income, rate of return and saving rates across the distribution.[1] The novelty of this decomposition is that it breaks down the composition of savings by asset class (i.e., housing, unincorporated business assets, financial assets), making it possible to improve our understanding of saving dynamics across wealth groups, especially during asset booms and busts.

My findings suggest that differences in capital gains are the main drivers of wealth inequality dynamics during housing booms, while differences in saving behavior are the main forces during housing busts. I show that capital gains contribute to reducing wealth concentration levels during booms for two main reasons. First, middle and bottom wealth groups have a larger share of housing in their portfolio. Second, capital gains on housing are higher on average than on financial assets. However, differences in capital gains do not seem to explain why top wealth concentration patterns revert, given that rates of capital gain almost fully converge across wealth groups during housing busts. Instead, persistent differences in saving rates across wealth groups and portfolio reshuffling towards financial assets among top wealth holders appear to be the main explanatory forces behind the reverting pattern in wealth concentration during housing busts.[2] The results hold for both house price cycle episodes (1985-1995, 1998-2014). Using wealth surveys, I document that large changes in the composition of savings among top wealth holders during housing busts are not only due to channeling new saving towards financial assets, but also due to dissaving in housing (i.e., tenant-occupied housing). I perform the same asset-specific decomposition with the French (Garbinti et al. [2018a]) and US wealth distribution series (Saez and Zucman [2016]) and show that these findings also apply to the house price cycle of the early 2000s in France and the US. Hence, these results are not specific to the Spanish context and seem to generally hold for housing booms and busts episodes.

Lastly, I explore potential mechanisms behind the heterogeneity in saving behavior along the wealth distribution during housing busts. I focus on three main candidate explanations: differences in portfolio adjustment frictions, real estate market dynamics and tax incentives. Contrary to middle and bottom wealth holders, I show that it is easier for top wealth holders

[1] Note that the rate of return is the sum of the flow return and the rate of capital gain.

[2] Persistent differences in flow rates of return across the whole distribution perpetuate the high levels of long-run wealth concentration. Nonetheless, because trends are quite similar across wealth groups, they do not seem to be the main drivers of wealth inequality dynamics during housing booms and busts. Labor income inequality does not strike as an important factor either, since labor income shares remain quite stable along the wealth distribution.

to reshuffle their portfolio towards financial assets because they are subject to fewer broadly defined portfolio adjustment frictions. First, top wealth holders have higher savings, so that they have fewer difficulties to incur in transaction costs (e.g., capital gains taxes) associated to selling real estate. Second, top wealth holders have lower indebtedness attached to real estate. Consequently, when it comes to sell, they are less constrained by the evolution of the value of their property relative to the value of their mortgage. Third, top wealth holders have much larger holdings of real estate for investment purposes (i.e., tenant-occupied housing). Contrary to housing for consumption purposes (i.e., primary residence), housing for investment is not subject to additional transaction costs such as those concerning moving to another property. Hence, top wealth holders can liquidate these types of properties more easily.

Real estate market dynamics could be a competing explanation for the larger portfolio reshuffling among top wealth holders during housing busts. Both housing demand and housing prices could evolve differently across time and space affecting wealth groups in an heterogeneous manner. If the dynamics of the real estate market are such that there is a higher demand for the type of properties owned by top wealth holders during the housing bust, this could explain why they managed to dissave more in real estate. Using wealth surveys, I document that indeed primary residences and other properties owned by bottom and middle wealth holders have different characteristics (e.g., value, size) than properties owned by the top. However, using information (e.g., number of listings, number of contacts received by listing, offer price) on the universe of 2009 property listings from the largest Spanish commercial real estate website, I find that the demand for housing was not significantly different in districts with the highest average house price versus the rest of districts.[3] Furthermore, top wealth holders might have decided to dissave relatively more in housing than middle and bottom wealth holders if the value of their properties had not declined or had declined less. Nonetheless, I show that top wealth holders live in municipalities whose average house price has experienced a similar evolution to municipalities in which bottom and middle wealth holders reside. This evidence suggests that real estate market dynamics are not driving the differential saving behavior across wealth groups during housing busts.

I also document that institutional factors such as tax incentives can exacerbate differences in saving behavior along the wealth distribution. In particular, I examine a large reform introduced in 2007 on the Spanish personal income tax aimed at incentivizing saving on financial assets. Financial income (i.e., interest, dividends, short-term capital gains) that used to be taxed under a progressive tax schedule with the rest of income components, started to be taxed at a flat rate of 18%. The reform implied substantial tax variation across individuals, largely benefiting top

[3]The demand index I use is directly elaborated by the commercial real estate company (*El Idealista*). It is based on the number of e-mails received by listing normalized by a factor, to make it comparable across space and time.

wealth holders. Using a novel personal income and wealth tax panel, I exploit quasi-experimental variation created by the reform to estimate behavioral responses to the Spanish personal income tax in a differences-in-differences setting. I compare the evolution of reported interest income for individuals who experience a tax cut (treatment group) with individuals who experience a slight tax increase (control group) after the reform.[4] I find that interest income increased on average 76% more for individuals who experienced a tax cut relative to those who experience a slightly tax increase. The effect is increasing with the size of the tax cut. Counterfactual simulations with the wealth distribution series reveal that the capital income tax reform explains on average 60% of the growth rate in the top 10% wealth share during the recent housing bust. In conjuction, these analyses suggest that portfolio adjustment frictions appear to be the most plausible explanation for the differential saving behavior across wealth groups during housing busts and that behavioral responses to tax incentives can exacerbate this behavior.[5]

This paper contributes to four main literatures. First, there is a nascent theoretical and empirical literature analyzing the determinants of wealth inequality dynamics (Bach et al. [2018a], Bach et al. [2018b], Fagereng et al. [2019a], Fagereng et al. [2019b], Gomez [2019], Hubmer et al. [2019], Kuhn et al. [2018]). While these studies have mainly focused on the implications of asset prices and rates of return for wealth inequality, my results reveal that behavioral components, and in particular saving responses, are also important factors behind wealth inequality dynamics. To my knowledge, this is the first study documenting how changes in the composition of savings across wealth groups shape the wealth distribution over the business cycle. Moreover, these studies have barely documented or explained why saving rates change in the way they do. This paper moves one step forward and uses quasi-experimental evidence from a large Spanish reform to quantify for the first time by how much capital income tax cuts contribute to changes in saving behavior and wealth concentration.

Second, this work also relates to the literature measuring wealth distributions (Alvaredo et al. [2018a], Garbinti et al. [2018a], Kopczuk and Saez [2004], Kuhn et al. [2018], Roine

[4] I focus on interest because dividends and capital gains are quite volatile and even more so during the crisis, so that any type of saving response is very hard to identify.

[5] I also briefly discuss other candidate explanations: differences in risk aversion, financial literacy, financial advisory and expectations on house prices. First, using Spanish wealth surveys I show that the fraction of households reporting not to be willing to take any financial risk is significantly lower for the top 10% wealth group relative to the middle 40% wealth group and even lower relative to the bottom 50% wealth group. Second, using a Spanish survey of financial competences I document that both financial knowledge and independent financial advising are positively correlated with economic outcomes, such as income. Thus, top wealth holders might have reshuffled their portfolio more during the housing bust because they were less risk averse or more financially informed. Nonetheless, differences in risk aversion, financial knowledge and financial advising seem to only explain why bottom and middle wealth holders did not invest as much as top wealth holders in risky financial assets (i.e., stocks), but not why they did not invest as much on safe financial assets (i.e., deposits). Little financial knowledge or advice is needed to invest in safe financial assets, especially deposits. Third, top wealth holders could have also dissaved more in housing if they had more pessimistic expectations about the future evolution of house prices. However, Bover [2015] finds using survey data no significant association of such beliefs with wealth during the recent housing bust.

and Waldenström [2009], Saez and Zucman [2016], Smith et al. [2019]). These studies have documented long-term wealth inequality trends, but abstracting from cyclical effects. This paper is the first to provide comprehensive long-term evidence on how housing booms and busts shape the wealth distribution. Kuhn et al. [2018] have recently shown that housing booms lead to substantial wealth gains for leveraged middle-class households in the US. However, the extent to which this pattern persists or not throughout housing busts has received much less attention so far. In Spain, the wealth distribution has been analyzed in the past using wealth tax records (Alvaredo and Saez [2009]) and wealth survey data (Anghel et al. [2018]), but the coverage in terms of distribution and time span was limited. The new wealth distribution series constructed in this paper covers the full distribution over the period 1984-2015 and provides complete long-run evidence on the evolution of wealth inequality over the last four decades in Spain.

Third, I also contribute to the literature studying how inequality evolves over the business cycle (Barlevy and Tsiddon [2006], Bonhomme and Hospido [2017], Castañeda et al. [1998], Heathcote et al. [2010], Kuznets and Jenks [1953], Storesletten et al. [2004]). These studies find that income inequality is countercyclical—with some exceptions at the top of the income distribution—but they do not analyze the implications of cyclical effects for wealth inequality.[6] This paper shows that wealth inequality is also countercyclical in the context of housing booms and busts.

Finally, this study contributes to the literature on housing and portfolio choice (Campbell [2006], Chetty et al. [2017], Cocco [2004], Guiso et al. [2002]). These studies analyze the role played by housing in the portfolio decisions of households, but they abstract from the implications of these decisions for wealth inequality. The results of this paper emphasize the importance of portfolio choice and in particular, differences in portfolio rebalancing across wealth groups, in shaping wealth inequality dynamics.

The layout of the paper is as follows. Section II discusses the concepts, data and methodology used to construct the wealth distribution series. In Section III, I first present the main patterns in real house prices and aggregate wealth and I then analyze wealth inequality dynamics during housing booms and busts. Lastly, I develop a new asset-specific decomposition of wealth accumulation and carry some simulation exercises to understand the key drivers of the dynamics of wealth inequality during housing booms and busts. In Section IV, I propose and explore several candidate explanations for the observed asset-specific saving responses. In Section V, I reconcile and test the methodology used with other sources. Finally, Section VI concludes.

[6] Fawaz et al. [2012] find that the relationship is procyclical in some developing countries.

# II Concepts, Data and Methodology

This section describes the concepts, data and methodology used to construct the Spanish wealth distribution series over the period 1984-2015, which will then be used to study the implications of housing booms and busts for wealth inequality. Further methodological details of the Spanish specific data sources and computations can be found in the appendix at the end of the paper and all detailed calculations in the companion data appendix.

## II.I Aggregate Wealth: Concept and Data Sources

The wealth concept used is based upon national accounts and it is restricted to net household wealth, that is, the current market value of all financial and non-financial assets owned by the household sector net of all debts. For net financial wealth, that is, for financial assets net of liabilities, I rely on the latest and previous financial accounts (European System of Accounts (ESA) 2010 and 1995, Bank of Spain) for the period 1996-2015 and 1984-1995, respectively. Financial accounts report wealth quarterly and I use mid-year values.

Households' financial assets include equities (stocks, investment funds and financial derivatives), debt assets, cash, deposits, life insurance and pensions. Households' financial liabilities are composed of loans and other debts. It is important to mention that pension wealth excludes Social Security pensions, since they are promises of future government transfers. As stated in Saez and Zucman [2016], including them in wealth would thus call for including the present value of future health care benefits, future government education spending for one's children, etc., net of future taxes. Hence, it would not be clear where to stop.

The wealth concept used only considers the household sector (code S14, according to the System of National Accounts (SNA)) and excludes non-profit institutions serving households (NPISH, code S15). There are three reasons which explain this decision. First, due to lack of data, non-profit wealth is not easy attributable to individuals. Second, income from NPISH is not reported in personal income tax returns. Third, non-profit financial wealth amounts to approximately 1-3% of household financial wealth between 1995 and 2017 in Spain (Table A1). Hence, it is a negligible part of wealth and excluding it should not alter the results.

Spanish financial accounts report financial wealth for the household and NPISH sector and also for both households and NPISH isolated as separate sectors. However, the level of disaggregation of the balance sheets in the latter case is lower than in the case in which households and NPISH are considered as one single sector. For instance, whereas the balance sheet of the sector of households and NPISH distinguishes among wealth held in investment funds and wealth held in stocks, the balance sheet of the household sector only provides an aggregate value with the sum of wealth held in these two assets. In order to have one value for household wealth held in investment funds and one value for household wealth held in stocks, I assume that they are

proportional to the values of households' investment funds and stocks in the balance sheet of households and NPISH.

For non-financial wealth, it is not possible to rely on non-financial accounts based on the SNA. Even though there are some countries that have these accounts, such as France and United Kingdom, no institution has constructed these type of statistics for Spain yet. I need to use other statistics instead. My definition of household non-financial wealth consists of housing and unincorporated business assets and I rely on the series elaborated by Artola Blanco et al. [2019]. Housing wealth is derived based on residential units and average surface from census data on the one hand, and average market prices from property appraisals, on the other hand.[7] Unincorporated business assets have been constructed using the five waves of the Survey of Household Finances (2002, 2005, 2008, 2011, 2014) elaborated by the Bank of Spain and extrapolated backwards using the series of non-financial assets held by non-financial corporations also constructed by the Bank of Spain.[8]

I exclude collectibles since they amount to less than 1% of total household wealth and they are not subject to the personal income tax. Furthermore, consumer durables, which amount to approximately 10% of total household wealth, are also excluded, because they are not included in the definition of wealth by the SNA and there are no statistics about consumer durables owned by Spanish households for the period prior to 2002.[9]

## II.II Distribution of Wealth: The Mixed Capitalization-Survey Approach

The wealth distribution series are constructed by allocating the total household wealth as defined in the previous subsection to the various groups of the distribution. I proceed with the following three steps. First, the distribution of taxable capital income is calculated. Second, the taxable capital income is capitalized. Third, I account for wealth that does not generate taxable income. This is a mixed method and not the pure capitalization technique, because income and wealth surveys are used in order to account for both income at the bottom of the distribution and assets that do not generate taxable income.

[7] Net housing wealth is the result of deducting real estate debt from household real estate wealth. Note that real estate debt is approximated by total household liabilities. This a quite reasonable approximation since as Table A2 in appendix shows, real estate property debt accounts for 80-88% of total household debt over the period 2002-2014 according to the Survey of Household Finances.

[8] A detailed explanation of the sources and methodology used in order to construct these two series can be found in the appendix of Artola Blanco et al. [2019].

[9] The shares of both collectibles and consumer durables over total household wealth are obtained using the Survey of Household Finances developed by the Bank of Spain. See Table A3 in appendix.

### II.II.I The Distribution of Taxable Capital Income

The starting point is the taxable capital income reported on personal income tax returns. I use micro-files of personal income tax returns constructed by the Spanish Institute of Fiscal Studies (*Instituto de Estudios Fiscales (IEF)*) in collaboration with the State Agency of Fiscal Administration (*Agencia Estatal de Administración Tributaria (AEAT)*). Three different databases are available: two personal income tax panels that range from 1982-1998 and 1999-2014, respectively, and personal income tax samples for 2002-2015. For the benchmark series, I use the first income tax panel for 1984-1998, the second panel for 1999-2001 and all income tax samples for 2002-2015[10]. I also use the full second panel 1999-2014 to carry robustness checks. The micro-files provide information for a large sample of taxpayers[11], with detailed income categories and an oversampling of the top. The income categories I use are interest, dividends, effective and imputed housing rents, as well as the profits of sole proprietorships.[12] The micro-files are drawn from 15 of the 17 autonomous communities of Spain, in addition to the two autonomous cities, Ceuta and Melilla. Two autonomous regions, Basque Country and Navarre, are excluded, as they do not belong to the Common Fiscal Regime (*Régimen Fiscal Común*), because they manage their income taxes directly. Combined these two regions represent about 6-7% and 8% of Spain in terms of population and gross domestic product, respectively (Tables A4 and A5).

The unit of analysis used is the adult individual (aged 20 or above), rather than the tax unit. Splitting the data into individual units has on the one hand the advantage of increasing comparability as across units since individuals in a couple with income for example at the 90th percentile is not as well off as an individual with the same level of income. On the other hand, it is also more advantageous for making international comparisons, given that in some countries individual filing is possible (i.e. Spain, Italy) and in others (i.e. France, US) not. Since in personal income tax returns the reporting unit is the tax unit, I need to transform it into an individual unit. A tax unit in Spain is defined as a married couple (with or without dependent children aged less than 18 or aged more than 18 if they are disabled) living together, or a single adult (with or without dependent children aged less than 18 or aged more than 18 if they are disabled). Hence, only the units for which the tax return has been jointly made by a married couple need to be transformed. For each of these units I split the joint tax returns into two separate individual returns and assign half of the jointly reported capital income to each

[10] Even though the first panel is available since 1982, I decided to start using it from 1984 since I found some inconsistencies between the files for 1982 and 1983 and subsequent years.

[11] Personal income tax samples are more exhaustive (i.e. 2,700,593 tax units in 2015) than the panels (i.e. 390,613 tax units in 1999). This is the reason why I rely on the tax samples for constructing the benchmark series.

[12] Note that imputed housing rents exclude primary residence from the period 1999-2015. I explain the way in which I account for primary residence in the following subsection. Moreover, profits of sole proprietorships are considered as a mixed income, so that I assume as it is commonly done in the literature that 70% of profits are labor income and 30% capital income.

member of the couple.[13] In 2015, for instance, this operation converts 19,480,423 tax units into 22,945,329 individual units in the population aged 20 or above, that is, approximately 18% of units are converted.[14]

One limitation of using personal income tax returns to construct income shares in the Spanish case is that not all individuals are obliged to file. There exist some labor income and capital income thresholds under which individuals are exempted from filing. In 2015, for instance, the labor income threshold when receiving labor income from one single source was 22,000 euros and 12,000 euros when receiving it from two or more sources. The capital income threshold was 1,600 euros for interest, dividends and/or capital gains and 1,000 euros for imputed rental income and/or Treasury bills.[15] For instance, over the period 1999-2015, approximately one third of the adult population was exempted from filing (Table A6). I account for the missing adults by first calculating the difference between the population totals by age and gender of the Spanish Population Census with the population totals of the micro-files. I then create new observations for all the missing individuals. By construction, my series perfectly match the Population Census series by gender and age.[16] These new individuals, although being the poorest since they do not have to file the personal income tax, earn some labor and also some capital income. Hence, we need to account for this missing income, otherwise we would be overestimating the amount of wealth held by the middle and top of the distribution. For that, I rely on the Survey of Household Finances for the period 1999-2015 and on the Household Budget Continuous Survey for the period 1984-1998. Appendix A.I explains in detail the imputation method followed using the two surveys. In Section V, different tests are run to prove the accuracy and robustness of the imputation method.

Finally, before capitalizing the capital income shares, it is important to make sure that income is distributed in a coherent way and that there are no significant breaks across years due to, for instance, tax reforms or the use of different data sources. If already the income data are not coherently distributed, neither the wealth distribution estimates will be. In appendix B.I, I explain in detail the particular aspects of the reforms which could potentially affect my methodology and how I deal with them in order to ensure consistency in the series across the whole

[13] Since business income from self-employment is a mixed income, only the part corresponding to capital income is split among the couple.

[14] Given the incentives of the tax code to file separately whenever both individuals in the couple receive income—the reductions for filing jointly usually do not compensate for the increase in the tax base—there are more married couples filing individually the further we move up in the income distribution. The 2015 Spanish Personal Income Tax Guide (*Guía de la Declaración de la Renta 2015*) includes a more detailed explanation in Spanish about how personal income tax filing works in Spain.

[15] In the 2015 Spanish Personal Income Tax Guide (*Guía de la Declaración de la Renta 2015*) the Spanish Tax Agency includes a more detailed explanation in Spanish about how personal income tax filing works in Spain for tax year 2015.

[16] The oldest personal income tax panel that I use for the period 1984-1998 does not include information about age nor gender. Hence, for this period of time I simply adjust the micro-files to match the Population Census totals excluding Basque Country and Navarre but without taking age and gender into consideration.

period of analysis.

### II.II.II The Income Capitalization Method

In the second step of the analysis the investment income approach is used. In essence, this method involves the application of a capitalization factor to the distribution of taxable capital income to arrive to an estimate of the wealth distribution.

The income capitalization method used in this paper may be set out formally as follows. An individual $i$ with wealth $w$ invests an amount $a_{ij}$ in assets of type $j$, where $j$ is an index of the asset classification ($j = 1, .., J$). If the return obtained by the individual on asset type $j$ is $r_j$[17], his investment income by asset type is:

$$y_{ij} = r_j * a_{ij} \tag{1}$$

and his total investment income:

$$y_i = \sum_{j=1}^{J} r_j * a_{ij} \tag{2}$$

Rearranging equation (1), the wealth for each individual by asset type is, thus, the following:

$$a_{ij} = \frac{y_{ij}}{r_j} \tag{3}$$

By rearranging equation (2), the total wealth for each individual is:

$$w_i = \sum_{j=1}^{J} \frac{y_{ij}}{r_j} \tag{4}$$

In the following paragraphs, I explain how this formal setting is applied to the Spanish case in order to obtain the wealth distribution series.

There are five categories of capital income in personal income tax data: effective and imputed rental income (excluding primary residence since 1999), business income from self-employment, interest and dividends. Tax return income for each category is weighted to match aggregate national income from National Accounts. I then map each income category (e.g. business income from self-employment) to a wealth category in the Financial Accounts from the Bank of Spain (e.g. business assets from self-employment).[18]

As it was mentioned in the previous subsection, income tax data exclude the regions of

[17] Note that the capitalization method relies on the assumption that the rate of return is constant for each asset type, that is, it does not vary at the individual level.

[18] Capital gains are excluded from the analysis. The reason is that they are not an annual flow of income and consequently, they experience large aggregate variations from year to year depending on stock price variations. By including them, the fluctuations in the wealth distribution series could be biased since we observe large variations in capital gains from year to year.

Basque Country and Navarre. Therefore, before mapping the taxable income to each wealth category, income and wealth in national accounts need to be adjusted to exclude the amounts corresponding to these two regions. Ideally, if one would know the amount of wealth and income in each category by region, one could simply discount the wealth and income corresponding to these two regions. Unfortunately, neither the Bank of Spain nor the National Statistics Institute have constructed regional national accounts with disaggregated information by asset type yet, so another methodology needs to be used. I assume that income and wealth in each category are proportional to total gross domestic product and housing wealth excluding these two regions, respectively.[19]

Once income and wealth have been adjusted, a capitalization factor is computed for each category as the ratio of aggregate wealth to tax return income, every year since 1984. In 2015, for instance, business income accounts for about 20.6 billion euros and business assets from self-employees for 575.6 billion euros. Hence, the rate of return on business assets is 3.6% and the capitalization factor is equal to 27.9. Flow returns (and thus capitalization factors) vary across asset types, being for most of the period higher for financial assets than for business assets and housing (Table 1).[20] This is consistent with the findings of Jordà et al. [2019], who show that the rate of return on equities has outperformed on average the rate of return on housing since the 1980s, but not in previous decades. This procedure ensures consistency with aggregate national income and wealth accounts. Having wealth distribution series which take all aggregated wealth into account is specially relevant for the purpose of this paper, which is to understand how periods of large changes in housing prices shape the entire wealth distribution.

The capitalization method is well suited to estimating the Spanish wealth distribution because the Spanish income tax code is designed so that a large part of capital income flows are taxable. However, as it has been already mentioned, tax returns do not include all income categories. In the following subsection, I carefully account for the assets that do not generate taxable income.

[19] As it has already been mentioned, total gross domestic product in Basque Country and Navarre accounts for approximately 8% of total gross domestic product over the period 1984-2016 (Table A5). This assumption seems reasonable since the share of housing wealth in Basque Country and Navarre also amounts to approximately 8% of total housing wealth (Table A7).

[20] The rate of return on housing using National Accounts is very low for international standards, particularly during the most recent period (2002-2015). This can be explained by the fact that differences in housing wealth growth versus housing rental income growth were much larger in Spain than in the rest of advanced economies. One potential explanation are the large differences in demand for renting (low) versus buying (high) dwellings in Spain, which have led to a larger increase in housing versus rental prices. In fact, the home-ownership ratio for primary residences is approximately 80% according to the 2011 Census of dwellings (INE) and the calculations of the Bank of Spain (Table A8). One cannot, however, fully disregard the existence of some type of measurement error in the construction of the rental income and/or housing wealth series. Nonetheless, the methodology used in this paper relies on the assumption of equal returns by asset class along the wealth distribution and in Section V I show that this is a plausible assumption in the Spanish context. Hence, if there exists some type of measurement error, it should not alter the wealth distribution series.

### II.II.III Accounting for Wealth that Does not Generate Taxable Income

The third and last step consists of dealing with the assets that do not generate taxable income. In Spain, there are four assets whose generated income is not subject to the personal income tax: Primary residences[21], life insurance, investment and pension funds.[22] Although these assets account for a large part of total household wealth, namely around 40-50% of total net household wealth (Table A9), the fact that they do not generate taxable income does not constitute a non-solvable problem for one main reason: Spain has a high quality wealth survey, the Survey of Household Finances (SHF).

As it was mentioned in the beginning of this section, this survey is elaborated every three years since 2002 by the Bank of Spain. It provides a representative picture of the structure of incomes, assets and debts at the household level and does an oversampling at the top. This is achieved on the basis of the wealth tax through a blind system of collaboration between the National Statistics Institute and the State Agency of Fiscal Administration, which preserves stringent tax confidentiality. The distribution of wealth is heavily skewed and some types of assets are held by only a small fraction of the population. Therefore, unless one is prepared to collect very large samples, oversampling is important to achieve representativeness of the population and of aggregate wealth and also, to enable the study of financial behavior at the top of the wealth distribution. Hence, this survey is extremely suitable for this analysis and it allows to allocate all the previous assets on the basis of how they are distributed, in such a way as to match the distribution of wealth for each of these assets in the survey. Appendix A.II explains in detail the imputation method used relying on the survey, which is very similar to the one developed by Garbinti et al. [2018b] for France.

To make sure that the imputations are correctly done, in Section V I have carried different robustness checks using the Survey of Household Finances. The levels and composition of my series are almost identical to the ones obtained using the direct reported wealth from the survey.

# III How do Housing Booms and Busts Shape the Wealth Distribution?

This section presents the main results of the paper. The first subsection describes the evolution of real house prices and aggregate household wealth in Spain over the period 1984-2015

[21] Imputed rents on primary residence are exempted since 1999. Hence, I only need to impute primary residence for the period 1999-2015.

[22] Unreported offshore assets do also not generate taxable income. Following Alstadsæter et al. [2019], I recalculate the wealth distribution series accounting for unreported offshore assets by assigning proportionally to the top 1% wealth group the annual estimate of unreported offshore wealth of Artola Blanco et al. [2019]. Due to the uncertainties related to these calculations, I do not include offshore assets in my benchmark series. Appendix D describes the methodology used to account for unreported offshore assets in detail and presents the adjusted wealth distribution series.

and identifies the different housing booms and busts episodes. The second subsection documents the wealth inequality fluctuations and uses a new asset-specific decomposition of wealth accumulation to better understand the observed dynamics during house price cycles.

## III.I Evolution of Real House Prices and Aggregate Household Wealth

Spain is an ideal laboratory to understand the implications of housing booms and busts for wealth inequality for three main reasons. First, the country has experienced two house price cycles over the period 1984-2015, which makes it possible to analyze in detail the implications of large asset price changes for wealth inequality taking a long-term perspective. The first house price cycle started in 1984 and ended up in 1995, with 1991 as turning point. The second house price cycle started in 1996 and finished in 2014, with 2007 as turning point. Housing booms and busts are house price cycles in which house price growth is considered large enough. There is no consensus about the threshold that needs to be chosen. In this paper, I will follow a similar approach to International Monetary Fund [2009] and identify housing boom and busts as periods when the four-quarter moving average of the annual growth rate of real housing prices falls above (below) 2.5%. According to this methodology, Spain had two housing booms (1985-1991, 1998-2007) and two housing busts (1991-1995, 2007-2014) during this period of time (Figure 1). Appendix C discusses alternative methodologies that have been used to identify housing booms and busts. No matter which methodology is used results are very similar.

Second, the dimensions of the two house price cycles were quite different. Whereas during the first and second boom housing prices rose on average 11.6% and 11.8% by year, respectively, the decline in house prices was larger during the recent housing bust (5.7% on average by year) than during the old housing bust (3.6% on average by year). Moreover, the rise in total real estate transactions was much larger during the second episode than during the first one (Figure A3a). The larger increase was partly due to an increase in the stock of new dwellings (Figure A3b), many of which were acquired through mortgage loans (Figure A3c). Moreover, the recent housing bust happened together with an economic crisis and a stock market crash, whereas there was no stock market collapse nor economic crisis at the turning point of the old housing boom.[23] This heterogeneity across the two episodes is useful to understand the implications of housing booms and busts for wealth inequality under different economic scenarios and house price cycle intensities.

Third, Spain reached an unprecedented level in its household wealth to national income ratio, almost doubling during this period of time. Household wealth amounted to 359% in 1984 and it grew up during the first housing boom up to 435% in the early 1990s. During the housing

[23] Spain went under a profound economic crisis during the 1990s but it did not start until 1993 and ended up in 1995.

bust of the mid-1990s it stabilized and from 1998 onwards, it started to increase more rapidly reaching the peak of 727% of national income at the end of the second housing boom in 2007. After the burst of the crisis in 2008, it dropped and it has been decreasing since then. In 2015, the household wealth to national income ratio amounted to 629%, a level which is similar to the wealth to national income ratio of 2004, but much higher than the household wealth to national income ratios of the 1980s and 1990s (Figure 2a). The level of household wealth to national income that Spain reached in 2007 is the highest among all countries with available records in the early twenty-first century (Figure 2b).

## III.II Wealth Inequality Dynamics during Housing Booms and Busts

The high level of disaggregation of the Spanish wealth distribution series, together with the existence of the two housing boom-busts episodes, allows me to carry the first comprehensive long-term study on how housing ups and downs shape the wealth distribution.

Figure 3a displays the wealth distribution in Spain over the period 1984-2015 decomposed into three groups: top 10%, middle 40% and bottom 50%. The wealth share going to the bottom 50% has always been very small ranging from 3 to 10%, the middle 40% has concentrated between 29% and 40% of total net wealth and the top 10% between 51% and 68% over the period of analysis. Wealth levels, thresholds and shares for 2015 are reported on Table 2. In 2015, average net wealth per adult in Spain was about 150,000 euros. Average wealth within the bottom 50% of the distribution was slightly less than 20,000 euros and their wealth share was 6.4%. Average wealth within the next 40% of the distribution was slightly more than 132,000 euros and their wealth share was 36%. Finally, average wealth within the top 10% was nearly 830,000 euros (i.e. about 5.6 times average wealth) and their wealth share was 57.4%.

In terms of long-term dynamics, Figure 3a shows that top 10% wealth concentration followed a decreasing trend since the 1980s that reverted at the the beginning of the 2000s. This decline happened at the expense of wealth gains for both middle and bottom wealth groups. Focusing on the dynamics during the two house price cycles, I find that top 10% wealth concentration decreased during the two housing boom episodes and increased during the two housing busts. Both bottom—to a low extent—and middle—to a large extent—wealth holders benefit from housing booms. Contradictory movements in relative asset prices have an important impact on the dynamics of the wealth distribution because asset composition is very different across wealth groups. As it is shown on Figure 3b, bottom deciles of the distribution own mostly financial assets in the form of cash and deposits, whereas primary residence is the main form of wealth for the middle of the distribution in 2015. As we move toward the top 10% and the top 1% of the distribution, unincorporated business assets, secondary owner-occupied and tenant-occupied housing gain importance, and financial assets (mainly equities) gradually become the dominant form of wealth. The same general pattern applies for the period 1984-2015, except that

unincorporated assets have lost importance over time, due mainly to the reduction in agricultural activity among self-employees.[24]

When decomposing the evolution of the wealth shares going to the bottom 50%, middle 40%, top 10% and top 1% by asset class, the impact of asset price movements on wealth shares, particularly the impact of the 2000 stock market boom and the 2007 housing bust, are clearly captured (Figure 4). One particularity of the Spanish case is that housing constitutes a very important asset in the portfolio of households even at the top of the distribution. This has been the case during the whole period of analysis, but it has become more striking in the last fifteen years due to the increase in the value of dwellings. For instance, whereas in 2012 the top 10% and 1% of the wealth distribution in Spain own 26% and 9% of total net wealth in housing, respectively, in France these figures are 19% and 5%, respectively (Garbinti et al. [2018a]).[25]

The negative correlation between wealth concentration and housing expansions and the positive correlation during housing busts seems to hold in other countries too. Figure A5a depicts the real house price index in Spain, France and the US. All three countries experienced a housing expansion over the period 1998-2007, but the length and dimension of the housing contraction after 2007 was quite different across the three countries. Figure A5b shows the evolution of the top 10% wealth share in these three countries. Wealth concentration was higher in Spain than in the US during the 1980s, but since the 1990s trends have diverged. In Spain, top 10% wealth concentration declined and has converged to the levels of the rest of Western European countries such as France (Garbinti et al. [2018a]). In contrast, wealth concentration in the US has been steadily increasing since the late 1980s and it is currently much higher than in continental Europe. In line with the findings for Spain, both in France and the US the evolution of 10% wealth concentration is different during housing expansions and contractions. The top 10% wealth share stabilized in the US and declined in France during the 1998-2007 housing expansion and increased during the housing contraction.

Kuhn et al. [2018] also document using long-term survey data that housing booms lead to substantial wealth gains for leveraged middle-class households and tend to decrease wealth inequality in the US. However, the extent to which these dynamics are purely mechanical or not is still an open question which I address in the next subsection.

## III.III An Asset-Specific Decomposition of Wealth Accumulation

The drop in wealth inequality during booms and the increase during busts would be mechanical if all individuals kept their portfolio composition fixed—that is, they did not sell any of their

[24] Equities include both listed and non-listed equities and that non-listed equities include incorporated business assets.

[25] The Spanish wealth distribution series can be also decomposed by age over the period 1999-2015. Appendix E summarizes the main results regarding the dynamics of wealth inequality by age.

assets nor buy or acquire new assets—so that the decline and increase would be entirely explained by differences in capital gains along the distribution. During housing booms, capital gains on housing are usually larger than on financial assets. Consequently, because the middle and bottom of the wealth distribution have a larger share of housing in their portfolio than the top, they experience larger wealth gains, all else equal. On the contrary, during housing busts, capital gains on housing tend to fall more than on financial assets. As a result, because the middle and bottom of the wealth distribution have a larger share of housing in their portfolio than the top, they experience larger wealth losses, all else equal. Table 1 shows that indeed capital gains on housing were larger than on financial assets during both housing booms and lower than on financial assets during both housing busts in Spain.

The aim of this section is thus to analyze which are the underlying forces driving the dynamics of wealth inequality during housing booms and busts and quantify its importance. Are the observed dynamics entirely due to differences in capital gains or are there any other forces (i.e., labor income, saving rates) driving the dynamics? To answer this question, my starting point is to decompose the wealth distribution series using the following transition equation:

$$W^g_{t+1} = (1 + q^g_t)[W^g_t + s^g_t(Y^g_{L_t} + r^g_t W^g_t)], \tag{5}$$

where $W^g_t$ stands for the average real wealth of wealth group g at time t, $Y^g_{L_t}$ is the average real labor income of wealth group g at time t, $r^g_t$ the average rate of return of group g at time t, $q^g_t$ the average rate of real capital gains of wealth group g at time t[26] and $s^g_t$ the synthetic saving rate of wealth group g at time t. By convention, savings are assumed to be made before the asset price effect $q^g_t$ is realized. The saving rate is synthetic because the identity of individuals in wealth group g changes over time due to wealth mobility.

I follow the same approach as Garbinti et al. [2018a] and Saez and Zucman [2016] and calculate the synthetic saving rates that can account for the evolution of average wealth of each group $g$ as a residual from the previous transition equation. This is a straightforward calculation since I observe variables $W^g_t$, $W^g_{t+1}$, $Y^g_{L_t}$, $r^g_t$ and $q^g_t$ over the whole period 1984-2015. Hence, the three forces that can affect the dynamics of wealth inequality are inequality in labor incomes, rates of return and saving rates.

In this paper, I go one step forward and develop a new asset-specific wealth accumulation decomposition by breaking down the previous transition equation by asset class: net housing, business assets and financial assets.[27] The transition equation is as follows:

[26] Real capital gains are defined as the excess of average asset price inflation, given average portfolio composition of wealth group g, over consumer price inflation.

[27] Artola Blanco et al. [2019] do a similar decomposition to analyze the dynamics of aggregate wealth in Spain, but they calculate real capital gains as a residual instead.

$$W^g_{t+1} = W^g_{H,t+1} + W^g_{B,t+1} + W^g_{F,t+1}, \tag{6}$$

where

$$W^g_{H,t+1} = (1 + q^g_t)[W^g_{H,t} + s^g_{H,t}(Y^g_{L_t} + r^g_t W^g_{H,t})] \tag{7}$$

$$W^g_{B,t+1} = (1 + q^g_t)[W^g_{B,t} + s^g_{B,t}(Y^g_{L_t} + r^g_t W^g_{B,t})] \tag{8}$$

$$W^g_{F,t+1} = (1 + q^g_t)[W^g_{F,t} + s^g_{F,t}(Y^g_{L_t} + r^g_t W^g_{F,t})] \tag{9}$$

This new asset-specific wealth decomposition allows me to quantify not only the relative importance of each channel, but also the role played by each asset in explaining the saving dynamics along the wealth distribution. By construction, the sum of the saving rates in equations 7-9 adds up to the total saving rate for wealth group $g$. This decomposition is critical for my purpose of understanding how housing booms and busts shape the wealth distribution. The reason is that during these episodes one should expect housing to play a relative more important role than other assets in explaining wealth inequality dynamics.

The first potential force which can drive wealth inequality dynamics is labor income inequality. Figure 5a depicts the evolution of labor income shares for the different wealth groups over the 1984-2015 period. Overall, the evolution of labor income inequality has been quite stable throughout the whole period, with some moderate fluctuations. The middle 40% share declined during the first housing boom and it then remained stable until 2010, after which it started to increase at the expense of the decline in the bottom 50% share. This is consistent with the large increase and high levels of unemployment, specially among the young, during the recent housing bust.[28] The top 10% share increased during the mid-1980s and decreased during the beginning of the 2000s, a period of rapid economic growth. Despite these fluctuations, the shares are overall quite stable and there is nothing particular in the observed labor income dynamics which seems to have played an important role in explaining the evolution of wealth inequality during housing booms nor busts.

Rate of return inequality is the second potential force driving wealth inequality dynamics. It might arise due to differences in flow rates of return or real capital gains along the distribution. Figure 5b displays the evolution of flow rates of return and Figure 5c of real capital gains for the different wealth groups over the 1984-2015 period. Rates of return have considerably fallen in the last thirty years, following similar trends across the whole wealth distribution. This is

[28] According to the Spanish Statistics Institute (INE), the unemployment rate almost tripled between 2007 and 2014 (from 8.42% to 23.70%).

mainly due to the fall in returns on some financial assets, such as interest rates. However, differences in rates of return levels across wealth groups are still quite significant. The further up one moves along the distribution, the higher are the rates of return.[29] This is consistent with the large portfolio differences that were previously documented, that is, top wealth groups own more financial assets, such as equities, that have higher rates of return than for instance housing. Persistent differences in rates of return over time across the whole distribution seem to perpetuate the high levels of long-run wealth concentration. Nonetheless, because trends are quite similar across wealth groups, they do not seem to be the main drivers of wealth inequality dynamics during housing booms and busts.

Contrary to flow rates of return, differences in real capital gains along the distribution do seem to considerably change during housing booms and busts (Figure 5c). Capital gains increase during housing booms and decline during housing busts across all wealth groups. During housing booms, capital gains are larger for the middle 40% and bottom 50% of the wealth distribution than for the top 10%. The reason is that the middle and the bottom have a larger share of housing in their portfolio than the top and consequently, they benefit more from the larger increase in capital gains on housing relative to financial assets (Table 1). In contrast, differences in capital gains almost fully converge across all wealth groups during housing busts. Figure 6 compares the evolution of the benchmark top 10% wealth share with the evolution of the simulated top 10% wealth share using the wealth accumulation decomposition and setting the rate of capital gain equal to zero all along the wealth distribution. Differences in capital gains appear to reduce wealth concentration during housing booms but do not seem to explain the reverting evolution during housing busts. These results could be confounded by the existence of stock market booms and busts. For instance, the larger convergence in capital gains across wealth groups during housing busts relative to housing booms could be simply explained because housing busts take place together with stock market crashes, as it happened during the recent episode. Interestingly, rates of capital gain also nearly converged during the old housing bust and there was no stock market collapse.

By construction, differences in capital gains across wealth groups only come from differences in portfolio composition, since the methodology used relies on the assumption of constant rates of capital gain by asset class along the wealth distribution. These results could be biased if rates of capital gain by asset class were different across wealth groups. For financial assets, this is less of a concern for two main reasons. First, as it has already been shown, individuals in bottom wealth groups hold mainly deposits—which do not generate capital gains—so that most capital gains on financial assets are earned by top wealth groups. Second, I use different rates of capital

[29] Bach et al. [2018b] and Fagereng et al. [2019b] also document a positive relationship between returns and wealth for Sweden and Norway, respectively.

gain for each financial asset class (debt securities, equities, investment funds, life insurance and pension funds) instead of a single rate of capital gain for all financial assets. In contrast, I only rely on one rate of capital gain for housing. This could be a concern if housing price growth was different along the wealth distribution during housing-price cycles.

To show that differences in house prices across wealth groups are modest in this context, I assign to each individual the average house price of the municipality in which they reside. I then calculate the average house price by wealth group. Figure A6a shows average house prices for the top 1% and top 10%, middle 40% and bottom 50% wealth groups over the period 2005-2015. Despite the large volatility in house prices during this period of time, the evolution of average house prices has been quite similar across wealth groups. It is only after 2014—when average house prices started to rise for the first time since the end of the housing boom—that house prices across wealth groups have started to diverge. The homogeneity in the evolution of house prices in Spain can also be also seen when comparing the evolution of average house prices between coastal versus non-coastal municipalities (Figure A6b) and between municipalities with different population size (Figure A6c). These results are also in line with Fagereng et al. [2019b], who document that heterogeneity in rates of return is much lower for housing than for most financial assets using Norwegian data.

Finally, the third force which can potentially drive wealth inequality dynamics is inequality in saving rates. Figure 5d depicts synthetic saving rates for the top 10%, middle 40% and bottom 50% over the period 1985-2015. Consistent with the high levels of concentration that we observe during this period in Spain, there is a high level of stratification between the top 10%, who save on average 24% of their income annually, and the middle 40% and bottom 50%, who save 10% and 3% of their income on average. These figures are similar to the ones obtained for France and the US (Garbinti et al. [2018a], Saez and Zucman [2016]).

Differences in saving rates across wealth groups increase during booms and decrease during busts. However, contrary to real capital gains, saving rate levels remain higher for the top than for the middle and bottom of the distribution during busts. The stratification in saving rates was more remarkable during the recent episode than during the old one because of differences in the intensity of the house price cycle. The larger increase in saving rates for the top during the recent than during the old boom is mainly due to purchases of secondary residences, both owner-occupied and tenant-occupied housing. As it is shown on Figure A11a, the share of individuals owning a secondary residence rose from 58% to 72% over the period 1998-2007. This is consistent with the large increase in the total number of dwellings transacted during the recent housing boom, which did not happen during the old episode (Figure A3a). The saving rate for the top 10% wealth group remained at a higher level than for the other wealth groups during the recent housing bust, but it considerably fell. There are two main reasons that explain this drop. First,

both average labor and capital income declined (Figure 7). Second, total consumption remained nearly constant (Figure 8a), so that they had to reduce their savings to smooth consumption.

In contrast, saving rates for the middle 40% and bottom 50% declined during the recent housing boom and increased during the bust, contrary to the stability in saving rates for these two groups during the old episode. Middle and bottom individuals also purchased new dwellings. Figure A11b shows that the middle 40% mainly purchased secondary owner-occupied housing, since the share of individuals owning secondary owner-occupied housing rose from 25% to 33% over the period 1998-2007. Figure A11c shows that the homeownership ratio rose from 38% to 42% for the bottom 50% over the period 1999-2007, mainly due to the purchase of primary residences.[30] However, both middle and bottom individuals acquired their new dwellings by getting on average highly indebted. Figure 8b depicts the evolution of debt-to-income ratios by wealth group during the recent house price cycle. Debt-to-income ratio levels significantly differ across wealth groups. They are much higher for the bottom 50% wealth group (100-230%), than for the middle 40% wealth group (38-52%) and the top 10% wealth group (13-24%). The ratio of indebtedness for the bottom 50% experienced the largest changes during the house price cycle. It doubled from 100 to 200% during the housing boom and remained at very high levels during the housing bust. These patterns are also consistent with the large increase in the total number of new mortgage loans attached to real estate during the recent housing boom, which did not happen during the old episode (Figure A3c). The rise in consumption and in total income was larger than the saving capacity for the middle 40% and bottom 50% wealth groups, which explains why their saving rates significantly declined over the period 1998-2007. In contrast, the increase in the saving rate for the middle and bottom wealth group during the recent housing bust was due to a drop in consumption to increase savings for prudential reasons (Figure 8a). The drop in consumption for the bottom wealth group was much larger than for the top wealth group, since they also experienced a larger decline in total income, in particular labor income (Figure 7), and they still managed to slightly increase their saving rate.

To better understand the saving patterns of the different wealth groups it is quite useful to look at the composition of the saving rate by asset class, in particular at the share of saving on net housing and on financial assets.[31] Figure 9 documents one striking fact: Saving rates on housing and financial assets are much more volatile for the top 10% wealth group than for the middle 40% and bottom 50% wealth groups during housing boom and busts. Saving rates

[30] The home-ownership ratio keeps growing after 2007. This is most likely due to the fact that many of the purchased dwellings were actually transacted after 2007 since they were under construction. In fact, Figure A3b shows that the number of new registered dwellings remain quite high over the period 2008-2010. Another potential explanation for this increase can be mobility along the wealth distribution.

[31] To simplify the analysis, I do not show the saving rate on unincorporated business assets, since they account on average for less than 15% of total net household wealth and consequently, they play a minor role in explaining wealth inequality dynamics. This saving rate can be found in the appendix (Figure A7).

on housing rise and remain very high for the top group during booms and significantly drop during housing busts. This finding is independent of the total saving rate, since the total saving rate fluctuated much more during the recent episode than the old one, but I still find large asset-specific saving rate fluctuations during the old housing boom and bust.[32] On the contrary, saving rates on housing fluctuate much less for the middle 40% and bottom 50% wealth groups. For the middle 40%, saving rates also increase during the beginning of the boom and start decreasing at the end of the boom, remaining stable throughout busts. For the bottom 50%, the saving rate on housing was quite stable during the old episode and became significantly negative during the recent episode. During the old episode very few individuals within the bottom 50% purchased a house—the increase in new mortgage loans attached to real estate was quite modest (Figure A3c)–, contrary to the recent housing boom, which was marked by a large increase in households' indebtedness on real estate. Nonetheless, their saving capacity on housing was not enough to compensate the rise in consumption and total income during the recent episode. Saving rates on financial assets for the top group experience the opposite dynamics to saving rates on housing. They decline during housing booms and sharply rise during housing busts. On the contrary, saving rates on financial assets remain quite stable for middle and bottom groups across the whole period.[33]

There are three complementary explanations behind the large changes in the composition of saving from housing to financial assets among top wealth holders during housing busts. First, their total saving rate declines during housing downs and consequently, they have less saving capacity to purchase housing—an indivisible asset—which requires either a large amount of saving, or requesting a mortgage. Financial assets are much more divisible and one can put large

[32] Asset-specific saving rates are derived by breaking down the total saving rate, so that they are also synthetic. The identity of individuals in wealth group g changes over time due to wealth mobility. Consequently, the observed saving dynamics could be simply driven by increasing mobility of individuals from bottom groups to upper groups and viceversa during the housing crisis. In appendix F, I explore wealth mobility during the recent housing boom and bust using a complementary longitudinal personal income tax panel. I find that there is no more wealth mobility within the top 10% wealth group around the turning point of the recent house price cycle. Furthermore, I replicate the analysis restricting the sample to individuals who remain within the same wealth group throughout the boom and bust and show that all results hold. Hence, this evidence confirms that the findings are not driven by mobility along the wealth distribution.

[33] The asset-specific decomposition I use is additive, since I want the asset-specific saving rates to add up to the total saving rate by wealth group. To reach additivity, I need to use wealth group-specific rates of capital gain ($q_t^g$). This could bias the fluctuations in the composition of saving rates, if group-specific rates of capital gain were different by asset class. To make sure that the large fluctuations in the composition of saving, specially for the top 10% wealth group, are not due to the use of group-specific rates of capital gain, I recalculate the asset-specific decomposition using group-and-asset specific rates of capital gain (i.e. $W^g_{H,t+1} = (1+q^g_{H,t})[W^g_{H,t} + s^g_{H,t}(Y^g_{L_t} + r^g_t W^{H,g}_t)]$). Figures A8a and A8b show that fluctuations are slightly attenuated for the top 10% wealth group when using the alternative decomposition. For instance, the saving rate on housing grows less during the housing boom and also declines less during the housing bust. Nonetheless, what is important for my exercise is that the same dynamics persist under this new alternative specification. The only exception are the fluctuations of the saving rate on financial assets during the first housing boom. The rates on capital gain on financial assets were significantly low but increasing during the mid-1980s (Figure A22) and consequently, by construction, the saving rates with the alternative decomposition declining.

or small amounts of saving into deposits, debt securities, stocks or investment funds. Hence, because of the indivisibility nature of housing, top wealth holders might have decided to put their new lower savings into financial assets. Second, the fall in the total saving rate might also prevent them from accumulating real estate, which is not only indivisible but also associated with larger transaction costs than financial assets (Jordà et al. [2019]). Third, changes in the composition of saving from housing to financial assets might also be due to dissaving in housing. Top wealth holders who purchased real estate properties for investment purposes—either during the housing boom (Figure A11a) or before—might decide to sell them. They can use the additional liquid wealth to smooth their consumption, purchase financial assets and diversify their portfolio, with the aim of reducing their wealth losses.

Top wealth holders did dissave in real estate. According to the Survey of Household Finances, the change in the stock of tenant-occupied real estate declined by 20% between 2005 and 2011 for the top 10% wealth group, while it kept rising for the middle 40% wealth group (Figure 10a). Real estate dissaving was almost entirely due to sales of tenant-occupied properties, since the fall in the total stock of real estate almost mirrors the drop in the stock of tenant-occupied housing (Figure 10c). In fact, the number of owner-occupied real estate properties owned by middle and top wealth groups kept rising during the bust (Figure 10c) and there was almost no decline in the number of owner-occupied primary residences among top wealth holders (Figure 10d). Real estate available for rent started to increase between 2011 and 2014 for the top 10% wealth group. However, this rise is not due to new purchases but to changes in housing occupancy status since the total stock of real estate excluding primary residence remained constant over this period of time. These results suggest that top wealth holders did sell some of their properties to lower wealth groups that decided to buy during the bust, when prices were lower. Foreign real estate transactions also significantly increased during the housing bust both in absolute terms and relative to the total number of transactions (Figure A12). Hence, top wealth holders might have also sold some of their properties to non-residents.

Reported attitudes towards saving can also be useful to understand changes in the composition of savings. In line with previous results, Figure 11a shows that the probability to save on real estate increased more for top wealth holders than for the middle and bottom wealth groups during the boom and it declined more during the bust. The same pattern holds when controlling for saving (Figure 11b), although the differential effect becomes smaller. Moreover, the probability of top wealth holders to save on financial assets increased more than for the rest of wealth groups during the housing bust, even when controlling for saving (Figures 11c, 11d). Overall, this is supporting evidence that portfolio rebalancing was much more pronounced among top wealth holders. These results are consistent with the observed large fluctuations in asset-specific saving rates during house price cycles among the rich (Figure 9). In the next section, I discuss

different candidate explanations for the observed differences in the dynamics of asset-specific saving rates along the wealth distribution.

Changes in the composition of saving among top wealth holders contribute to increasing wealth concentration during housing busts. I document this for the recent house price cycle by means of counterfactual simulations. I fix the individual asset composition, so that changes in portfolio composition over time only come from changes in the composition of aggregage wealth. Very top wealth holders benefit the most at the expense of wealth losses for the bottom. Figure 12 compares the evolution of the benchmark wealth shares with the evolution of the simulated wealth shares fixing the indidivual asset composition to 2002 for bottom and very top wealth groups. While top 0.1% and top 0.01% wealth shares keep rising during the housing bust—mainly due to portfolio reshuffling towards financial assets—they would have remained nearly constant under the counterfactual scenario. In constrast, the bottom 50% wealth group would have experienced fewer wealth losses during the housing bust if they had invested less on housing during the housing boom. Hence, changes in the composition of saving appear to have an important explanatory force for the reverting pattern in wealth concentration during housing busts.

Finally, to externally validate these results, I have performed the same asset-specific decomposition of wealth accumulation for France and the US using the wealth distribution series of Garbinti et al. [2018a] and Saez and Zucman [2016], respectively. France and the US also experienced a housing expansion and contraction over the period 1998-2014 and 1999-2011, respectively (Figure A5a). Figures A13a and A14a depict the distribution of real capital gains, saving rates and asset-specific saving rates for France and the US, respectively. As in the case of Spain, capital gains are larger for the middle and bottom of the distribution during the boom and they almost fully converge across wealth groups during the bust. Moreover, saving rates are larger for the top than for the middle and the bottom. Figures A13c and A14c also show that saving rates on housing for the top increase during the expansion and decrease during the contraction. Furthermore, Figures A13d and A14d document that saving rates on financial assets increase in France and the US during the housing contraction, as documented for the Spanish case. Hence, this evidence suggests that the results are not specific to the Spanish context and that generally seem to hold for house price-cycle episodes.

# IV Nature of Asset-Specific Saving Responses

This section aims to understand the observed differences in the dynamics of asset-specific saving rates along the wealth distribution, as documented in the previous section. There are different factors which can explain why the rich change their asset composition of saving more than the middle and the bottom during house price cycles. I empirically explore three candidate

explanations in detail: portfolio adjustment frictions, real estate dynamics and tax incentives. I also briefly discuss with the support of empirical evidence other potential explanations, such as risk aversion, financial literacy, financial advisory and expectations on house prices. In this section, I will mainly focus on the recent house price cycle since most empirical evidence is only available from the 2000s.

## IV.I Portfolio Adjustment Frictions

One plausible explanation for why the rich change substantially more their composition of saving—from housing to financial assets and viceversa—during house price cycles is because they might be subject to fewer portfolio adjustment frictions than middle and bottom groups. These frictions are broadly defined and I will refer to different potential candidates throughout the section. First, selling houses involves high transaction costs.[34] Middle and bottom groups were highly indebted (Figure 8b) and consequently, had a very low saving rate (Figure 5d). Hence, they would have had difficulties to incur in the high transaction costs which involve selling a house. Second, most individuals in these two groups own owner-occupied housing that they use as primary residence (Figures A11b and A11c). Thus, housing is mainly a consumption good for them. Apart from transaction costs, there are other costs associated to selling a primary residence (mobility costs, searching costs, etc.), which might have prevented these individuals from selling their houses. In fact, Figure 10d shows that the stock of primary residences did not fall for bottom wealth holders during the housing bust. Third, they are also highly indebted, in particular bottom wealth holders had very large mortgages relative to their income that were acquired during the housing boom (Figure 8b). Housing prices significantly dropped during the housing bust, so that they would have less incentives to sell their houses if the selling value did not more than compensate for the remaining mortgage value. Fourth, Spain has—contrary to the US—a mortgage recourse system, meaning that the lender can go after the borrower's other assets or sue to have his or her wages garnished, if money is still owed on the debt after the collateral is sold. Hence, this type of system constitutes another potential friction for why financial distressed individuals might not sell their houses.

For top wealth holders, adjustment frictions seem to be much less pronounced. First, they are less indebted and have higher savings, so that they can incur more easily in housing transaction costs. Second, most individuals within the top 10% wealth group own more than a primary res-

[34] In Spain, as in most countries, there are both costs for the buyer and seller of a house. The buyer has to pay notary fees (600-1,000 euros), property registry costs (450-600 euros), the property transaction tax (4-11% of the property value) and property valuation costs (only if a mortgage is needed, approx. 800 euros). The seller has to pay personal income taxes for the capital gains generated from the sale (19-23%) and the *plusvalía*, which is another capital gains tax payed at the local level over the increase of the value of the ground the property is on. The tax liability is calculated on the basis of three factors: the period of ownership, the location of the property and the tax-assessed ground value.

idence and a large fraction of housing is for investment purposes (i.e., tenant-occupied housing), which is less costly to sell (Figures A11a). For all these reasons, differences in portfolio adjustment frictions along the wealth distribution appear to be consistent with larger fluctuations in asset-specific saving rates among top wealth holders during house price cycles.

## IV.II Real Estate Market Dynamics

A competing explanation to the existence of portfolio adjustment frictions among middle and bottom wealth holders relates to the dynamics of the real estate market. Both housing demand and housing prices could evolve differently across time and space affecting wealth groups in an heterogeneous manner. Top wealth holders might own properties with different characteristics than properties owned by middle and bottom wealth holders. If the dynamics of the real estate market are such that during the housing bust there is only demand for the type of properties owned by top wealth holders, this could explain why they managed to dissave more in real estate.

Properties owned by bottom and middle wealth holders do have different characteristics than properties owned by the top. Top wealth holders own primary residences that are on average more expensive and larger in size (Table 3). In addition, their other real estate properties are also on average more expensive (Table 5). However, there is no evidence of higher demand for more expensive properties. Table 6 reports the characteristics of the stock of properties available for sale in districts with the highest average price of each Spanish municipality versus the rest of districts in 2009. The data used contains information on the universe of listings at the district level from the largest commercial real estate website in Spain, *El Idealista*. The stock of properties available for sale is on average larger in districts with the highest average price of each municipality than in the rest of districts. However, the demand index is not significantly different across the two types of districts.[35] Hence, this evidence is consistent with top wealth holders willing to dissave relatively more than middle and bottom wealth holders during the housing bust.

Another reason why top wealth holders might have decided to sell relatively more their properties than middle and bottom wealth holders could be that their market prices did not decline or declined less. Nonetheless, as it was already shown in Section III, average house prices have followed a similar evolution across wealth groups during the recent housing boom and bust (Figure A6a). It is only after 2015—when average house prices started to rise for the first time since the end of the housing boom—that ratios have started to considerably diverge. The homogeneity in the evolution of house prices in Spain can also be seen when comparing the evolution of average house prices between coastal versus non-coastal municipalities (Figure A6b)

[35] The demand index is directly elaborated by *El Idealista*. It is based on the number of e-mails received by listing normalized by a factor, to make it comparable across space and time.

and between municipalities with different population size (Figure A6c). Average house prices declined during the housing crisis across all types of municipalities. Overall, these results suggest that real estate dynamics are not behind the differential saving behavior across wealth groups.

## IV.III Tax incentives

Tax incentives could also potentially influence differences in saving behavior along the wealth distribution. In this section, I explore a key institutional change—a large decline in capital income taxes—which exacerbated the increase in both saving rates on financial assets and wealth concentration during the recent housing bust. To my knowledge, this if the first time that quasi-experimental evidence is used to quantify how capital income taxes shape saving rates and wealth inequality dynamics.

### IV.III.I Institutional Setting

In 2007, a large reform was introduced on the personal income tax aimed at incentivizing savings. Before the reform, the Spanish personal income tax was a dual tax with a progressive tax schedule for all income components except from long-term capital gains— those generated over more than one year—which were subject to a 15% flat tax (Figure A15a). With the 2007 reform, a significant change in the tax schedule was introduced. Both long-term capital gains, together with financial income (i.e., interest and dividends) and short-term capital gains, that used to be taxed under the progressive tax schedule, started to be taxed at a flat rate of 18% (Figure A15b).[36] The reform was announced in 2005, approved in November 2006 and in place as of 1st of January 2007.

The introduction of the flat tax on financial income created a wedge between the taxation of financial income and the rest of capital income components, such as rental and business income. Moreover, it implied substantial tax variation across individuals, larger than the major tax acts in the United States (Gruber and Saez [2002]) in the 1980s and comparable to the large Danish personal income tax reforms in the 1980s and 1990s (**?**).

### IV.III.II Tax Variation, Data and Empirical Strategy

To give a clear sense of the large identifying variation, Figure A16a shows the mechanical variation in marginal net-of-tax rates by pre-reform income tax bracket using the 1999-2014 personal income tax panel. All taxpayers except those in the bottom bracket experienced a drop in the marginal tax rate on financial income, with larger declines for upper brackets (30-50%) than

[36] The 2007 reform also increased the minimum exempted from 3,400 to 9,000 euros and introduced an exemption of 1,500 euros on dividends. The saving schedule was slightly modified from 2010 until 2014 with a flat tax rate of 19% for the first 6,000 euros of reported financial income and a 21% rate for financial income above 6,000 euros.

for middle brackets (7-14%). Taxpayers in the bottom bracket prior to the reform experienced a slight increase in their marginal tax rate on financial income (3%), because their marginal tax rate was 15% prior to the reform. The incentives to save in assets generating interest and dividends were thus larger for personal income tax filers in upper brackets prior to the reform, since they experienced the largest tax cuts. The reason why this reform is directly linked to the large increase in the saving rate on financial assets for the top 10% wealth group, is because income and wealth are strongly correlated, and consequently, the fraction of personal income taxpayers in upper brackets is larger within the top 10% wealth group, than within the middle 40% and bottom 50% wealth groups (Figure A16).

To analyze whether the introduction of the flat tax incentivized saving on financial assets, I rely on the 1999-2014 personal income tax panel linked to a novel dataset on wealth tax records for those taxpayers who are rich enough to file the wealth tax[37]. Information on wealth tax records is available for the period 1999-2007, since the wealth tax was suppressed during 2008-2010 and the number of wealth taxpayers significantly decreased after its reintroduction in 2011, because of a higher exemption threshold.

To estimate behavioral responses to the 2007 reform, I use a balanced panel of taxpayers and I compare the evolution of financial income of the groups who experienced a tax cut (treatment) with the group who experienced a slight tax increase (control) before and after the reform using a differences-in-differences approach. Taxpayers in the two groups have different income levels by construction. Hence, one potential thread for identification is that they might have different saving behaviors for reasons different to the reform. For instance, they could save differently because they were differently affected by the housing crisis.

To deal with this issue, I restrict my analysis to personal income taxpayers who also file the wealth tax prior to the reform, so that both groups have closer wealth levels and hence, they are more comparable in terms of their saving behavior. Wealth taxpayers account on average for 15% of the sample of personal income taxpayers over the pre-reform period 2004-2006. Figure 13b shows the mechanical variation in marginal net-of-tax rates by income tax bracket among wealth taxpayers. As expected, the fraction of wealth taxpayers who are in the top personal income tax bracket is quite large, but there are still some taxpayers within the lowest personal income tax bracket, that I will use as control group.

The empirical analysis is based on a standard differences-in-differences event study specification, i.e

[37]The wealth tax exemption threshold over the period 1999-2017 was 108,182.2 euros of net taxable wealth. Appendix B.II provides a recount of wealth taxation in Spain.

$$log\ Y_{it} = \sum_{j \neq 2006} \beta_j \cdot Year_{j=t} \cdot Treat_i^{pre} + \gamma_i + \eta_t + v_{it}, \tag{10}$$

where $Y_{it}$ denotes the interest income of taxpayer $i$ in year $t$, $Year_{j=t}$ is a dummy equal to one when the year equals $t$, $Treat_i^{pre}$ is an indicator for being in the treatment group based on pre-reform behavior, $\gamma_i$ is a taxpayer fixed effect, $\eta_t$ is a year fixed effect, and $v_{it}$ is an error term. The differences-in-differences coefficient $\beta_t$ captures the effect of the tax reform in year $t$ relative to the pre-reform year, 2006. To increase persistence, I focus on individuals with the same status in several consecutive pre-years. As a baseline, treatment status is assigned based on three pre-reform years (2004-2006), but I show that results are robust to different treatment windows.

### IV.III.III Descriptive Statistics

Before investigating behavioral responses to changes in the income tax, I present descriptive statistics in Tables 7 and 8. Table 7 shows means of income and demographics for individuals in the full income tax panel (column 1) and for individuals in the treatment and control group (columns 2 and 3), that is those that file wealth taxes. Table 8 shows the same descriptive statistics for wealth taxpayers by treatment status, but including now information on wealth.[38] The treatment group is decomposed by pre-reform income tax bracket. As previously discussed, the assignment of treatment status is based on pre-reform variables and restricts attention to individuals whose status stays constant during 2004-2006. The statistics in both tables are based on pooled data between 2004-2006.

The following points are worth highlighting. First, my population of interest is very different from the general population in the full personal income tax panel. This is to be expected given that I focus on wealth taxpayers. The treatment and control groups consist of individuals who are older, more self-employed and richer in terms of income than the average individual filing personal income taxes. Third, the difference between labor income and total income (including capital income) is relatively small in the full sample, but large among the wealthy who receive most of their income in the form of asset returns. Finally, there are some noticeable differences in pre-reform means for the treatment and control groups. This is to be expected given how these groups are defined. Wealth taxpayers who experience a capital income tax cut (treatment group) are much wealthier, hold more of their wealth in financial assets and less in housing, and are more self-employed than wealth taxpayers who experience a slight capital income tax increase (control group). These differences become larger when comparing wealth taxpayers in upper personal income tax brackets. This lack of balance could be a concern for the differences-in-differences

[38] Information on wealth is only available for the sample of wealth taxpayers within the personal income tax panel.

approach, but only insofar as it affects the credibility of the parallel trends assumption.

### IV.III.IV Results

Graphical evidence on the evolution of average interest among the two groups shows that interest experienced similar trends before the reform (Figure A17a).[39] Hence, the paralell trends assumption seems to be satisfied. After the reform, trends in average interest income started to diverge rising much faster for the treatment than for the control. Both groups experienced a large decline in reported interest income between 2008 and 2010. This is mainly due to the banking crisis that Spain experienced during this period of time. Many banks, which were having large losses, did not distribute coupon payments on debt securities and consequently, individuals earned less interest income. Reported interest have declined since 2011 due mainly to the decline in interest rates.

Results from the differences-in-differences estimation show that average interest increased on average 76% more for the treatment relative to the control after the reform (Table 9). Table 10 shows the differences-in-differences results decomposing the treatment group by pre-reform income bracket. Average interest increased on average more for all treatment groups relative to the control and the effect is larger the larger the tax cut. This explains why the effect is largest for individuals in the fifth bracket prior to the reform and lowest for individuals in the second bracket prior to the reform.

Figure 14 plots the differences-in-differences coefficients decomposing the treatment group by pre-reform income bracket. The paralell trends assumption seems to be satisfied since they are non-significant prior to the reform. Coefficients become significant immediately after the reform and increase over time with the exception of years 2009 and 2010. The 2009 banking crisis affected more the treatment than the control group, so that the differential effect becomes non-significant during these two years.

### IV.III.V Wealth Inequality Simulations

Finally, I simulate the counterfactual evolution of wealth inequality absent the capital income tax reform. I estimate wealth across all individuals and years in the panel using the same mixed capitalization-survey method used to construct the benchmark wealth distribution series and apply the annual growth rate of deposits and bonds of the control group over the period 2007-2014 to the treatment group. Figure 15 shows that as expected, the top 10% wealth share would have grown less absent the reform. In particular, according to the counterfactual simulation, the capital income tax reform explains two thirds of the growth rate in the top 10% wealth share

[39] I focus on interest because dividends and capital gains are quite volatile and even more so during the crisis, so that any type of saving response is very hard to identify.

over the period 2007-2014.

The introduction of the flat tax on financial income in 2007 led to an increase in savings on financial assets that was more pronounced by the rich and helps to explain why the increase in saving rates on financial assets and in wealth concentration during the recent housing bust was larger than during the old housing bust. Overall, this section shows that tax incentives can be an important factor behind changes in asset-specific saving rates and wealth inequality dynamics.

## IV.IV Other Candidate Explanations

### IV.IV.I Risk aversion

Heterogeneity in saving responses can also happen due to differences in attitudes towards risk along the wealth distribution. It is widely accepted that Pratt [1964] and Arrow [1970] measure of absolute risk aversion should be declining with wealth. For instance, Guiso and Paiella [2008] show empirically that risk aversion is decreasing with wealth for the case of Italy. The evidence for Spain goes in the same direction. Table 11 shows using the Survey of Household Finances that the fraction of households reporting not to be willing to take any financial risk is significantly lower for the top 10% wealth group relative to the middle 40% wealth group and even lower relative to the bottom 50% wealth group. Hence, top wealth holders might have reshuffled their portfolio towards financial assets, because they are less risk averse than middle and bottom wealth holders. However, risk aversion can only explain why bottom and middle wealth holders did not invest as much as top wealth holders in risky financial assets (i.e., stocks), but not why they did not invest as much on safe financial assets (i.e., deposits).

### IV.IV.II Financial Knowledge and Financial advising

Heterogeneity in financial knowledge and advising across wealth groups can also be behind the observed differences in saving behavior across wealth groups during the housing bust. There is evidence of a positive empirical link between financial knowledge and wealth holdings (Behrman et al. [2012]) and, in particular, stock holdings (Van Rooij et al. [2011]). In Spain, financial knowledge is also positively correlated with economic outcomes, such as income. Using the 2016 Spanish Survey of Financial competences (SFC), I find that a larger fraction of top income holders respond correctly to each of the financial literacy questions than middle and bottom income holders (Table 12).[40]

One could argue that financial knowledge would not be needed if individuals could rely on financial advisers. However, there is evidence showing that advice more often serves as a complement to, rather than a substitute for, financial capability: individuals with higher incomes,

[40] Ideally, one should looked at the relationship between financial knowledge and wealth (not income), but the SFC does not ask about the amount of households' wealth holdings. Nonetheless, income and wealth are highly correlated, so that one can already learn about the gradient for wealth by looking at income.

educational attainment, and levels of financial literacy are most likely to receive financial advice in the US context (Collins [2012]). Using Dutch data, Von Gaudecker [2015] also looks at the relationship between investment diversification (return loss), financial knowledge, and financial advice, and he finds that the least financially informed were unlikely to do well on diversification. In Spain, the probability of getting financial advice is also higher among top income holders (Table 12). Differences across groups are not very large, but this is most likely because individuals are ranked by income and not wealth. This evidence suggests that top wealth holders might have reshuffled their portfolio more during the housing bust because they were more financially informed. However, once again differences in financial information seem to only explain why bottom and middle wealth holders did not invest as much as top wealth holders in risky financial assets (i.e., stocks), but not why they did not invest as much on safe financial assets (i.e., deposits). Little financial knowledge or advice is needed to invest in safe financial assets, specially deposits.

#### IV.IV.III Expectations on House Prices

Differences in expectations on future house prices across wealth groups can be another candidate explanation for why top wealth holders dissave relatively more in real estate. Top wealth holders might have dissaved more if they had more pessimistic expectations about the future evolution of house prices. Bover [2015] analyzes the information on subjective probabilistic expectations on house prices collected in the 2011 Spanish Survey of Household Finances. Households are asked to distribute ten points among five different scenarios for the change in the price of their homes over the next twelve months. She finds no significant association of such beliefs with household characteristics, except for a not very precise positive effect of household income. In particular, she finds no association with wealth. Hence, negative house price expectations were therefore widespread across groups of the population at the end of 2011 and they do not seem to explain why top wealth holders did reshuffle their portfolio towards financial assets relatively more than middle and bottom wealth holders.

# V Reconciliation and Test of the Mixed Capitalization-Survey Method with Other Sources

## V.I Comparison with Other Sources

### V.I.I Wealth Tax

The wealth tax in Spain was introduced for the first time in 1978 by law 50/1977. Initially, it was meant to be transitory and exceptional. The tax rate was relatively small, with a maximum of 2%. The aim of the Spanish wealth tax was basically to complement the Spanish personal income tax, which had limited redistributive goals. Tax filing was done on an individual basis,

with the exception of married couples under joint tenancy. Since 1988, married couples can file individually.

In 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 year 2008, the tax was not abolished but a bonus of 100% was introduced by law 4/2008. Nevertheless, the economic crisis and the lack of funds of the Spanish Tax Agency, reactivated the wealth tax from exercise 2011 (payable in 2012) until the present.

Alvaredo and Saez [2009] use wealth tax returns and the Pareto interpolation method to construct long run series of wealth concentration for the period 1982 to 2007. The progressive wealth tax had high exemption levels and during this period only the top 2-3% wealthiest individuals filed wealth tax returns. Thus, they limit their analysis of wealth concentration to the top 1% and above. This is a general limitation of using wealth tax data, the middle and bottom of the distribution can not be analyzed. Durán-Cabré and Esteller-Moré [2010] also use wealth tax returns to analyze the distribution of wealth at the top and obtain similar results to them. Their approach complements theirs by offering a more precise treatment of the correction of fiscal underassessment and tax fraud in real estate, which is the main asset in Spaniards' portfolios.

Results using wealth tax data and the capitalization method are quite similar, specially for the top 0.1% and 0.01% (Figure A18). In line with the trends observed in Alvaredo and Saez [2009], my estimates also reveal a fall in concentration at the top 1% during the 1980s and an increase in concentration during the 1990s. Concentration levels are larger using capitalized income shares rather than wealth taxes, specially at times in which asset prices significantly grow, such as the dot-com bubble and the housing boom and bust of the 2000s.

There are several conceptual and methodological differences across the two methods which might explain these differences. First, Alvaredo and Saez [2009] use financial wealth from both households and non-profit institutions serving households in their wealth denominator, rather than only financial household wealth. Second, they exclude pensions from the wealth denominator because they are exempted from the wealth tax. Hence, they use slightly different wealth aggregates to the ones used in this paper (Table A10). Third, they use real state wealth at assessed value, as reported in the wealth tax, and update it based on the differences between real state total assessed values and market values. In contrast, I use the series of housing wealth at market prices of Artola Blanco et al. [2019] and impute primary residence housing wealth for the period 1999-2015 using the Survey of Household Finances. Another difference is that they use the Pareto interpolation method in order to obtain top wealth shares because they have tabulated data. Finally, they use the tax unit and not the individual unit as unit of analysis.

The exclusion of pension funds, together with the different valuation of housing wealth are most likely the biggest determinants in the differences observed in the shares using the two methods. The reason is that differences are more pronounced for the rich (top 1%) than for the very rich (top 0.1% and top 0.01%), with the rich owning relative more real assets and pension funds than the very rich.

### V.I.II The Survey of Household Finances

The Survey of Household Finances provides a representative picture of the structure of household incomes, assets and debts at the household level and does an oversampling at the top, as it was already pointed out in section II. It exists for five waves (2002, 2005, 2008, 2011 and 2014) and it is elaborated by the Bank of Spain.

Anghel et al. [2018] use the five waves of the survey to reconstruct the wealth distribution. They present results for the top 10%, 5% and 1% wealth groups. Their estimates are similar in trend to the series of Alvaredo and Saez [2009] using wealth tax returns and the series using the capitalization method, but different in levels. For instance, whereas they find a top 1% wealth share of 13.5% in 2005, the estimates using wealth tax returns and the mixed capitalization-survey method are 18.9% and 20.6%, respectively.

There are notable differences in terms of definitions and methodology between our estimates and the study of Anghel et al. [2018]. First, in this paper individual units are used while the SHF uses households to define each fractile. Second, they use a broader definition of wealth including collectibles and consumer durables.

In an attempt to do a more consistent comparison across the two sources, I have also constructed the wealth distribution series with the SHF under the same wealth definition and assumptions than for the mixed capitalization-survey method. Households are split into individuals and wealth is assigned proportionally to all members of the household, except from children, who are only proportionally given wealth held in bank accounts. Moreover, only individuals aged 20 and above are considered. Even though trends are the same, levels are still quite different across the two methods (Figure A19a). Whereas the top 10% holds 57.4% using the capitalization method in 2011, it only concentrates 47.6% using the survey-method. Contrary to what happens at the top 10%, the middle 40% and the bottom 50% concentrate more wealth using the survey (44.7% and 7.7%, respectively) than the capitalization method (36.1% and 6.5%, respectively). However, if on top of the previous adjustments, I calculate the SHF wealth shares using the same population and wealth totals as in the mixed capitalization-survey method, that is, the ones consistent with the Population Census and National Accounts, results are almost identical (Figure A19b). Figure A19d shows that results are also quite similar when looking at the very top of the distribution (top 1% and 0.1%).

In general, it is a challenge for wealth surveys to accurately capture wealthy individuals because of limited sample size and low response rates at the very top. Thus, as it is the case with income, wealth shares tend to be lower using survey data instead of tax data. This is the case in the US, as documented by Saez and Zucman [2016]. Nonetheless, this does not seem to be the case in Spain, since after adjusting for population and wealth totals results are almost the same. This is also the case even looking at very top groups (Figure A19d). Hence, the Spanish SHF is extremely useful not only to analyze the bottom and middle of the distribution, which as it has already be mentioned it is not entirely possible using only tax data, but also to understand the wealth inequality dynamics at the top. The main reason why the mixed capitalization-survey method is used is because instead of only five data points, it allows to cover on an annual basis a much longer period of time.

## V.II Testing the Mixed Capitalization-Survey Method

The wealth distribution series are obtained using a mixed capitalization-survey method and thus, assuming that within a given asset class, everybody has the same capitalization factor. Computing wealth shares by capitalizing income consists of allocating the wealth for each asset recorded in the Non-financial and Financial Accounts to each group of the distribution based on how the income for this asset is distributed. Hence, this method does not require to know the exact rate of return for each asset type, as long as the distribution of each capital income category is similar to the distribution of its corresponding wealth category. A new wave of papers have documented that returns are positively correlated with wealth and that wealth inequality series estimated using the capitalization method can be sensitive to the assumptions on the rates of return (Fagereng et al. [2019b], Smith et al. [2019]). In this section, I carry different tests and show that the mixed capitalization-survey method is robust to the assumption of constant asset-specific rates of return in the Spanish context.

Figures A19b and A19d are already a test for the well-behaved wealth inequality trends using the mixed capitalization-survey method. Nonetheless, I go one step forward and test whether rates of return are flat along the distribution using the micro-files from personal income tax records linked to wealth tax records for the period 2002-2007. This allows me to calculate the individual rate of return on deposits and fixed-income securities as the ratio of the interest they earn in these assets and the total value they hold in these assets. Whether ranking individuals by the total amount of deposits and fixed-income securities they owned or by total net wealth, rates of return are flat along the distribution, meaning that at least for these type of assets the assumption of constant returns by asset-stype seems plausible in this context (Figure A20).

As another robustness check, I use the SHF and compare the wealth shares using direct reported wealth, with the shares calculated by capitalizing the income from the survey. These wealth shares include the same assets as the benchmark capitalized shares in this paper, except

for owner-occupied housing, life insurance, pension and investment funds. The reason is that the SHF does not include the income generated by these assets in any of the four waves. Results using direct and capitalized wealth shares are very similar (Figure A21). All these robustness checks suggest that the capitalization method derives robust wealth distribution series in the Spanish context.

# VI Conclusion

This paper studies how housing booms and busts shape the wealth distribution. I examine the Spanish context, an ideal setting since the country has experienced two house price cycle episodes in the last forty years. I combine multiple micro and macro data sources (i.e., tax records, income and wealth surveys, national accounts) to reconstruct the wealth distribution. I then develop a new asset-specific decomposition of wealth accumulation to identify the key forces (i.e., labor income, rates of return, saving rate inequality) driving wealth inequality dynamics. My findings show that the top 10% wealth share decreases during housing booms, but the decreasing pattern reverts during busts. Differences in capital gains along the wealth distribution seem to be the main driver of the drop in wealth concentration during housing busts. Instead, persistent differences in saving rates across wealth groups and portfolio reshuffling towards financial assets among top wealth holders appear to be the main forces behind the reverting evolution in wealth concentration during housing busts. These results seem to generally hold for housing booms and busts episodes, since I find the same dynamics for the US and France during the house price cycle of the early 2000s.

The theoretical and empirical literature studying the determinants of wealth inequality has commonly highlighted the relevance of asset prices and rates of return in shaping the wealth distribution. My results confirm the importance of asset prices, specially during booms. However, they also reveal that behavioral components, and in particular, saving responses, cannot be neglected to fully understand wealth inequality dynamics. The literature has also overlooked the channels through which these saving responses occur. I present new empirical evidence showing that differences in the dynamics of saving responses along the wealth distribution are consistent with the existence of portfolio adjustment frictions. Moreover, I also exploit quasi-experimental evidence from a large capital income tax reform and show that tax incentives, largely benefiting top wealth holders, can exacerbate this behavior and contribute to the rise in wealth concentration during housing busts. In conjuction, these findings suggest that the current macroeconomics literature could benefit from incorporating lessons from the public and household finance literature.

The time series compiled in this paper and specially, the decompositions of wealth accumulation between valuation effects and saving effects by asset class, might be also useful for

policymakers both at national and international levels to design targeted stabilization policies aimed at mitigating the effects of housing or other economic crises, specially among bottom wealth holders (i.e., high rates of indebtedness, low saving rates, drop in consumption). The increase in wealth concentration seems to persist beyond housing busts. To the extent that policymakers aim to minimize the distributional consequences of house-price cycles, better monitoring to prevent or at least identify housing booms and busts could be effective to take policy actions before housing crises occur.

For a long time, research on macroeconomics and research on inequality have grown apart. This study is a step forward in understanding the interactions between wealth inequality, business cycles and saving behavior. Further research is needed to assess and identify the mechanisms underlying the heterogeneity in saving responses. I hope these findings will open up new avenues for future empirical and theoretical research on the determinants of inequality over the business cycle.

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# Figures and Tables

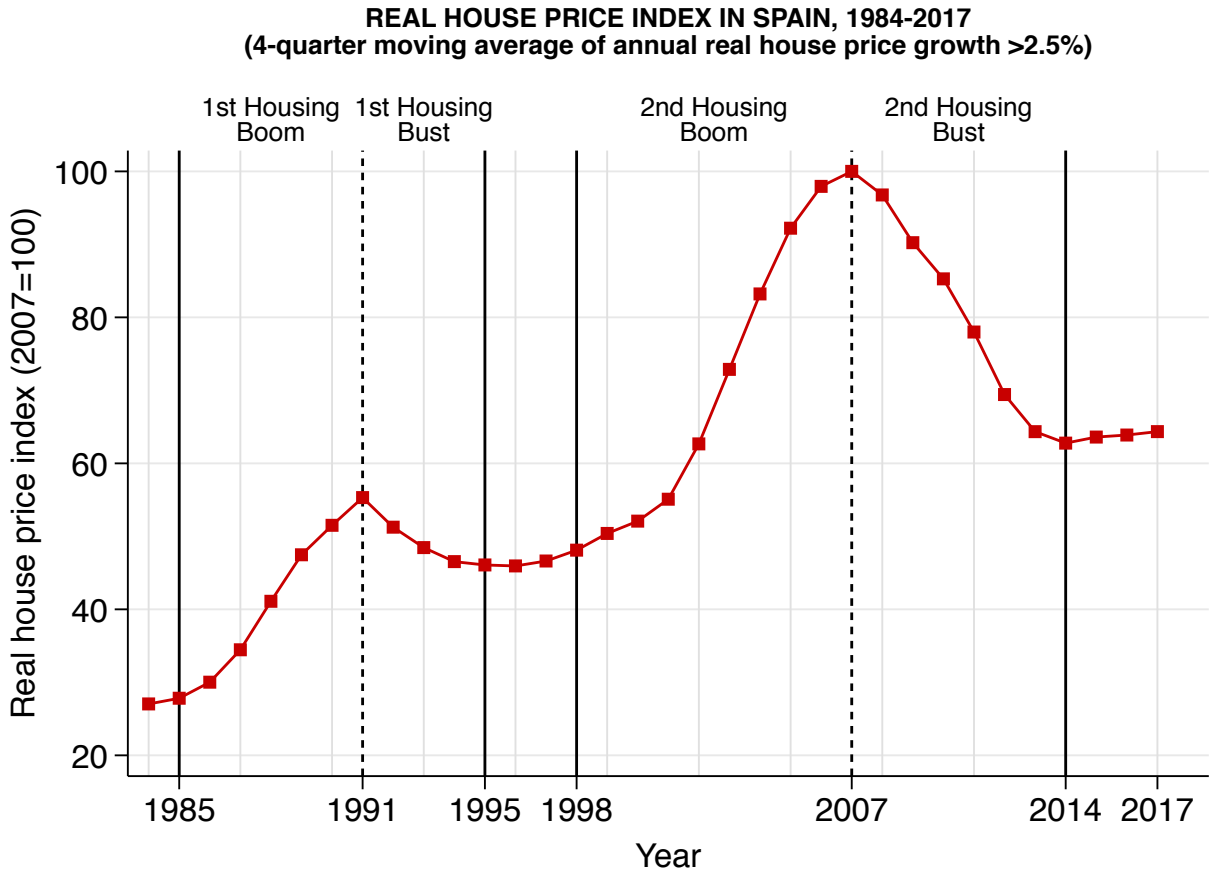
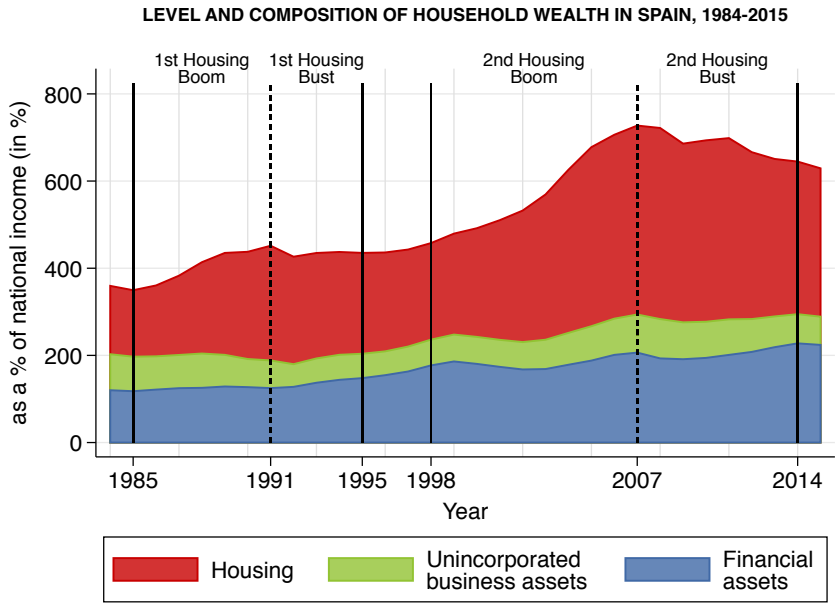
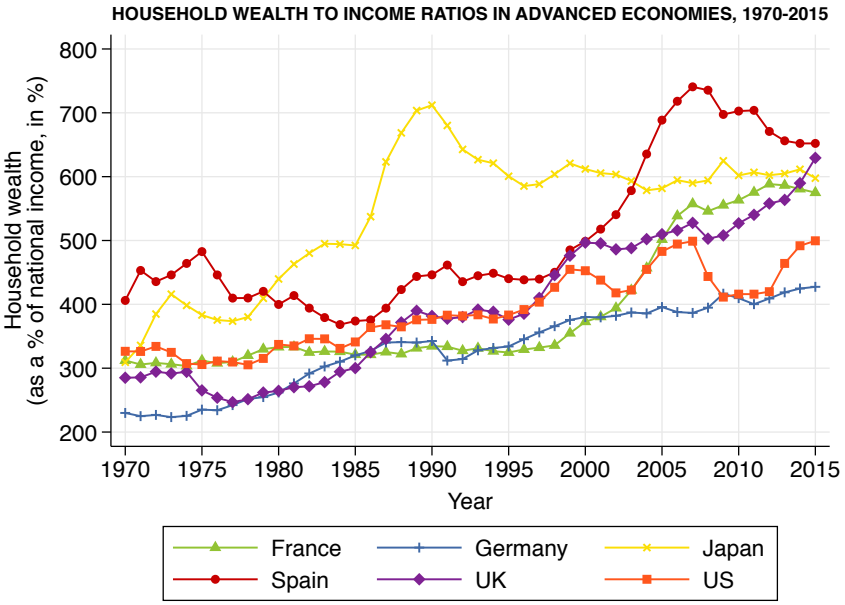



FIGURE 1: REAL HOUSE PRICE INDEX IN SPAIN, 1984-2015

Notes: This figure depicts Mack and Martínez-García [2011]'s real house price index in Spain over the period 1984-2015. Housing booms and busts are identified following a similar methodology to International Monetary Fund [2009]. Housing booms (housing busts) are defined as periods when the four-quarter moving average of the annual growth rate of real housing prices falls above (below) 2.5%. For a more detailed explanation of the methodology used to identify house price cycles and housing boom and busts read appendix C. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.



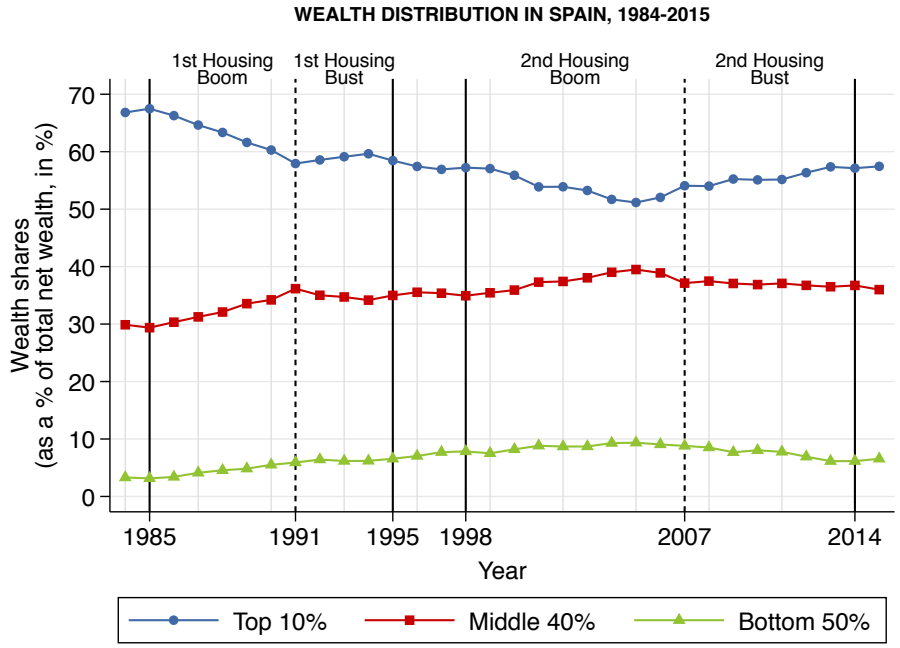

(a) Level and composition of household wealth in Spain, 1984-2015



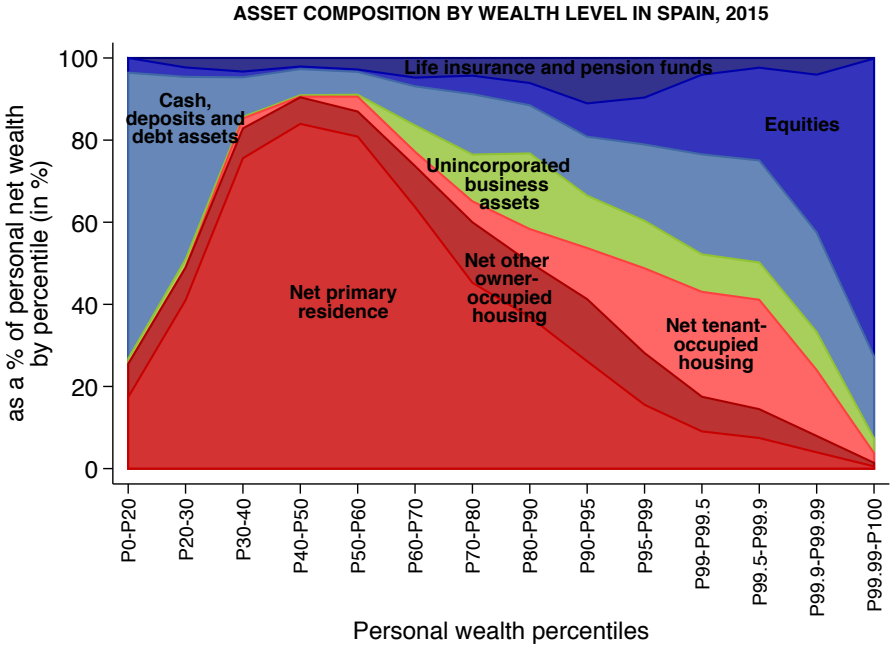

(b) Household wealth to income ratios in advanced economies, 1970-2015

FIGURE 2: AGGREGATE HOUSEHOLD WEALTH: SPAIN VS. ADVANCED ECONOMIES

Notes: The figure depicts on panel a the level and composition of aggregate household wealth from 1984 to 2015 expressed as a percentage of national income. Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities. Unincorporated business assets include the total value of the business of sole proprietorships. Financial assets cover equities, investment funds, fixed income assets (mainly bonds), saving and current deposits, currency, life insurance reserves and pension funds, excluding Social Security. This figure has been constructed using the national income series from the Spanish National Statistics Institute (INE), the series on financial assets from the Financial Accounts of Bank of Spain and the series of housing and unincorporated business assets from Artola Blanco et al. [2019]. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode. Panel b compares the evolution of household wealth as a percentage of national income in Spain versus other advanced countries since 1970. The series for the rest of countries are extracted from the World Wealth and Income Database.



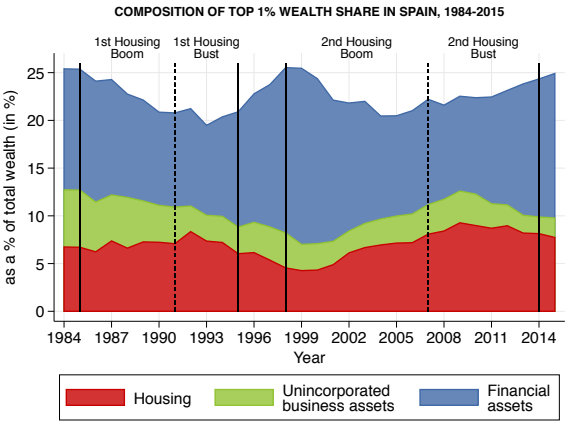

(a) Wealth distribution, 1984-2015



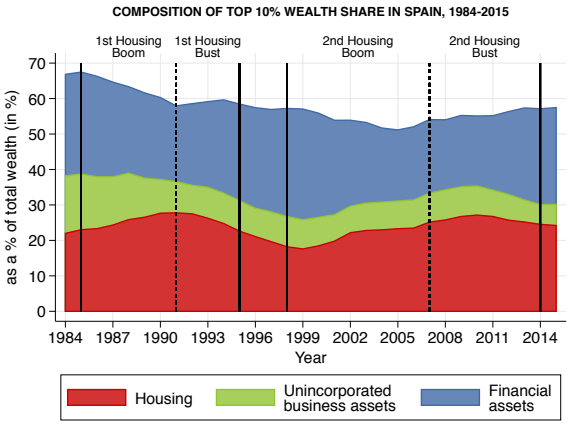

(b) Asset composition by wealth level, 2015

FIGURE 3: WEALTH DISTRIBUTION AND ITS COMPOSITION IN SPAIN

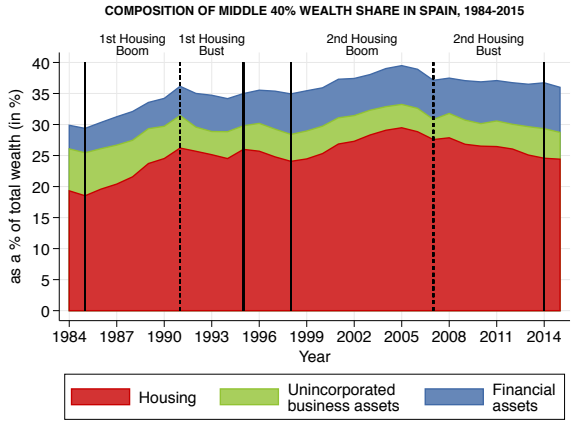
Notes: This figure depicts on panel a the breakdown of the wealth distribution in Spain for years 1984-2015 into three groups: top 10%, middle 40% and bottom 50%. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode. Panel b depicts the asset composition by wealth group in 2015. Wealth includes net housing (primary, other owner-occupied and tenant-occupied housing), unincorporated business assets and financial assets (cash, deposits, equities, life insurance reserves and pension funds). Wealth shares are constructed by capitalizing taxable income and accounting for the assets that do not generate taxable income (primary residence (1999-2015), life insurance, pension and investment funds) using income and wealth surveys. The unit of analysis is the adult individual (+20), excluding the regions of Basque Country and Navarre since they do not belong to the Common Fiscal Regime and hence, they are not included in personal income tax samples.



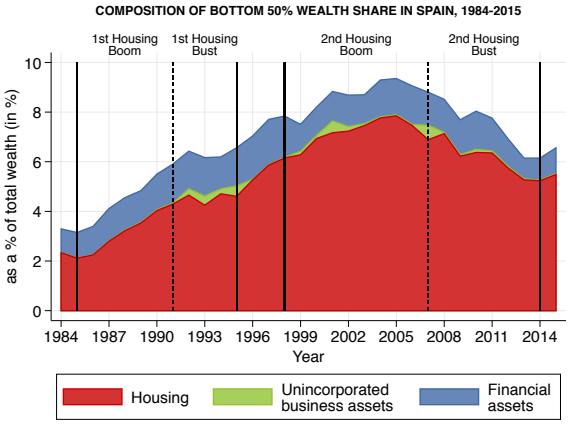

(a) Composition of top 1% wealth share




(b) Composition of top 10% wealth share



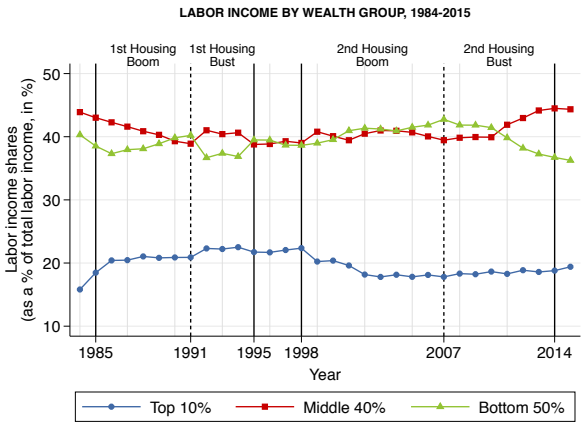

(c) Composition of middle 40% wealth share



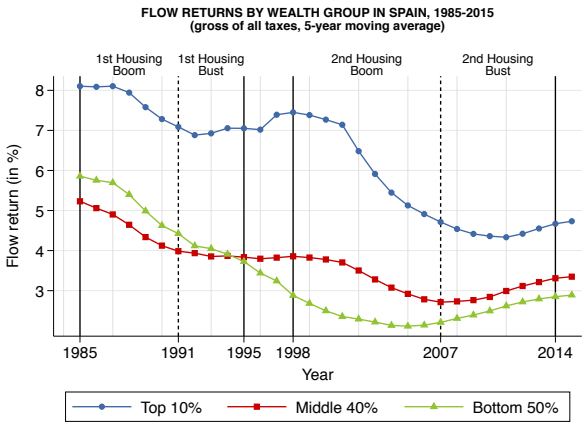

(d) Composition of bottom 50% wealth share

FIGURE 4: ASSET COMPOSITION ACROSS THE WEALTH DISTRIBUTION IN SPAIN, 1984-2015

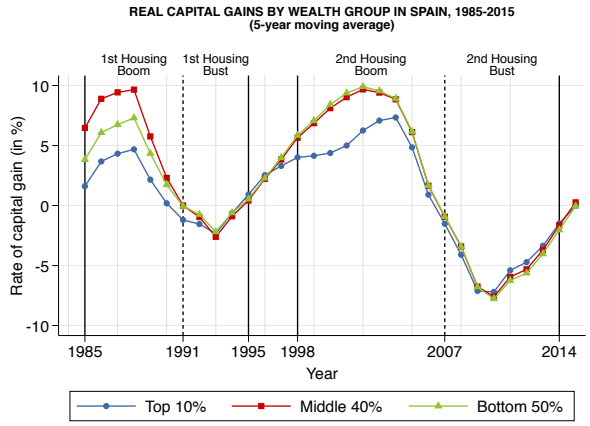
Notes: The figure displays the composition of top 1% (panel a), top 10% (panel b), middle 40% (panel c) and bottom 50% (panel d) wealth shares in Spain using the mixed capitalization-survey method for the period 1984-2015. Net housing includes owner- and tenant-occupied housing net of mortgage debt, the latter approximated by total household liabilities. Unincorporated business assets include the total value of the business of sole proprietorships. Financial assets cover equities, investment funds, fixed income assets (mainly bonds), saving and current deposits, currency, life insurance reserves and pension funds, excluding Social Security.



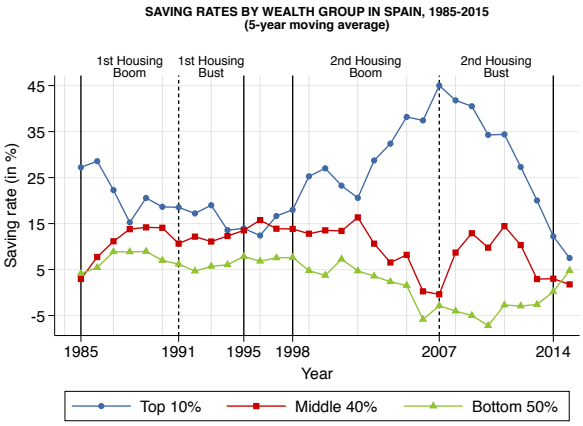

(a) Labor income by wealth group




(b) Flow returns by wealth group




(c) Real capital gains by wealth group




(d) Saving rates by wealth group

FIGURE 5: WEALTH ACCUMULATION DECOMPOSITION BY WEALTH GROUP IN SPAIN, 1984-2015

Notes: The figure depicts the distribution of labor income (panel a), flow rates of return (panel b), real capital gains (panel c) and synthetic saving rates (panel d) among the top 10%, middle 40% and bottom 50% wealth groups over the period 1984-2015 in Spain. The flow return is the ratio of average income to average wealth in wealth group $g$. Real capital gains are defined as the excess of average asset price inflation, given average portfolio composition of wealth group $g$, over consumer price inflation. The synthetic saving rate $s_t^g$ for wealth group $g$ in year $t$ is defined so that $W_{t+1}^g = (1 + q_t^g)[W_t^g + s_t^g(Y_{L_t}^g + r_t^g W_t^g)]$, where $W_t^g$ stands for the average real wealth of wealth group $g$ at time $t$, $Y_{L_t}^g$ is the average real labor income of wealth group $g$ at time $t$, $r_t^g$ the average rate of return of group $g$ at time $t$, $q_t^g$ the average rate of real capital gains of wealth group $g$ at time $t$ and $s_t^g$ the synthetic saving rate of wealth group $g$ at time $t$. The flow rates of return, real capital gains and synthetic saving rates are displayed using a five year moving average from 1985 up to 2015. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.

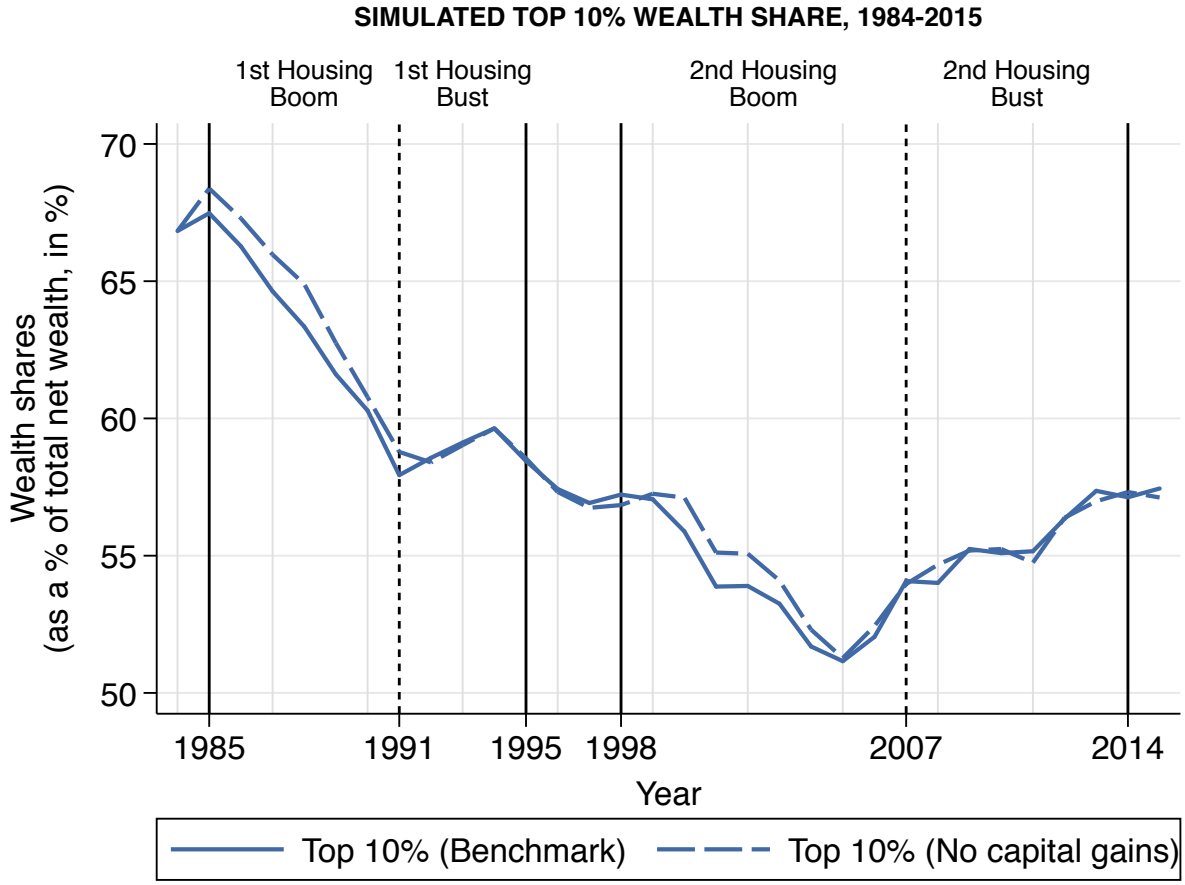
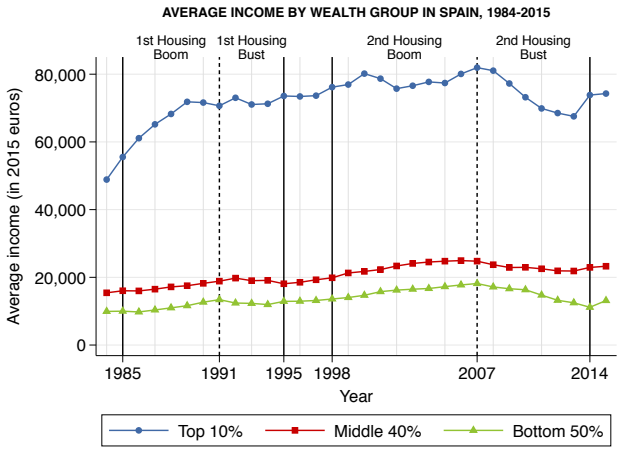
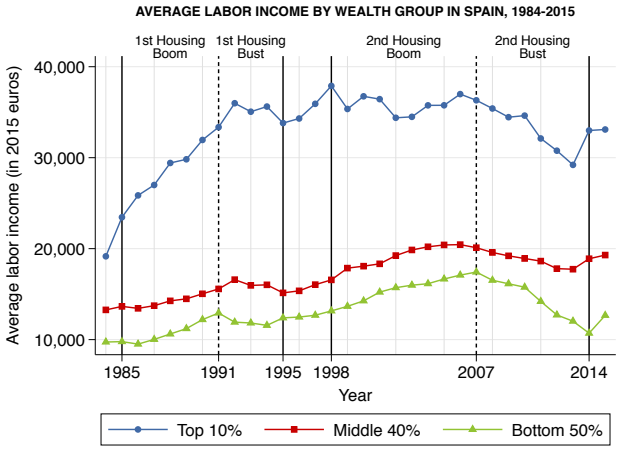



FIGURE 6: SIMULATED TOP 10% WEALTH SHARE IN SPAIN, 1984-2015

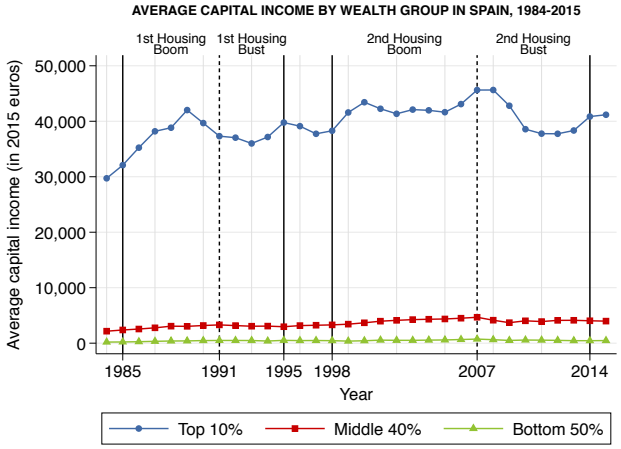
Notes: This figure compares the evolution of the benchmark top 10% wealth share (solid line) with the simulated evolution of the top 10% wealth share (dashed line) using the wealth accumulation decomposition and setting the rate of capital gain equal to zero all along the wealth distribution. Capital gains appear to have contributed to decreasing wealth concentration during housing booms but not during housing busts. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.




(a) Average income by wealth group



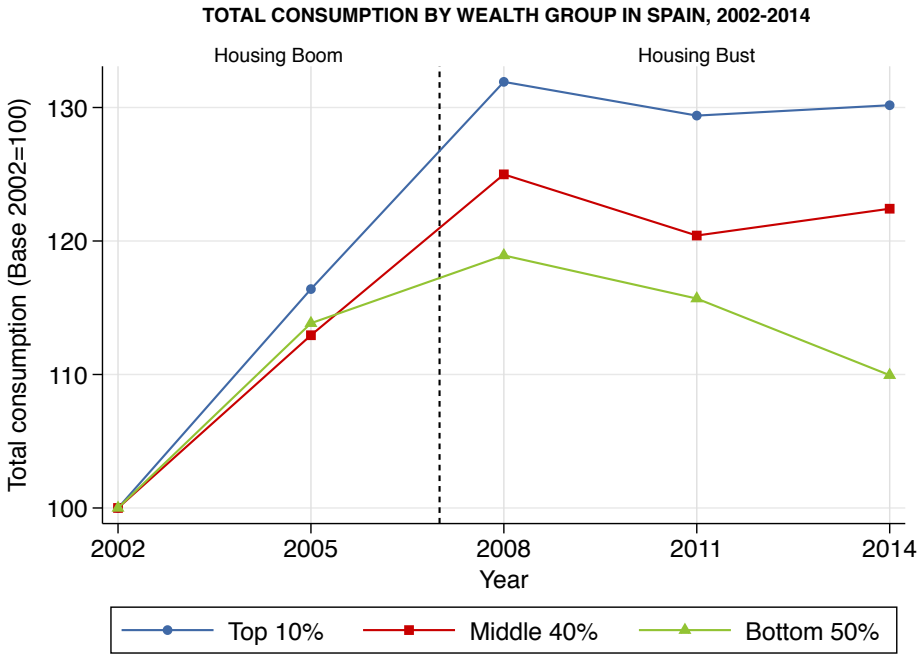

(b) Average labor income by wealth group



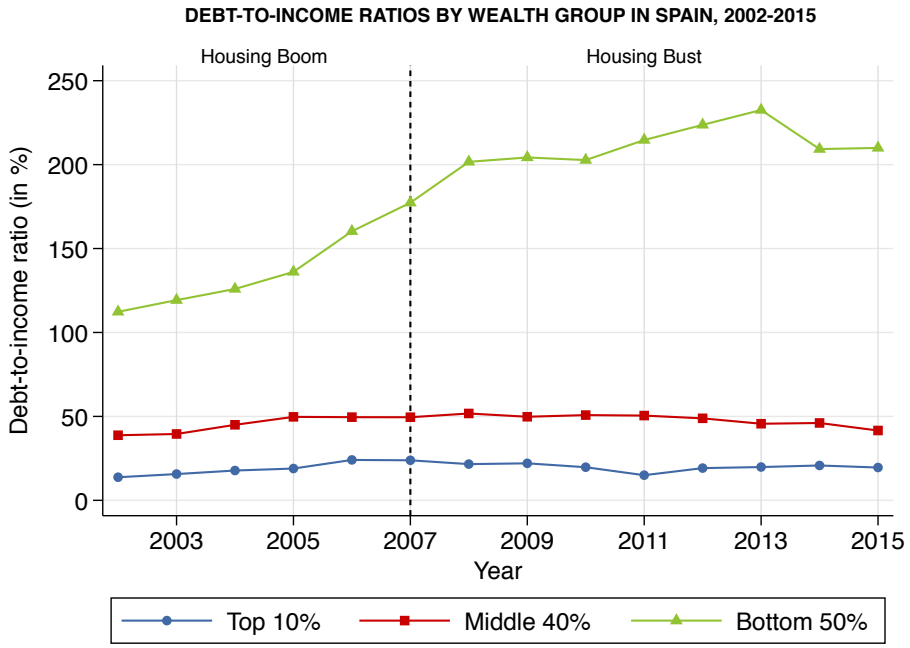

(c) Average capital income by wealth group

FIGURE 7: AVERAGE INCOME BY WEALTH GROUP IN SPAIN, 1984-2015

Notes: The figure depicts average income (panel a), average labor income (panel b) and average capital income (panel c) for the top 10%, middle 40% and bottom 50% wealth groups over the period 1984-2015. These series are calculated based on the available information in tax records and the mixed capitalization-survey method used to construct the wealth distribution. Income variables are deflated to 2015 euros using Spain's consumer price index from OECD statistics. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.



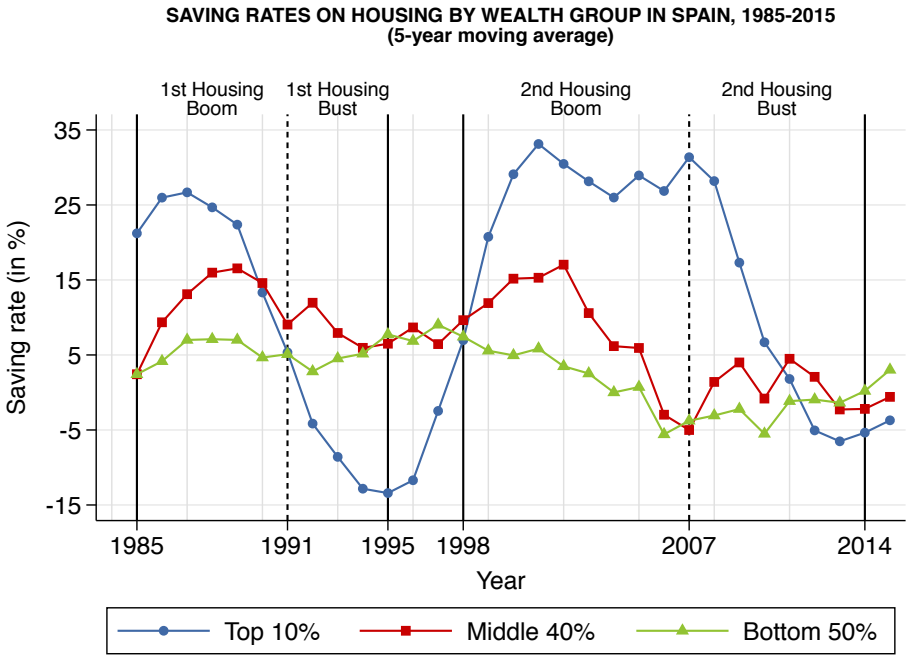

(a) Total consumption by wealth group, 2002-2014



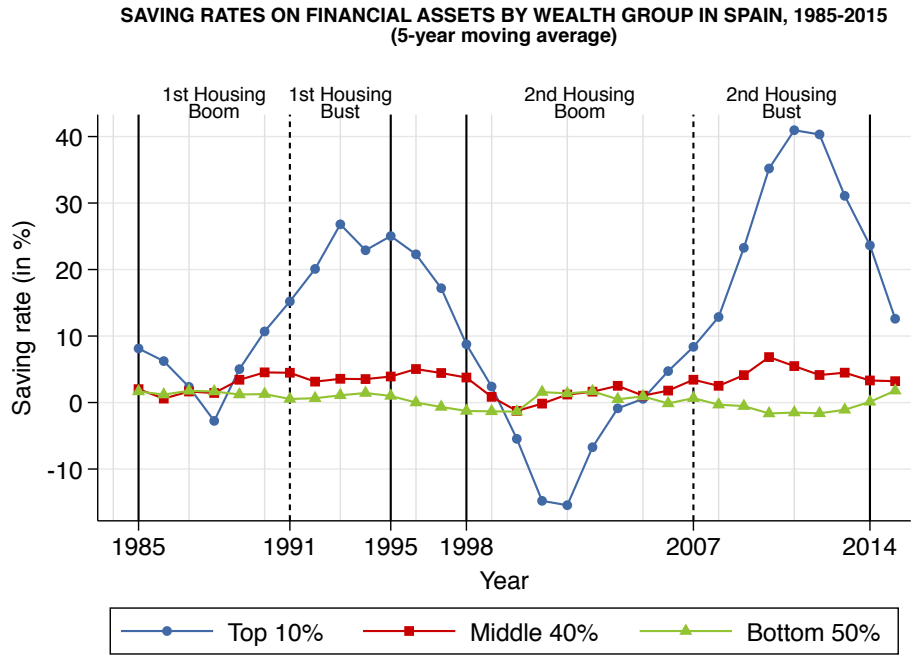

(b) Debt-to-income ratios by wealth group, 2002-2015

FIGURE 8: CONSUMPTION AND DEBT BY WEALTH GROUP IN SPAIN

Notes: This figure depicts on panel a the change in total consumption by wealth group in Spain over the period 2002-2014. These series are calculated using the five waves of the Survey of Household Finances from the Bank of Spain (2002, 2005, 2008, 2011 and 2014). Consumption includes both expenditures on durables and non-durables. Expenditure on durable goods is obtained as the depreciation value of the stock of the household equipment of real estate property and the value of household vehicles and other modes of transport. I use the same depreciation values as in Bover et al. [2006]. Consumption is deflated to 2014 euros using the consumer price index from the Spanish Statistics Institute (INE). Panel b compares the distribution of debt by wealth group in Spain over the period 2002-2015. Debt is imputed into the tax data so as to match the distribution of debt in the Survey of Household Finances (SHF) (see Appendix A.II). The vertical dashed black line at 2007 denotes the turning point from the housing boom to the housing bust.



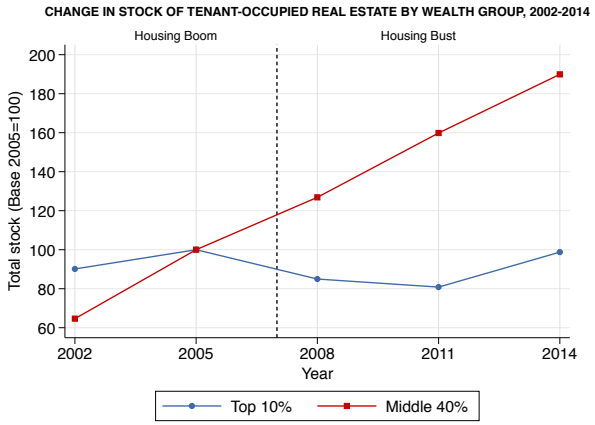

(a) saving rates on net housing by wealth group in Spain, 1985-2015




(b) Saving rates on financial assets by wealth group in Spain, 1985-2015

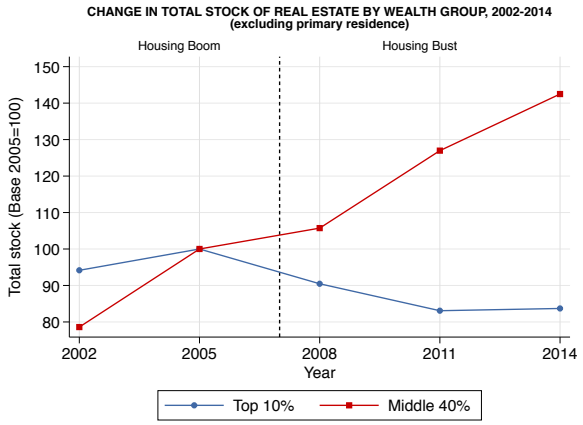
FIGURE 9: ASSET-SPECIFIC SAVING RATES BY WEALTH GROUP IN SPAIN, 1985-2014

Notes: Panels a and b plot the synthetic saving rates on net housing and financial assets for the top 10%, middle 40%, and bottom 50%, respectively, using a five year moving average from 1985 up to to 2015. Synthetic saving rate $s^g_{A,t}$ for wealth group $g$ in year $t$ is defined so that $W^g_{A,t+1} = (1 + q^g_t)[W^g_{A,t} + s^g_{A,t}(Y^g_{L_t} + r^g_t W^g_{H,t})]$, where $W^g_{A,t}$ stands for the average value of asset $A$ (i.e. net housing or financial assets) of wealth group $g$ at time $t$, $s^g_{A,t}$ the synthetic saving rate on asset $A$ of wealth group $g$ at time $t$ and the rest of variables are the same as in Figure 5. For each wealth group, the sum of these two saving rates each year, together with the saving rate on business assets are equal to the total annual saving rate by wealth group. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.

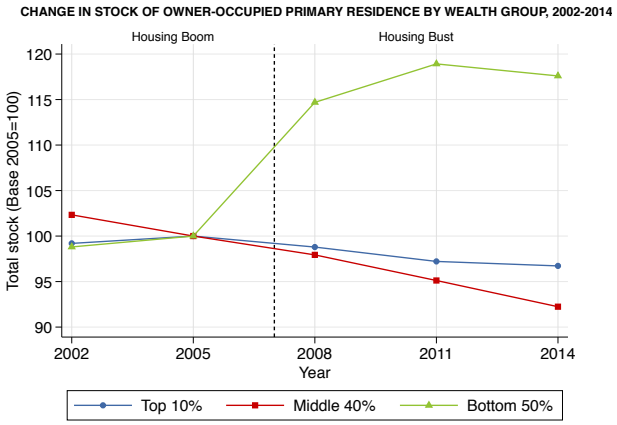



(a) Change in stock of tenant-occupied real estate


(b) Change in stock of owner-occupied real estate



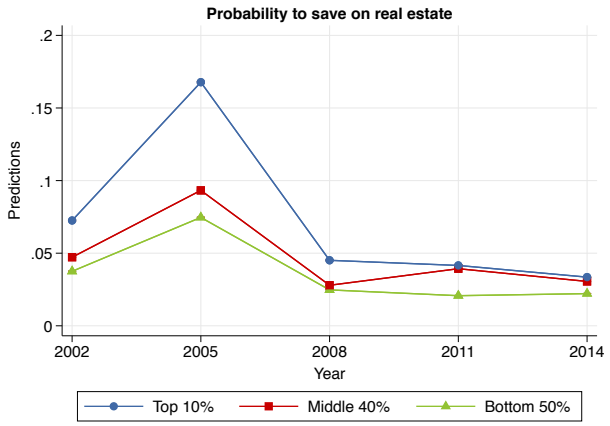

(c) Change in total stock of real estate (excluding primary residence)



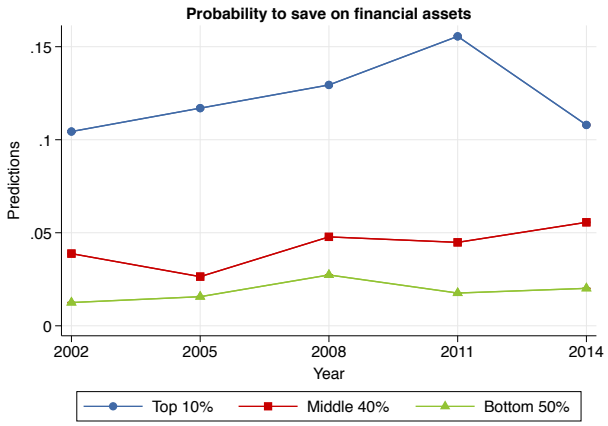

(d) Change in stock of owner-occupied primary residence

FIGURE 10: STOCK OF REAL ESTATE BY WEALTH GROUP IN SPAIN, 2002-2014

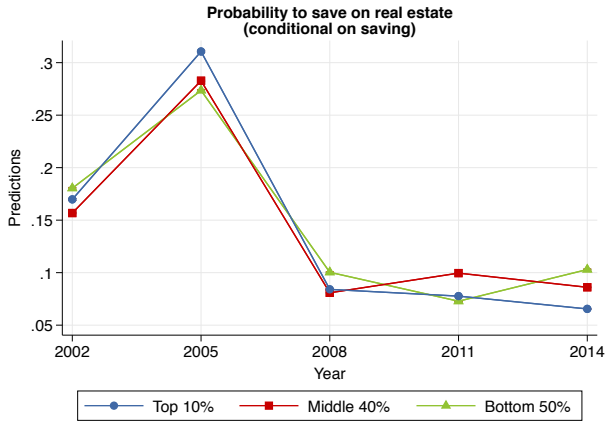
Notes: The figure depicts the evolution in the stock of real estate by wealth group over the period 2002-2014 in Spain. Changes in the stock of real estate are shown for tenant-occupied real estate (panel a), owner-occupied real estate (panel b), total real estate excluding primary residence (panel c) and owner-occupied primary residence (panel d). These series are indexed to base year 2005 and are calculated using the five waves of the Survey of Household Finances from the Bank of Spain (2002, 2005, 2008, 2011 and 2014). Changes between $t$ and $t+1$ are calculated using the longitudinal dimension of the survey by comparing two consecutives waves and fixing the wealth group to year $t$. The vertical dashed black line at 2007 denotes the turning point from the housing boom to the housing bust.



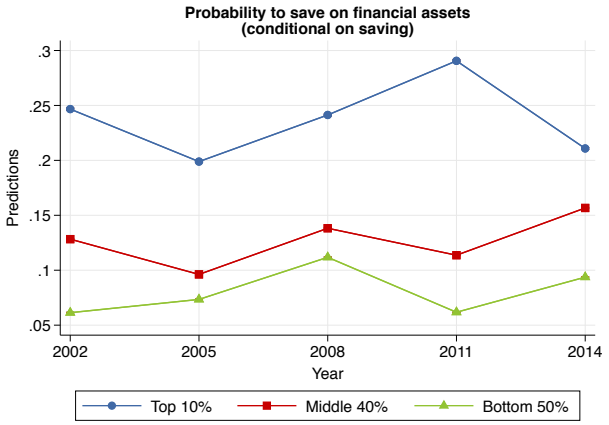

(a) Probability to save on real estate




(b) Probability to save on financial assets



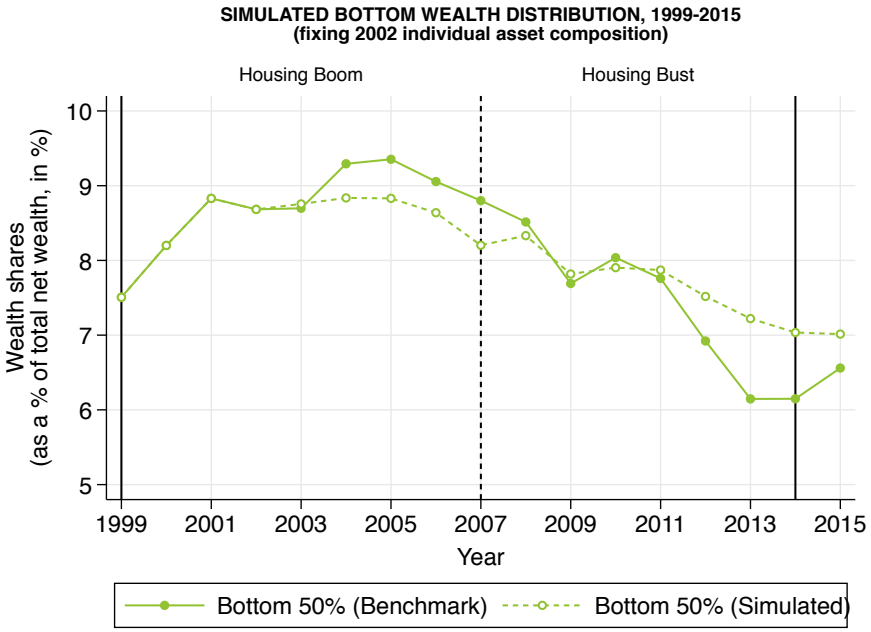

(c) Probability to save on real estate (conditional on saving)



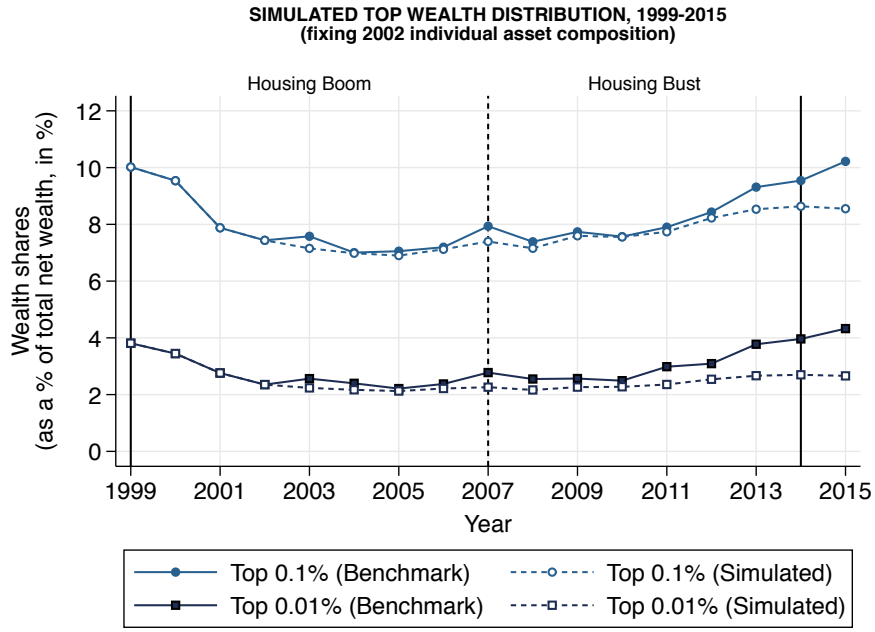

(d) Probability to save on financial assets (conditional on saving)

FIGURE 11: ATTITUDES TOWARDS SAVING, 2002-2014

Notes: The figure depicts the probability to save on real estate (panel a) and on financial assets (panel b) over the period 2002-2014. Panels c and d show the same probabilities conditional on being a saver. These results are obtained after carrying logit regressions with the five waves of the Survey of Household Finances from the Bank of Spain (2002, 2005, 2008, 2011 and 2014). 95% confidence intervals are reported.



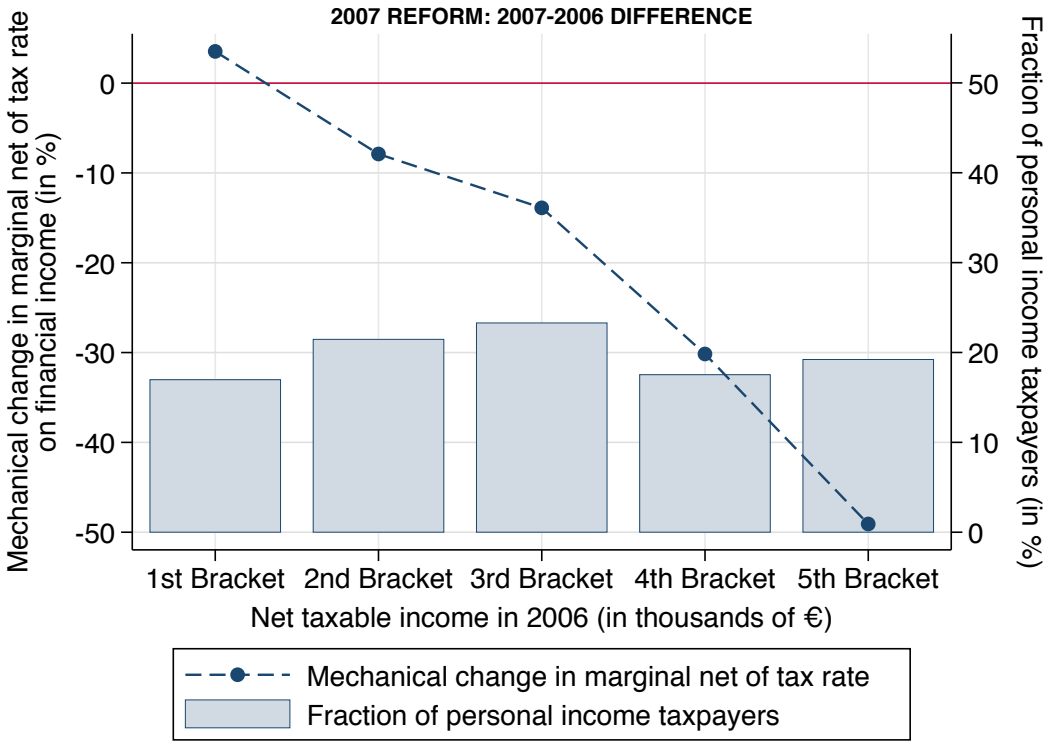

(a) Simulated Bottom Wealth Distribution



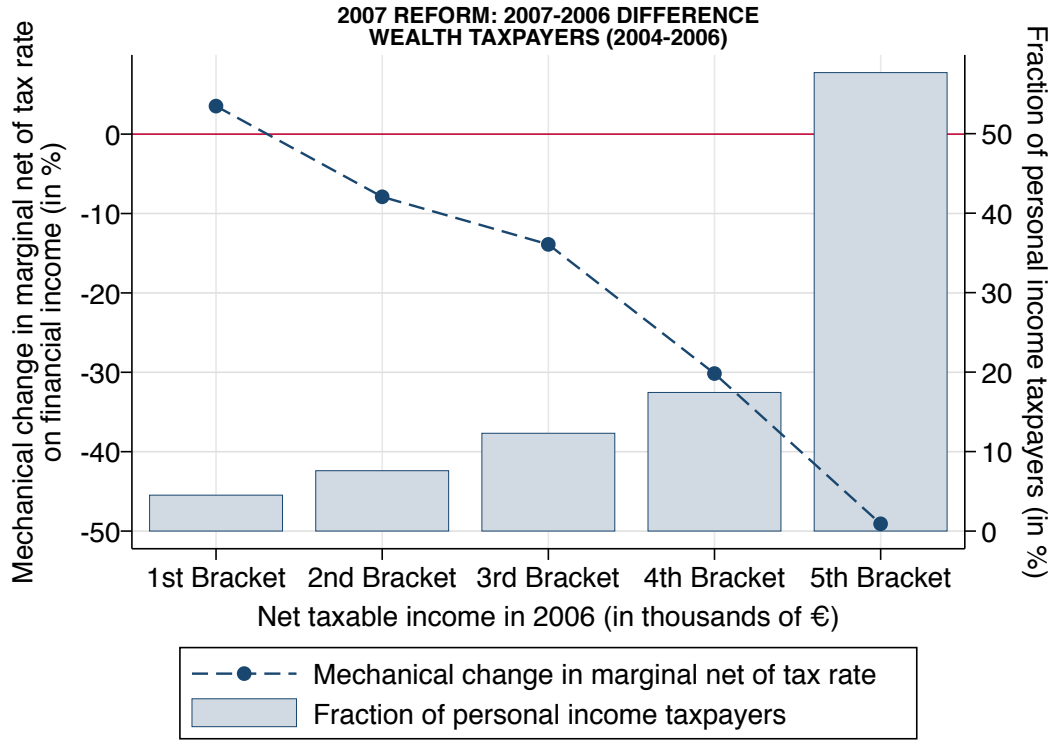

(b) Simulated Top Wealth Distribution

FIGURE 12: SIMULATED WEALTH DISTRIBUTION FIXING 2002 ASSET COMPOSITION, 1999-2015

Notes: The figure depicts the simulated bottom (panel a) and top (panel b) wealth distribution series fixing the individual asset composition to year 2002 from 2003 up to 2015. Only changes in the composition of assets coming from changes in the aggregate composition of household wealth are allowed.



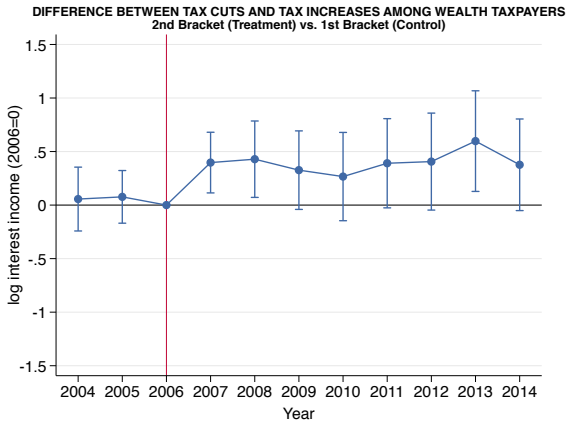

(a) Mechanical changes in net of tax rates on financial income among personal income taxpayers



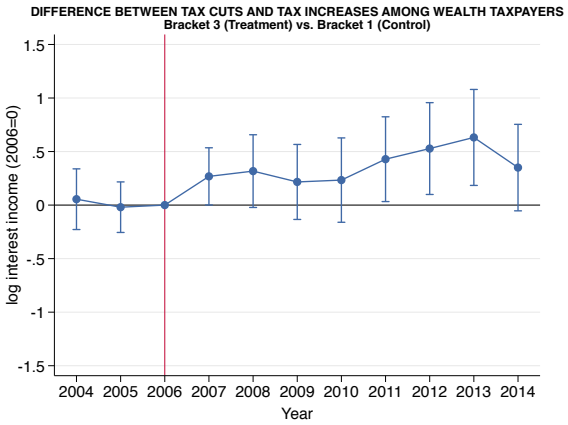

(b) Mechanical changes in net of tax rates on financial income among personal wealth taxpayers

FIGURE 13: MECHANICAL CHANGES IN MARGINAL NET OF TAX RATES ON FINANCIAL INCOME

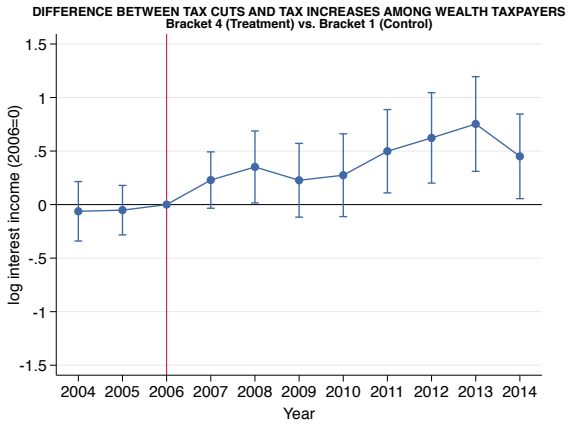
Notes: This figure depicts the mechanical changes in marginal net of tax rates (dashed lines) due to the 2007 reform among personal income taxpayers (panel a) and among wealth taxpayers (panel b). Each panel shows the 2007-2006 differences in percent. The figure also shows the size of each group as a share of all taxpayers (bars).



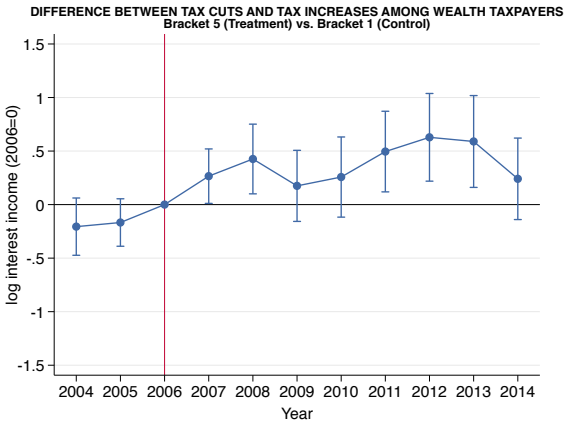

(a) Differences-in-Differences Results (2nd vs. 1st Bracket)




(b) Differences-in-Differences Results (3rd vs. 1st Bracket)




(c) Differences-in-Differences Results (4th vs. 1st Bracket)




(d) Differences-in-Differences Results (5th vs. 1st Bracket)

FIGURE 14: DIFFERENCE BETWEEN TAX CUTS AND TAX INCREASES AMONG WEALTH TAXPAYERS BY PRE-REFORM INCOME BRACKET, 2004-2014

Notes: The figure shows the differences-in-differences event-study results normalized to zero in the pre-reform year 2006 for groups that were affected differently by the 2007 reform. The figure is based on a balanced panel of wealth taxpayers who are observed throughout the period 2004-2014. The vertical line at 2006 denotes the last pre-reform year. The treatment group is split by personal income tax bracket, into those who experience the largest net-of-tax rate increases (5th bracket) and those who experience smaller net-of-tax rate increases (4th, 3rd brackets) and even smaller net-of-tax rate increases (2nd bracket). The treatment-control definition is based on the reform-induced tax variation (2004-2006) for the different groups shown in Figure 12b, with the control being the group who experiences a decline in the marginal net-of-tax rate (1st bracket). 95% confidence intervals are based on standard errors clustered at the individual level.


FIGURE 15: SIMULATED TOP 10% WEALTH SHARE IN SPAIN, 1999-2014

Notes: The figure compares the evolution of the top 10% benchmark wealth share (solid line) with the counterfactual top 10% wealth share absent the capital income tax reform (dashed line). The counterfactual wealth distribution has been calculated by first estimating wealth across all individuals and years in the panel using the mixed capitalization-survey method and then applying the annual growth rate of deposits and bonds of the control group over the period 2007-2014 to the treatment group.

**AVERAGE ANNUAL RATES OF RETURN IN SPAIN, 1984-2015**

| | Flow return | Real capital gains | Total return |
|---|---|---|---|
| **1984-2015** | | | |
| **Net personal wealth** | 5.0% | 2.7% | 7.9% |
| **Housing assets** | 1.3% | 3.0% | 4.3% |
| **Business assets** | 7.2% | 3.0% | 10.4% |
| **Financial assets** | 10.2% | -2.6% | 7.3% |
| **Liabilities** | 1.0% | 1.0% | 2.0% |
| **1985-1991 (1st housing boom)** | | | |
| **Net personal wealth** | 6.6% | 5.3% | 12.3% |
| **Housing assets** | 1.7% | 7.0% | 8.8% |
| **Business assets** | 8.5% | 7.0% | 16.1% |
| **Financial assets** | 13.7% | -6.6% | 6.2% |
| **Liabilities** | 1.5% | -2.4% | -0.9% |
| **1991-1995 (1st housing bust)** | | | |
| **Net personal wealth** | 5.7% | 0.2% | 5.9% |
| **Housing assets** | 1.1% | -1.5% | -0.5% |
| **Business assets** | 11.3% | -1.5% | 9.6% |
| **Financial assets** | 11.5% | -1.4% | 9.9% |
| **Liabilities** | 0.9% | -0.5% | 0.5% |
| **1998-2007 (2nd housing boom)** | | | |
| **Net personal wealth** | 4.3% | 6.6% | 11.2% |
| **Housing assets** | 1.0% | 8.3% | 9.3% |
| **Business assets** | 7.3% | 8.3% | 16.2% |
| **Financial assets** | 8.8% | 0.1% | 8.9% |
| **Liabilities** | 0.6% | 7.3% | 7.9% |
| **2008-2014 (2nd housing bust)** | | | |
| **Net personal wealth** | 3.7% | -4.2% | -0.7% |
| **Housing assets** | 1.4% | -5.7% | -4.4% |
| **Business assets** | 3.0% | -4.7% | -1.8% |
| **Financial assets** | 8.3% | -4.2% | 3.7% |
| **Liabilities** | 0.9% | -3.3% | -2.4% |

TABLE 1: AVERAGE ANNUAL RATES OF RETURN IN SPAIN, 1984-2015

Notes: This table reports the average total returns on household wealth by asset category over the 1984-2015 period in Spain. The total returns are the sum of the flow returns and of the real rates of capital gains from national accounts. The returns are gross of all taxes but net of capital depreciation. Real capital gains correspond to asset price inflation in excess of consumer price inflation. The rates of return are reported for the full period 1984-2015 and further decomposed for the two different housing booms and busts (1985-1991, 1992-1995, 1998-2007 and 2007-2014). All figures are presented in percentages.

**WEALTH THRESHOLDS AND SHARES IN SPAIN, 2015**

| Wealth group | Number of adults | Wealth threshold | Average wealth | Wealth share |
|---|---|---|---|---|
| Full population | 35,082,703 | 0€ | 147,395€ | 100% |
| Bottom 50% | 17,541,352 | 0€ | 19,413€ | 6.6% |
| Middle 40% | 14,033,081 | 61,890€ | 132,643€ | 36.0% |
| Top 10% | 3,721,375 | 284,390€ | 829,942€ | 57.4% |
| incl. Top 1% | 372,138 | 1,416,646€ | 3,393,448€ | 24.9% |
| incl. Top 0.1% | 37,214 | 4,894,606€ | 12,482,984€ | 10.2% |
| incl. Top 0.01% | 3,721 | 19,130,185€ | 51,017,990€ | 4.3% |

TABLE 2: WEALTH THRESHOLDS AND SHARES IN SPAIN, 2015

Notes: This table reports statistics on the distribution of wealth in Spain in 2015 obtained using the mixed capitalization-survey method. The unit is the adult individual (20-year-old and over; net wealth of married couples is split into two). Fractiles are defined relative to the total number of adult individuals in the population.

**PRIMARY RESIDENCE BY WEALTH GROUP IN SPAIN, 2002-2014**

| | Wealth group | | | P-value | | |
|---|---|---|---|---|---|---|
| | **T10%** | **M40%** | **B50%** | **T10%-M40%** | **T10%-B50%** | **M40%-B50%** |
| **% Own** | | | | | | |
| 2002 | 0.96 | 0.98 | 0.64 | 0.093 | 0.000 | 0.000 |
| 2005 | 0.98 | 0.98 | 0.63 | 0.787 | 0.000 | 0.000 |
| 2008 | 0.97 | 0.97 | 0.67 | 0.815 | 0.000 | 0.000 |
| 2011 | 0.97 | 0.96 | 0.68 | 0.124 | 0.000 | 0.000 |
| 2014 | 0.96 | 0.97 | 0.64 | 0.246 | 0.000 | 0.000 |
| **Average value** | | | | | | |
| 2002 | 255,827 | 128,856 | 62,292 | 0.000 | 0.000 | 0.000 |
| 2005 | 403,348 | 226,788 | 112,327 | 0.000 | 0.000 | 0.000 |
| 2008 | 448,211 | 231,283 | 123,859 | 0.000 | 0.000 | 0.000 |
| 2011 | 394,980 | 201,920 | 113,096 | 0.000 | 0.000 | 0.000 |
| 2014 | 353,785 | 172,941 | 97,706 | 0.000 | 0.000 | 0.000 |
| **Average size in m2** | | | | | | |
| 2002 | 155 | 108 | 96 | 0.000 | 0.000 | 0.000 |
| 2005 | 163 | 106 | 97 | 0.000 | 0.000 | 0.000 |
| 2008 | 175 | 114 | 98 | 0.000 | 0.000 | 0.000 |
| 2011 | 171 | 119 | 98 | 0.000 | 0.000 | 0.000 |
| 2014 | 162 | 122 | 99 | 0.000 | 0.000 | 0.000 |
| **% Own mortgage** | | | | | | |
| 2002 | 0.17 | 0.23 | 0.21 | 0.003 | 0.056 | 0.221 |
| 2005 | 0.20 | 0.27 | 0.26 | 0.000 | 0.001 | 0.566 |
| 2008 | 0.19 | 0.25 | 0.28 | 0.000 | 0.000 | 0.016 |
| 2011 | 0.12 | 0.23 | 0.32 | 0.000 | 0.000 | 0.000 |
| 2014 | 0.14 | 0.24 | 0.35 | 0.000 | 0.000 | 0.000 |
| **Average interest rate** | | | | | | |
| 2002 | 5.37 | 5.48 | 5.54 | 0.758 | 0.654 | 0.884 |
| 2005 | 3.58 | 3.66 | 3.86 | 0.524 | 0.118 | 0.037 |
| 2008 | 3.84 | 2.43 | 3.10 | 0.455 | 0.637 | 0.006 |
| 2011 | 2.68 | 3.44 | 3.41 | 0.000 | 0.001 | 0.799 |
| 2014 | 1.72 | 2.03 | 2.52 | 0.077 | 0.001 | 0.000 |
| **% Movers** | | | | | | |
| 2002 | 0.042 | 0.034 | 0.021 | 0.319 | 0.004 | 0.013 |
| 2005 | 0.058 | 0.051 | 0.028 | 0.419 | 0.000 | 0.000 |
| 2008 | 0.032 | 0.037 | 0.028 | 0.544 | 0.509 | 0.090 |
| 2011 | 0.023 | 0.033 | 0.027 | 0.149 | 0.621 | 0.248 |
| 2014 | 0.020 | 0.038 | 0.030 | 0.012 | 0.142 | 0.194 |

TABLE 3: PRIMARY RESIDENCE BY WEALTH GROUP IN SPAIN, 2002-2014

Notes: This table provides information on the ownership and characteristics (value, size, mortgage, interest rate) of primary residence by wealth group over the period 2002-2014 in Spain. It also reports the reported probability to change in the next two years of primary residence. These calculations are with the the five waves of the Spanish Survey of Household Finances (SHF) constructed by Bank of Spain. The sample size is 5,141 in 2002, 5,950 in 2005, 6,194 in 2008, 6,103 in 2011 and 6,116 in 2014.

**OTHER REAL ESTATE PROPERTIES BY WEALTH GROUP IN SPAIN, 2002-2014**

| | Wealth group | | | P-value | | |
|---|---|---|---|---|---|---|
| | **T10%** | **M40%** | **B50%** | **T10%-M40%** | **T10%-B50%** | **M40%-B50%** |
| **% Own other prop.** | | | | | | |
| 2002 | 0.76 | 0.39 | 0.12 | 0.000 | 0.000 | 0.000 |
| 2005 | 0.83 | 0.40 | 0.18 | 0.000 | 0.000 | 0.000 |
| 2008 | 0.83 | 0.48 | 0.17 | 0.000 | 0.000 | 0.000 |
| 2011 | 0.90 | 0.50 | 0.21 | 0.000 | 0.000 | 0.000 |
| 2014 | 0.89 | 0.56 | 0.17 | 0.000 | 0.000 | 0.000 |
| **% Own owner-occupied** | | | | | | |
| 2002 | 0.41 | 0.17 | 0.04 | 0.000 | 0.000 | 0.000 |
| 2005 | 0.45 | 0.17 | 0.04 | 0.000 | 0.000 | 0.000 |
| 2008 | 0.47 | 0.20 | 0.05 | 0.000 | 0.000 | 0.000 |
| 2011 | 0.53 | 0.24 | 0.06 | 0.000 | 0.000 | 0.000 |
| 2014 | 0.55 | 0.32 | 0.07 | 0.000 | 0.000 | 0.000 |
| **% Own tenant-occupied** | | | | | | |
| 2002 | 0.19 | 0.04 | 0.00 | 0.000 | 0.000 | 0.000 |
| 2005 | 0.22 | 0.04 | 0.01 | 0.000 | 0.000 | 0.000 |
| 2008 | 0.25 | 0.05 | 0.01 | 0.000 | 0.000 | 0.000 |
| 2011 | 0.27 | 0.07 | 0.02 | 0.000 | 0.000 | 0.000 |
| 2014 | 0.34 | 0.09 | 0.03 | 0.000 | 0.000 | 0.000 |
| **# other prop.** | | | | | | |
| 2002 | 2.65 | 1.05 | 0.29 | 0.000 | 0.000 | 0.000 |
| 2005 | 3.14 | 1.14 | 0.48 | 0.000 | 0.000 | 0.000 |
| 2008 | 3.19 | 1.34 | 0.41 | 0.000 | 0.000 | 0.000 |
| 2011 | 3.65 | 1.47 | 0.48 | 0.000 | 0.000 | 0.000 |
| 2014 | 3.76 | 1.67 | 0.42 | 0.000 | 0.000 | 0.000 |
| **# owner-occupied** | | | | | | |
| 2002 | 1.29 | 1.05 | 1.01 | 0.000 | 0.000 | 0.109 |
| 2005 | 1.20 | 1.10 | 1.04 | 0.000 | 0.000 | 0.031 |
| 2008 | 1.37 | 1.17 | 1.19 | 0.000 | 0.000 | 0.600 |
| 2011 | 1.40 | 1.17 | 1.04 | 0.000 | 0.000 | 0.001 |
| 2014 | 1.42 | 1.21 | 1.07 | 0.000 | 0.000 | 0.001 |
| **# tenant-occupied** | | | | | | |
| 2002 | 1.55 | 1.24 | 1.00 | 0.000 | 0.000 | 0.131 |
| 2005 | 1.50 | 1.16 | 1.19 | 0.000 | 0.000 | 0.813 |
| 2008 | 1.54 | 1.14 | 1.37 | 0.000 | 0.026 | 0.010 |
| 2011 | 1.51 | 1.11 | 1.05 | 0.000 | 0.000 | 0.216 |
| 2014 | 1.48 | 1.16 | 1.10 | 0.000 | 0.000 | 0.379 |

TABLE 4: OTHER REAL ESTATE PROPERTIES BY WEALTH GROUP IN SPAIN, 2002-2014

Notes: This table reports summary statistics on the ownership and number of real estate properties owned (excluding primary residence) by wealth group over the period 2002-2014 in Spain. These calculations are with the the five waves of the Spanish Survey of Household Finances (SHF) constructed by Bank of Spain. The sample size is 5,141 in 2002, 5,950 in 2005, 6,194 in 2008, 6,103 in 2011 and 6,116 in 2014.

**OTHER REAL ESTATE PROPERTIES BY WEALTH GROUP IN SPAIN, 2002-2014 (cont.)**

| | Wealth group | | | P-value | | |
|---|---|---|---|---|---|---|
| | **T10%** | **M40%** | **B50%** | **T10%-M40%** | **T10%-B50%** | **M40%-B50%** |
| **Value other prop.** | | | | | | |
| 2002 | 100,912 | 35,870 | 14,975 | 0.000 | 0.000 | 0.000 |
| 2005 | 155,379 | 57,106 | 25,805 | 0.000 | 0.000 | 0.000 |
| 2008 | 173,276 | 65,660 | 31,798 | 0.000 | 0.000 | 0.000 |
| 2011 | 180,328 | 59,565 | 30,245 | 0.000 | 0.000 | 0.000 |
| 2014 | 190,108 | 51,395 | 29,111 | 0.000 | 0.000 | 0.000 |
| **Value owner-occupied** | | | | | | |
| 2002 | 131,311 | 75,075 | 30,819 | 0.000 | 0.000 | 0.000 |
| 2005 | 215,988 | 120,572 | 49,427 | 0.000 | 0.000 | 0.000 |
| 2008 | 240,924 | 120,786 | 54,571 | 0.000 | 0.000 | 0.000 |
| 2011 | 233,972 | 108,572 | 59,011 | 0.000 | 0.000 | 0.000 |
| 2014 | 238,600 | 78,178 | 44,994 | 0.000 | 0.000 | 0.000 |
| **Value tenant-occupied** | | | | | | |
| 2002 | 152,695 | 78,518 | 42,459 | 0.000 | 0.000 | 0.012 |
| 2005 | 245,275 | 100,516 | 102,753 | 0.000 | 0.000 | 0.880 |
| 2008 | 246,511 | 127,985 | 148,279 | 0.000 | 0.006 | 0.309 |
| 2011 | 259,752 | 138,967 | 105,476 | 0.000 | 0.000 | 0.051 |
| 2014 | 242,798 | 157,830 | 82,492 | 0.001 | 0.000 | 0.216 |
| **Value rent other prop.** | | | | | | |
| 2002 | 1,163 | 544 | 606 | 0.000 | 0.121 | 0.606 |
| 2005 | 861 | 583 | 797 | 0.000 | 0.491 | 0.076 |
| 2008 | 1,133 | 735 | 872 | | 0.000 | 0.125 |
| 0.303 | | | | | | |
| 2011 | 1,040 | 761 | 676 | 0.001 | 0.004 | 0.281 |
| 2014 | 1,085 | 643 | 678 | 0.000 | 0.000 | 0.674 |
| **Interest rate on debt** | | | | | | |
| 2002 | 5.37 | 5.48 | 5.54 | 0.758 | 0.654 | 0.884 |
| 2005 | 3.38 | 3.55 | 4.13 | 0.177 | 0.002 | 0.007 |
| 2008 | 5.10 | 4.93 | 5.30 | 0.459 | 0.358 | 0.098 |
| 2011 | 3.12 | 3.33 | 3.40 | 0.409 | 0.255 | 0.741 |
| 2014 | 2.01 | 2.48 | 3.32 | 0.030 | 0.000 | 0.000 |

TABLE 5: OTHER REAL ESTATE PROPERTIES BY WEALTH GROUP IN SPAIN, 2002-2014 (cont.)

Notes: This table reports summary statistics on the characteristics (value, mortgage, interest rate, etc.) of real estate properties owned (excluding primary residence) by wealth group over the period 2002-2014 in Spain. These calculations are with the the five waves of the Spanish Survey of Household Finances (SHF) constructed by Bank of Spain. The sample size is 5,141 in 2002, 5,950 in 2005, 6,194 in 2008, 6,103 in 2011 and 6,116 in 2014.

**REAL ESTATE DEMAND: RICH DISTRICTS VS. REST, 2009**

| | Districts with highest price | | Rest of districts | | | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Diff. | P-value |
| Sale price per m2 | 2675.01 | 1094.68 | 1956.00 | 795.22 | -719.01 | 0.00 |
| Surface per m2 | 107.63 | 59.47 | 127.00 | 82.05 | 19.37 | 0.00 |
| Demand index | 0.01 | 0.02 | 0.01 | 0.01 | 0.00 | 0.11 |
| Available stock | 5.22 | 5.64 | 3.92 | 2.65 | -1.30 | 0.00 |
| Rental price per m2 | 8.43 | 5.81 | 7.01 | 3.98 | -1.42 | 0.01 |
| N | 363 | | 1,192 | | | |

TABLE 6: REAL ESTATE DEMAND: RICH DISTRICTS VS. REST, 2009

Notes: This table reports summary statistics on real estate properties available for sale and for rent in Spanish districts with the highest average price per square meter versus the rest in 2009. These calculations are obtained based on the universe of listings from the largest commercial real estate website in Spain, *El Idealista*. The demand index is directly elaborated by *El Idealista* and it is based on the number of e-mails received by listing normalized by a factor to make it comparable across space and time.

**SUMMARY STATISTICS, 2004-2006**

| | | Control | Treatment |
|---|---|---|---|
| | **All** | **1st Br.** | **2nd-5th Br.** |
| Taxable income | 41,349 | 9,266 | 195327.61 |
| Taxable labor income | 20,979 | 3,167 | 52,212 |
| Age | 47.96 | 65.46 | 57.83 |
| Fraction Men | 0.71 | 0.40 | 0.72 |
| Fraction Married | 0.70 | 0.62 | 0.77 |
| Fraction Self-employed | 0.27 | 0.14 | 0.38 |
| N | 800,079 | 693 | 70,518 |

TABLE 7: SUMMARY STATISTICS, 2004-2006

Notes: This table presents the summary statistics for the full sample of personal income tax filers, the control (wealth taxpayers within the 1st bracket) and the treatment group (wealth taxpayers within the 2nd-5th bracket) prior to the reform. All variables report mean values over the period 2004-2006. Taxable total income and taxable labor income are reported in euros.

**SUMMARY STATISTICS BY INCOME BRACKET, 2004-2006**

| | Control | Treatment | | |
|---|---|---|---|---|
| | **1st Br.** | **2nd Br.** | **3rd Br.** | **4th Br.** | **5th Br.** |
| Taxable wealth | 265,217 | 363,615 | 397,458 | 497,604 | 1,489,324 |
| Taxable income | 9,266 | 16,667 | 26,101 | 38,331 | 248,022 |
| Taxable labor income | 3,167 | 5,370 | 11,132 | 17,273 | 64,724 |
| Taxable debt assets | 12,356 | 15,117 | 16,304 | 17,536 | 43,221 |
| Asset Share in Housing | 0.33 | 0.37 | 0.38 | 0.38 | 0.31 |
| Asset Share in Financial Assets | 0.63 | 0.56 | 0.57 | 0.55 | 0.61 |
| Age | 65.46 | 62.67 | 62.04 | 60.54 | 56.68 |
| Fraction Men | 0.40 | 0.47 | 0.54 | 0.58 | 0.77 |
| Fraction Married | 0.62 | 0.68 | 0.68 | 0.71 | 0.79 |
| Fraction Self-employed | 0.14 | 0.23 | 0.22 | 0.24 | 0.42 |
| N | 693 | 3,192 | 5,661 | 8,208 | 53,457 |

TABLE 8: SUMMARY STATISTICS BY INCOME BRACKET, 2004-2006

Notes: This table presents the summary statistics for the control (wealth taxpayers within the 1st bracket) and the different treatment groups (wealth taxpayers within the 2nd-5th bracket) prior to the reform. All variables report mean values over the period 2004-2006. Taxable wealth, taxable total income, taxable labor income and taxable debt assets are reported in euros.

**DIFFERENCES-IN-DIFFERENCES RESULTS**

| | (1) | (2) |
|---|---|---|
| Post | 0.517*** | 0.516*** |
| | (3.89) | (3.70) |
| Treat | 0.322** | |
| | (2.05) | |
| Post·Treat | 0.560*** | 0.564*** |
| | (3.68) | (4.03) |
| Individual fixed effects | | X |
| N | 260,089 | 260,089 |

TABLE 9: DIFFERENCES-IN-DIFFERENCES RESULTS

Notes: The table shows the results from the differences-in-differences estimation for groups that were differently affected by the 2007 reform. The figure is based on a balanced panel of wealth taxpayers who are observed throughout the period 2004-2014. The treatment-control definition is based on the reform-induced tax variation (2004-2006) for the different groups shown in Figure 12b, with treatments being an aggregation of groups who experience an increase in the marginal net-of-tax rate due to the reform (2nd-5th bracket) and the control being the group who experiences a decline in the marginal net-of-tax rate (1st bracket). 95% confidence intervals are based on standard errors clustered at the individual level. The coefficient of interest ($Post \cdot Treat$) is larger than 0.1, so that I cannot directly interpret it as an effect of $Post \cdot Treat \cdot 100$ percent and need to use the technical equation $\Delta y = 100 \cdot (e^{Post \cdot Treat} - 1)$. Hence, average interest increased on average 75% more for the treatment relative to the control after the reform, under the specification without individual fixed effects, and 76%, under the specification with individual fixed effects.

**DIFFERENCES-IN-DIFFERENCES RESULTS BY INCOME BRACKET**

| | T2 (2nd Br.) | T3 (3rd Br.) | T4 (4th Br.) | T5 (5th Br.) |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Post | 0.516*** | 0.516*** | 0.516*** | 0.516*** |
| | (3.70) | (3.70) | (3.70) | (3.70) |
| Post·Treat | 0.354** | 0.360** | 0.463*** | 0.614*** |
| | (2.28) | (2.43) | (3.18) | (4.38) |
| Individual fixed effects | X | X | X | X |
| N | 14,200 | 23,244 | 32,566 | 197,687 |

TABLE 10: DIFFERENCES-IN-DIFFERENCES RESULTS BY INCOME BRACKET

Notes: The table presents the results from the differences-in-differences estimation for groups that were differently affected by the 2007 reform. The figure is based on a balanced panel of wealth taxpayers who are observed throughout the period 2004-2014. The treatment group is split by personal income tax bracket, into those who experience the largest net-of-tax rate increases (5th bracket) and those who experience smaller net-of-tax rate increases (4th, 3rd brackets) and even smaller net-of-tax rate increases (2nd bracket). The treatment-control definition is based on the reform-induced tax variation (2004-2006) for the different groups shown in Figure 12b, with the control being the group who experiences a decline in the marginal net-of-tax rate (1st bracket). 95% confidence intervals are based on standard errors clustered at the individual level. The coefficient of interest ($Post \cdot Treat$) is larger than 0.1, so that I cannot directly interpret it as an effect of $Post \cdot Treat \cdot 100$ percent and need to use the technical equation $\Delta y = 100 \cdot (e^{Post \cdot Treat} - 1)$. Hence, average interest increased on average 42% (43%, 59%, 85%) more for the second (third, fourth, fifth) bracket relative to the control (1st bracket) after the reform.

**ATTITUDES TOWARDS RISK BY WEALTH GROUP IN SPAIN, 2002-2014**

| | | **Fraction of risk averse** | | | **Difference** | | |
|---|---|---|---|---|---|---|---|
| **Year** | **N** | **T10%** | **M40%** | **B50%** | **T10%-M40%** | **T10%-B50%** | **M40%-B50%** |
| 2002 | 5,141 | 0.61 | 0.80 | 0.84 | -0.19*** | -0.24*** | -0.05*** |
| 2005 | 5,950 | 0.64 | 0.83 | 0.87 | -0.20*** | -0.23*** | -0.04*** |
| 2008 | 6,194 | 0.58 | 0.84 | 0.90 | -0.26*** | -0.32*** | -0.06*** |
| 2011 | 6,103 | 0.70 | 0.87 | 0.92 | -0.18*** | -0.23*** | -0.05*** |
| 2014 | 6,116 | 0.62 | 0.86 | 0.92 | -0.24*** | -0.30*** | -0.06*** |

TABLE 11: ATTITUDES TOWARDS RISK BY WEALTH GROUP IN SPAIN, 2002-2014

Notes: This table reports the fraction of households by wealth group who report that are not willing to take any financial risk. These calculations have been carried with the the five waves of the Spanish Survey of Household Finances constructed (SHF) by Bank of Spain.

**FINANCIAL INFORMATION BY INCOME GROUP IN SPAIN, 2016**

| | Income group | | | Difference | | |
|---|---|---|---|---|---|---|
| | **T10%** | **M40%** | **B50%** | **T10%-M40%** | **T10%-B50%** | **M40%-B50%** |
| **Knowledge** | | | | | | |
| Diversification | 0.70 | 0.51 | 0.41 | 0.19*** | 0.30*** | 0.11*** |
| Interest rates | 0.59 | 0.48 | 0.40 | 0.11*** | 0.20*** | 0.08*** |
| Inflation | 0.76 | 0.62 | 0.47 | 0.14*** | 0.29*** | 0.15*** |
| **Advisor** | 0.03 | 0.02 | 0.01 | 0.01*** | 0.02*** | 0.01*** |

TABLE 12: FINANCIAL KNOWLEDGE AND ADVICE BY INCOME GROUP IN SPAIN, 2016

Notes: This table reports the fraction of households who answer correctly to financial literacy questions on diversification, interest rates and inflation by income group, as well as the fraction who gets independent financial advising. These calculations have been carried using the 2016 Survey of Financial Competences (SFC) elaborated by Bank of Spain.

# Appendices

## A Imputation methods

### A.I Imputation method for the bottom income of the distribution

In order to carry the imputation of the bottom income of the distribution I rely on the Survey of Household Finances for the period 1999-2013 and on the Household Budget and Continuous Survey for the period 1984-1998.

The Spanish Survey of Household Finances (SHF) has been conducted by the Bank of Spain for four waves: 2002, 2005, 2008 and 2011. It is the only statistical source in Spain that allows the linking of incomes, assets, debts, and consumption at the household level and that provides a representative picture of the structure of household incomes, assets and debts at the household level. Therefore, it is extremely suitable for our analysis. The income in the survey is recorded as of the previous year, hence they years for which information on income are available are 2001, 2004, 2007 and 2010. The unit of analysis used in the SHF is the household. Since data in the micro-files are rearranged in order to have individuals as units of analysis, I proceed in the same way with the survey in order to be as consistent as possible. Hence, if the head of the household is not married, I assume that all capital income belongs to him. However, if the head of the household is married, I create a new individual and split the capital income of the household among the two. The new individuals are the partners of the heads of the households that are married and become now head of households.

First, using the SHF I classify individuals into seven age groups: from 20-24, 25-29, 30-39, 40-49, 50-59, 60-69, and above 69 using the SHF and the personal income tax data. I then calculate the fraction of income by category (labor income, interest and dividends, rental income and business income) that each age group has in the P20-P50 percentiles with respect to the P50-P60 and P70-P80 percentiles. I also compute the fraction of individuals that own each income category by age group and assign these fractions to the same groups in the personal income tax data. These fractions are linearly interpolated for the years in between in order to account for the missing income at the bottom across all years. Finally, I assign the SHF P20-50 to P50-60 fractions of labor income to the bottom 3, 4 and 5 deciles and the SHF P20-P50 to P70-P80 fractions of capital income to the bottom 3, 4 and 5 deciles in the personal income tax data.

The Household Budget Continuous Survey (HBCS) was carried out during the 1985-2005 period, with the purpose of providing quarterly and annual information regarding the origin and amount of household income, and the way in which income is used for different consumption expenses. As of 2006, this survey was replaced by the Household Budget Survey (HBS). I calculate the fraction of income by category (labor income, interest and dividends, rental income

and business income) that the P20-P70 percentiles have with respect to the P70-P80 percentiles. Since the shares using the HBCS differ substantially from the shares using the SHF, I stick to the SHF levels and I only use the growth rate in the HBCS shares to extrapolate the series backwards (1984-1998). Finally, once again, I assign the SHF P20-70 to P70-80 fractions of labor and capital income to the bottom 3-7 deciles in the personal income tax data.

## A.II Imputation method for assets that do not generate taxable income

The imputations are conducted using the four waves of the Survey of Household Finances and they are based on the methodology used by Garbinti et al. [2018a] for France. I only consider individuals aged 20 or above in order to be consistent with the population of interest in the micro tax data, which are all individuals aged 20 or above. The unit of analysis used in the SHF is the household. Since data in the micro-files are rearranged in order to have individuals as units of analysis, I proceed in the same way with the survey in order to be as consistent as possible. Hence, if the head of the household is not married, I assume that all capital income belongs to him. However, if the head of the household is married, I create a new individual and split the capital income of the household among the two. The new individuals are the partners of the heads of the households that are married and become now head of households.

The first step of the imputation consists of constructing groups of individuals according to their gender, age, labor and capital income. First, individuals are split by gender. Second, individuals are classified into ten age groups: from 20-24, 25-29, 30-39, 40-49, 50-54, 55-59, 60-65, and above 65. Third, they are also grouped according to their capital income into seven brackets of percentiles: P30-P59, P60-P69, P70-P79, P80-P89, P90-P94, and equal or above P95. In order for the imputations to be consistent, I only consider as capital income the one that is subject to the personal income tax. Finally, six groups of percentiles are formed according to the labor income the individuals have: P0-P10, P10-P39, P40-P59, P60-P74, P75-P90 and equal or above P90.

Once individuals are sorted by gender, age, capital and labor income, I combine them and end up with 576 different groups. One can then calculate which is the share of main owner-occupied housing, life insurance, investment and pension funds that corresponds to each group, as well as the fraction of individuals that owns the asset within each group, that is, the within-group ownership shares. Since the survey is only available for four waves I linearly interpolate the shares for the years in between and I use the 2002 shares for imputing life insurance, pension and investment funds for the period 1999-2001.

The final aim is to impute the value of these assets that do not generate taxable income to the capitalized distribution of income in order to obtain the distribution of total net wealth. For that, I need to construct with the data from the micro-files the same groups by age, capital and

labor income. Once the individuals in the tax data are classified into the same 576 groups, the group shares and the within-group ownership shares that are obtained with the survey can be used in order to calculate which is the amount of main owner-occupied housing[41], wealth from life insurance, investment and pension funds from National Accounts that corresponds to each group.Due the limited information on negative net wealth holders in Spain and the small fraction of negative aggregate net wealth over total net wealth (3% according to Cowell and Kerm [2015]) using the Eurosystem Household Finance and Consumption Survey (HFCS) I have decided to set minimum net wealth at zero.

For the period before 1999, Primary residence is included in personal income tax returns, so that no imputation is needed. Moreover, no imputation is done for life insurance, investment and pension funds for the historical period either, since they are capitalized together with saving accounts, stocks and fixed-income securities. Ideally, each financial asset should be capitalized individually during the historical period too. Nonetheless, life insurance, investment and pension funds were much less important in the asset portfolio of households during the 1980s and beginning of the 1990s and consequently, this assumption should not affect our results much.

# B The Spanish Personal Income Tax and Wealth Tax

## B.I A Recount of Personal Income Taxation in Spain

### B.I.I Adjustment of the income distribution series for personal income tax reforms

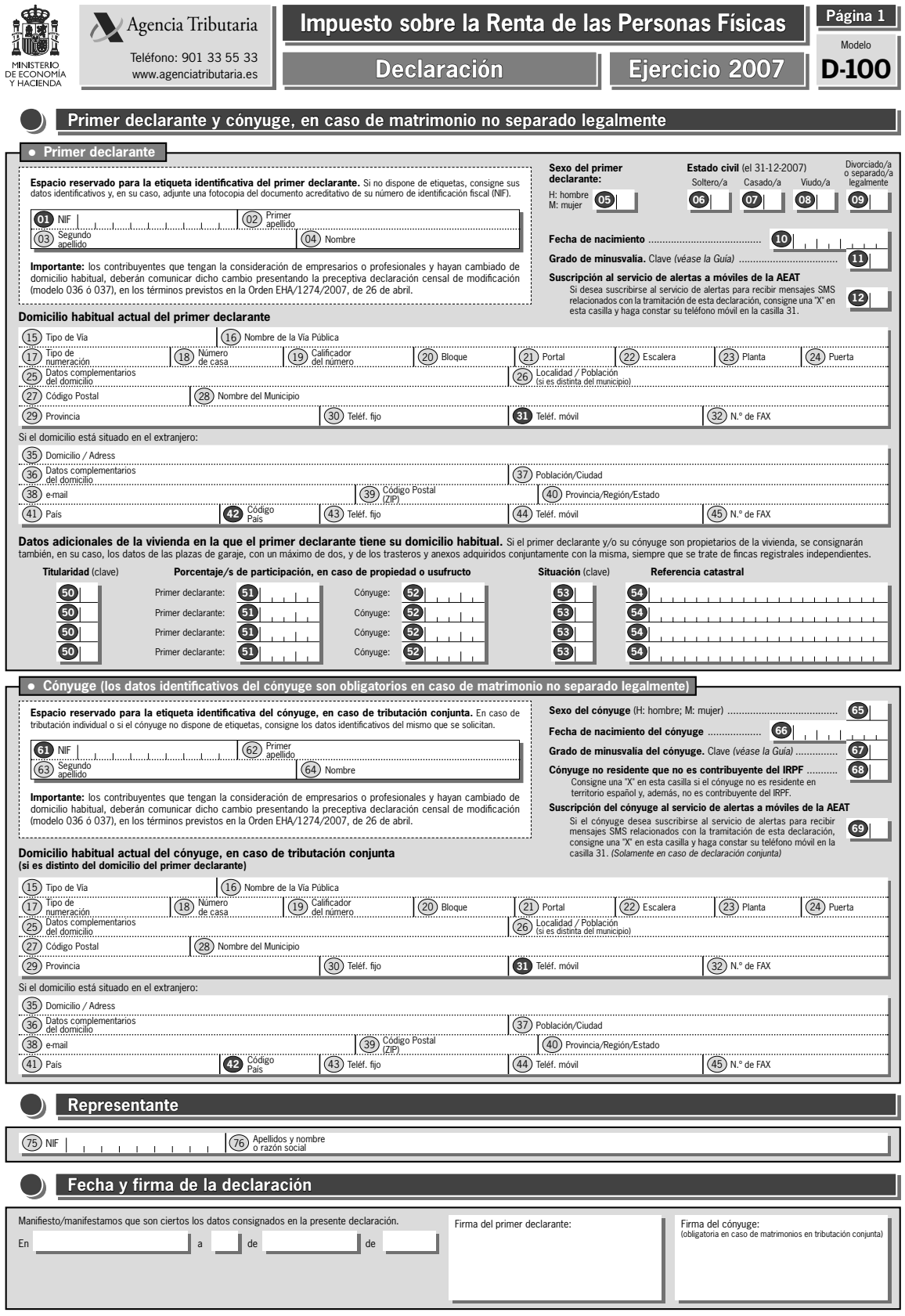
The modern income tax was established in 1979 (Law 44/1978), with three major reforms in 1991, 1998 and 2006. Albi (2006) provides a detailed description of the current system along with all the reforms from 1979 to date. From 1984 to 1987 the top marginal rate was 66%; however the average tax rate could 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 A1, 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 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 provided a general rate

[41] Individuals are not indebted in an homogeneous way along the distribution. Hence, I calculate the ratio of Primary residence indebtedness for each of the 576 groups using the survey and I apply it to each group when doing the imputation.

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 2005, a distinction was made between short run (or regular, meaning assets held less than 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. Since 1994, long run capital gains from assets purchased before 1994 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 up to 1996 (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 from assets held between one and two years continued to follow the rules described above. For those held more than two years, a 20% rate was applied only to any amount beyond 200,000 pesetas. Since 1999 only gains for sales of assets held more than two years are considered irregular and consequently taxed in a different way from the rest of income, at a 20% rate (18% for 2002 and 15% since 2003). All capital gains (with the exception of the reductions mentioned above) are reported and thus included in our estimations, irrespective of whether they have been taxed based on the marginal tax scale or the flat tax rate,. We report in appendix Table 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).

FIGURE B1: Personal Income Tax Form D-100 (2007)



MINISTERIO DE ECONOMÍA Y HACIENDA

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**Impuesto sobre la Renta de las Personas Físicas**

**Declaración** — **Ejercicio 2007**

Página 1

Modelo **D-100**

## Primer declarante y cónyuge, en caso de matrimonio no separado legalmente

### Primer declarante

**Espacio reservado para la etiqueta identificativa del primer declarante.** Si no dispone de etiquetas, consigne sus datos identificativos y, en su caso, adjunte una fotocopia del documento acreditativo de su número de identificación fiscal (NIF).

01 NIF | 02 Primer apellido | 03 Segundo apellido | 04 Nombre

**Importante:** los contribuyentes que tengan la consideración de empresarios o profesionales y hayan cambiado de domicilio habitual, deberán comunicar dicho cambio presentando la preceptiva declaración censal de modificación (modelo 036 ó 037), en los términos previstos en la Orden EHA/1274/2007, de 26 de abril.

**Sexo del primer declarante:** H: hombre M: mujer 05

**Estado civil** (el 31-12-2007) 06 Soltero/a | 07 Casado/a | 08 Viudo/a | 09 Divorciado/a o separado/a legalmente

**Fecha de nacimiento** ..... 10

**Grado de minusvalía.** Clave *(véase la Guía)* ..... 11

**Suscripción al servicio de alertas a móviles de la AEAT**
Si desea suscribirse al servicio de alertas para recibir mensajes SMS relacionados con la tramitación de esta declaración, consigne una "X" en esta casilla y haga constar su teléfono móvil en la casilla 31. 12

**Domicilio habitual actual del primer declarante**

15 Tipo de Vía | 16 Nombre de la Vía Pública | 17 Tipo de numeración | 18 Número de casa | 19 Calificador del número | 20 Bloque | 21 Portal | 22 Escalera | 23 Planta | 24 Puerta | 25 Datos complementarios del domicilio | 26 Localidad / Población (si es distinta del municipio) | 27 Código Postal | 28 Nombre del Municipio | 29 Provincia | 30 Teléf. fijo | 31 Teléf. móvil | 32 N.º de FAX

Si el domicilio está situado en el extranjero:

35 Domicilio / Adress | 36 Datos complementarios del domicilio | 37 Población/Ciudad | 38 e-mail | 39 Código Postal (ZIP) | 40 Provincia/Región/Estado | 41 País | 42 Código País | 43 Teléf. fijo | 44 Teléf. móvil | 45 N.º de FAX

**Datos adicionales de la vivienda en la que el primer declarante tiene su domicilio habitual.** Si el primer declarante y/o su cónyuge son propietarios de la vivienda, se consignarán también, en su caso, los datos de las plazas de garaje, con un máximo de dos, y de los trasteros y anexos adquiridos conjuntamente con la misma, siempre que se trate de fincas registrales independientes.

| **Titularidad** (clave) | **Porcentaje/s de participación, en caso de propiedad o usufructo** | | **Situación** (clave) | **Referencia catastral** |
|---|---|---|---|---|
| 50 | Primer declarante: 51 | Cónyuge: 52 | 53 | 54 |
| 50 | Primer declarante: 51 | Cónyuge: 52 | 53 | 54 |
| 50 | Primer declarante: 51 | Cónyuge: 52 | 53 | 54 |
| 50 | Primer declarante: 51 | Cónyuge: 52 | 53 | 54 |

### Cónyuge (los datos identificativos del cónyuge son obligatorios en caso de matrimonio no separado legalmente)

**Espacio reservado para la etiqueta identificativa del cónyuge, en caso de tributación conjunta.** En caso de tributación individual o si el cónyuge no dispone de etiquetas, consigne los datos identificativos del mismo que se solicitan.

61 NIF | 62 Primer apellido | 63 Segundo apellido | 64 Nombre

**Importante:** los contribuyentes que tengan la consideración de empresarios o profesionales y hayan cambiado de domicilio habitual, deberán comunicar dicho cambio presentando la preceptiva declaración censal de modificación (modelo 036 ó 037), en los términos previstos en la Orden EHA/1274/2007, de 26 de abril.

**Sexo del cónyuge** (H: hombre; M: mujer) ..... 65

**Fecha de nacimiento del cónyuge** ..... 66

**Grado de minusvalía del cónyuge.** Clave *(véase la Guía)* ..... 67

**Cónyuge no residente que no es contribuyente del IRPF** ..... 68
Consigne una "X" en esta casilla si el cónyuge no es residente en territorio español y, además, no es contribuyente del IRPF.

**Suscripción del cónyuge al servicio de alertas a móviles de la AEAT**
Si el cónyuge desea suscribirse al servicio de alertas para recibir mensajes SMS relacionados con la tramitación de esta declaración, consigne una "X" en esta casilla y haga constar su teléfono móvil en la casilla 31. *(Solamente en caso de declaración conjunta)* 69

**Domicilio habitual actual del cónyuge, en caso de tributación conjunta**
**(si es distinto del domicilio del primer declarante)**

15 Tipo de Vía | 16 Nombre de la Vía Pública | 17 Tipo de numeración | 18 Número de casa | 19 Calificador del número | 20 Bloque | 21 Portal | 22 Escalera | 23 Planta | 24 Puerta | 25 Datos complementarios del domicilio | 26 Localidad / Población (si es distinta del municipio) | 27 Código Postal | 28 Nombre del Municipio | 29 Provincia | 30 Teléf. fijo | 31 Teléf. móvil | 32 N.º de FAX

Si el domicilio está situado en el extranjero:

35 Domicilio / Adress | 36 Datos complementarios del domicilio | 37 Población/Ciudad | 38 e-mail | 39 Código Postal (ZIP) | 40 Provincia/Región/Estado | 41 País | 42 Código País | 43 Teléf. fijo | 44 Teléf. móvil | 45 N.º de FAX

## Representante

75 NIF | 76 Apellidos y nombre o razón social

## Fecha y firma de la declaración

Manifiesto/manifestamos que son ciertos los datos consignados en la presente declaración.

En _____ a ____ de _____ de ____

Firma del primer declarante:

Firma del cónyuge:
(obligatoria en caso de matrimonios en tributación conjunta)

## Situación familiar

### • Hijos y descendientes menores de 25 años o discapacitados que conviven con el/los contribuyente/s

| | NIF | Primer apellido, segundo apellido y nombre (por este orden) | Fecha de nacimiento | Fecha de adopción o de acogimiento | Minusvalía (clave) | Vinculación (*) | Otras situaciones |
|---|---|---|---|---|---|---|---|
| 1.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 2.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 3.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 4.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 5.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 6.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 7.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 8.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 9.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |
| 10.º | 80 | 81 | 82 | 83 | 84 | 85 | 86 |

(*) No se cumplimentará esta casilla cuando se trate de hijos o descendientes comunes del primer declarante y del cónyuge.

Si alguno de los hijos o descendientes incluidos en la relación anterior hubiera fallecido en el año 2007, indique el número de orden con el que figura relacionado y la fecha de fallecimiento .....

| | N.º de orden | Fecha de fallecimiento |
|---|---|---|
| | 87 | 88 2,0,0,7 |
| | 87 | 88 2,0,0,7 |

### • Ascendientes mayores de 65 años o discapacitados que conviven con el/los contribuyente/s al menos la mitad del período impositivo

| NIF | Primer apellido, segundo apellido y nombre (por este orden) | Fecha de nacimiento | Minusvalía (clave) | Vinculación | Convivencia |
|---|---|---|---|---|---|
| 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 |
| 90 | 91 | 92 | 93 | 94 | 95 |

## Devengo

**Atención:** este apartado únicamente se cumplimentará en las declaraciones individuales de contribuyentes fallecidos en el ejercicio 2007 con anterioridad al día 31 de diciembre.

**Fecha de finalización del período impositivo** ..... Día Mes Año: 100 2,0,0,7

## Opción de tributación

**Indique la opción de tributación elegida** (marque con una "X" la casilla que proceda) .....

**Atención:** solamente podrán optar por el régimen de tributación conjunta los contribuyentes integrados en una unidad familiar.

- **Tributación individual** ..... 101
- **Tributación conjunta** ..... 102

## Comunidad o Ciudad autónoma de residencia en el ejercicio 2007

**Clave de la Comunidad Autónoma o de la Ciudad con Estatuto de Autonomía en la que tuvo/tuvieron su residencia habitual en 2007** *(véase la Guía)* ..... 103

## Asignación tributaria a la Iglesia Católica

Si desea que se destine un 0,7 por 100 de la cuota íntegra al sostenimiento económico de la Iglesia Católica, marque con una "X" esta casilla ..... 105

## Asignación de cantidades a fines sociales

**Atención:** esta asignación es independiente y compatible con la asignación tributaria a la Iglesia Católica.

Si desea que se destine un 0,7 por 100 de la cuota íntegra a los fines sociales previstos en el Real Decreto 825/1998, de 15 de julio (BOE del 28), marque con una "X" esta casilla *(véase la Guía)* ..... 106

## Solicitud del borrador de la declaración o de los datos fiscales del ejercicio 2008

Si desea/n que para el próximo ejercicio 2008 la Agencia Tributaria le/s facilite un borrador de la declaración o, en su defecto, los datos fiscales de dicho ejercicio, marque con una "X" esta casilla ..... 110

En caso de matrimonio, si desea/n el envío individualizado del borrrador y/o de los datos fiscales del ejercicio 2008, marque con una "X" esta casilla *(véase la Guía)* ..... 111

(En este caso, la Agencia Tributaria enviará por separado a cada cónyuge el borrador de su declaración, necesariamente en régimen de tributación individual, y/o los datos fiscales que individualmente le correspondan)

## Declaración complementaria

Si esta declaración es complementaria de otra declaración anterior del mismo ejercicio 2007, indíquelo marcando con una "X" esta casilla, salvo que proceda marcar la casilla 123 ..... 120

Si la declaración complementaria está motivada por haber percibido atrasos de rendimientos del trabajo después de la presentación de la declaración anterior del ejercicio 2007 o si se trata de una declaración complementaria presentada en cumplimiento de lo dispuesto en el artículo 14.3 de la Ley del Impuesto, marque con una "X" esta casilla además de marcar la casilla 120 ..... 121

Si la declaración complementaria está motivada por haberse producido, después de la presentación de la declaración anterior del ejercicio 2007, alguno de los supuestos especiales que se señalan en la Guía de la declaración, marque con una "X" esta casilla además de marcar la casilla 120 ..... 122

Si de la declaración complementaria resulta una cantidad a devolver inferior a la solicitada en la declaración anterior y dicha devolución no hubiera sido todavía efectuada por la Agencia Tributaria, indíquelo marcando con una "X" esta casilla. (En este supuesto, no marque ninguna de las casillas 120 a 122 anteriores) ..... 123

## A Rendimientos del trabajo

Retribuciones dinerarias (incluidas las pensiones compensatorias y las anualidades por alimentos no exentas). Importe íntegro ..... 001

| | Valoración | Ingresos a cuenta | Ingresos a cuenta repercutidos | Importe íntegro (002 + 003 – 004) |
|---|---|---|---|---|
| Retribuciones en especie (excepto contribuciones empresariales a Planes de Pensiones y a Mutualidades de Previsión Social) | 002 | 003 | 004 | 005 |

Contribuciones empresariales a planes de pensiones, planes de previsión social empresarial y mutualidades de previsión social. Importes imputados al contribuyente ..... 006

Aportaciones al patrimonio protegido de las personas con discapacidad del que es titular el contribuyente. Importe computable ..... 007

Reducciones (artículo 18, apartados 2 y 3, y disposiciones transitorias 11.ª y 12.ª de la Ley del Impuesto). Importe *(véase la Guía)* ..... 008

**Total ingresos íntegros computables** ( 001 + 005 + 006 + 007 – 008 ) ..... 009

Cotizaciones a la Seguridad Social o a mutualidades generales obligatorias de funcionarios, detracciones por derechos pasivos y cotizaciones a los colegios de huérfanos o entidades similares ..... 010

Cuotas satisfechas a sindicatos ..... 011

Cuotas satisfechas a colegios profesionales (si la colegiación es obligatoria y con un máximo de 500 euros anuales) ..... 012

Gastos de defensa jurídica derivados directamente de litigios con el empleador (máximo: 300 euros anuales) ..... 013

**Total gastos deducibles** ( 010 + 011 + 012 + 013 ) ..... 014

**Rendimiento neto** ( 009 – 014 ) ..... 015

**Reducción de rendimientos acogidos al régimen especial "Copa América 2007"** (artículo 13 del Real Decreto 2146/2004). *Véase la Guía* ..... 016

**Reducción por obtención de rendimientos del trabajo** (artículo 20 de la Ley del Impuesto):

Cuantía aplicable con carácter general *(véase la Guía)* ..... 017

Incremento para trabajadores activos mayores de 65 años que continúen o prolonguen la actividad laboral *(véase la Guía)* ..... 018

Incremento para contribuyentes desempleados que acepten un puesto de trabajo que exija el traslado de su residencia a un nuevo municipio *(véase la Guía)* ..... 019

Reducción adicional para trabajadores activos que sean personas con discapacidad *(véase la Guía)* ..... 020

**Rendimiento neto reducido** ( 015 – 016 – 017 – 018 – 019 – 020 ) ..... 021

## B Rendimientos del capital mobiliario

### • Rendimientos del capital mobiliario a integrar en la base imponible del ahorro

Intereses de cuentas, depósitos y activos financieros en general (*) ..... 022

Intereses de activos financieros con derecho a la bonificación prevista en la disposición transitoria 11.ª de la Ley del Impuesto sobre Sociedades (*) ..... 023

Dividendos y demás rendimientos por la participación en fondos propios de entidades *(véase la Guía)* ..... 024

Rendimientos procedentes de la transmisión o amortización de Letras del Tesoro ..... 025

Rendimientos procedentes de la transmisión, amortización o reembolso de otros activos financieros (*) ..... 026

Rendimientos procedentes de contratos de seguro de vida o invalidez y de operaciones de capitalización ..... 027

Rendimientos procedentes de rentas que tengan por causa la imposición de capitales y otros rendimientos del capital mobiliario a integrar en la base imponible del ahorro ..... 028

(*) *Salvo que procedan de entidades vinculadas con el contribuyente, en cuyo caso formarán parte de la base imponible general.*

**Total ingresos íntegros** ( 022 + 023 + 024 + 025 + 026 + 027 + 028 ) ..... 029

**Gastos fiscalmente deducibles:** gastos de administración y depósito de valores negociables, exclusivamente ..... 030

**Rendimiento neto** ( 029 – 030 ) ..... 031

Reducción aplicable a rendimientos derivados de determinados contratos de seguro (disposición transitoria 4.ª de la Ley del Impuesto). *Véase la Guía* ..... 032

**Rendimiento neto reducido** ( 031 – 032 ) ..... 035

### • Rendimientos del capital mobiliario a integrar en la base imponible general

Rendimientos procedentes del arrendamiento de bienes muebles, negocios o minas o de subarrendamientos ..... 040

Rendimientos procedentes de la prestación de asistecia técnica, salvo en el ámbito de una actividad económica ..... 041

Rendimientos procedentes de la propiedad intelectual cuando el contribuyente no sea el autor ..... 042

Rendimientos procedentes de la propiedad industrial que no se encuentre afecta a una actividad económica ..... 043

Otros rendimientos del capital mobiliario a integrar en la base imponible general ..... 044

**Total ingresos íntegros** ( 040 + 041 + 042 + 043 + 044 ) ..... 045

**Gastos fiscalmente deducibles** *(exclusivamente los que se indican en la Guía de la declaración)* ..... 046

**Rendimiento neto** ( 045 – 046 ) ..... 047

Reducciones de rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 26.2 de la Ley del Impuesto) ..... 048

**Rendimiento neto reducido** ( 047 – 048 ) ..... 050

## C Bienes inmuebles no afectos a actividades económicas, excluida la vivienda habitual e inmuebles asimilados

Si procediera relacionar más de tres inmuebles en este apartado, indique el número de hojas adicionales que se adjuntan ..... ☐

### • Bienes inmuebles a disposición de sus titulares y bienes inmuebles arrendados o cedidos a terceros

**Inmueble 1**

Contribuyente titular [060] | Titularidad (%) [061] | Naturaleza: clave (*) [062] | Uso o destino: clave (*) [063] | Situación: clave (*) [064] | Referencia catastral [065]

(*) *Véase la Guía.*

**Inmuebles a disposición de sus propietarios o usufructuarios:** Parte del inmueble que está a disposición (%): [066] | Período computable (número de días): [067] | **Renta inmobiliaria imputada** *(véase la Guía)* .... [068]

**Inmuebles arrendados o cedidos a terceros y constitución o cesión de derechos o facultades de uso o disfrute sobre los mismos:**

Ingresos íntegros computables ..... [069]

Gastos deducibles: Intereses de los capitales invertidos en la adquisición o mejora y gastos de reparación y conservación: Importe que se aplica en esta declaración (como máximo, el importe de la casilla [069]) ..... [070]; Pendiente de deducir en los 4 años siguientes ..... [071]

Otros gastos fiscalmente deducibles ..... [072]

Rendimiento neto ( [069] – [070] – [072] ) ..... [073]

Reducción por arrendamiento de inmuebles destinados a vivienda (artículo 23.2 de la Ley del Impuesto). Importe *(véase la Guía)* ..... [074]

Reducción por rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 23.3 de la Ley del Impuesto). Importe *(véase la Guía)* ..... [075]

Rendimiento mínimo computable en caso de parentesco (artículo 24 de la Ley del Impuesto). *Véase la Guía* ..... [076]

**Rendimiento neto reducido del capital inmobiliario:** la cantidad mayor de ( [073] – [074] – [075] ) y [076] ..... [077]

---

**Inmueble 2**

Contribuyente titular [060] | Titularidad (%) [061] | Naturaleza: clave (*) [062] | Uso o destino: clave (*) [063] | Situación: clave (*) [064] | Referencia catastral [065]

(*) *Véase la Guía.*

**Inmuebles a disposición de sus propietarios o usufructuarios:** Parte del inmueble que está a disposición (%): [066] | Período computable (número de días): [067] | **Renta inmobiliaria imputada** *(véase la Guía)* .... [068]

**Inmuebles arrendados o cedidos a terceros y constitución o cesión de derechos o facultades de uso o disfrute sobre los mismos:**

Ingresos íntegros computables ..... [069]

Gastos deducibles: Intereses de los capitales invertidos en la adquisición o mejora y gastos de reparación y conservación: Importe que se aplica en esta declaración (como máximo, el importe de la casilla [069]) ..... [070]; Pendiente de deducir en los 4 años siguientes ..... [071]

Otros gastos fiscalmente deducibles ..... [072]

Rendimiento neto ( [069] – [070] – [072] ) ..... [073]

Reducción por arrendamiento de inmuebles destinados a vivienda (artículo 23.2 de la Ley del Impuesto). Importe *(véase la Guía)* ..... [074]

Reducción por rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 23.3 de la Ley del Impuesto). Importe *(véase la Guía)* ..... [075]

Rendimiento mínimo computable en caso de parentesco (artículo 24 de la Ley del Impuesto). *Véase la Guía* ..... [076]

**Rendimiento neto reducido del capital inmobiliario:** la cantidad mayor de ( [073] – [074] – [075] ) y [076] ..... [077]

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**Inmueble 3**

Contribuyente titular [060] | Titularidad (%) [061] | Naturaleza: clave (*) [062] | Uso o destino: clave (*) [063] | Situación: clave (*) [064] | Referencia catastral [065]

(*) *Véase la Guía.*

**Inmuebles a disposición de sus propietarios o usufructuarios:** Parte del inmueble que está a disposición (%): [066] | Período computable (número de días): [067] | **Renta inmobiliaria imputada** *(véase la Guía)* .... [068]

**Inmuebles arrendados o cedidos a terceros y constitución o cesión de derechos o facultades de uso o disfrute sobre los mismos:**

Ingresos íntegros computables ..... [069]

Gastos deducibles: Intereses de los capitales invertidos en la adquisición o mejora y gastos de reparación y conservación: Importe que se aplica en esta declaración (como máximo, el importe de la casilla [069]) ..... [070]; Pendiente de deducir en los 4 años siguientes ..... [071]

Otros gastos fiscalmente deducibles ..... [072]

Rendimiento neto ( [069] – [070] – [072] ) ..... [073]

Reducción por arrendamiento de inmuebles destinados a vivienda (artículo 23.2 de la Ley del Impuesto). Importe *(véase la Guía)* ..... [074]

Reducción por rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 23.3 de la Ley del Impuesto). Importe *(véase la Guía)* ..... [075]

Rendimiento mínimo computable en caso de parentesco (artículo 24 de la Ley del Impuesto). *Véase la Guía* ..... [076]

**Rendimiento neto reducido del capital inmobiliario:** la cantidad mayor de ( [073] – [074] – [075] ) y [076] ..... [077]

### • Rentas totales derivadas de los bienes inmuebles no afectos a actividades económicas

**Suma de rentas inmobiliarias imputadas derivadas de los inmuebles a disposición de sus propietarios o usufructuarios** (suma de las casillas [068]) ..... [080]

**Suma de rendimientos netos reducidos del capital inmobiliario derivados de los inmuebles arrendados o cedidos a terceros** (suma de las casillas [077]) ..... [085]

## D Bienes inmuebles urbanos afectos a actividades económicas

Si procediera relacionar más de cinco inmuebles en este apartado, indique el número de hojas adicionales que se adjuntan ..... ☐

| | Contribuyente titular | Titularidad (%) | Situación *(véase la Guía)* | Referencia catastral |
|---|---|---|---|---|
| Inmueble 1 ..... | [090] | [091] | [092] | [093] |
| Inmueble 2 ..... | [090] | [091] | [092] | [093] |
| Inmueble 3 ..... | [090] | [091] | [092] | [093] |
| Inmueble 4 ..... | [090] | [091] | [092] | [093] |
| Inmueble 5 ..... | [090] | [091] | [092] | [093] |

E1 **Rendimientos de actividades económicas en estimación directa**

Si el número de actividades económicas previsto en esta hoja resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

## • Actividades económicas realizadas y rendimientos obtenidos

| | | Actividad 1.ª | Actividad 2.ª | Actividad 3.ª |
|---|---|---|---|---|
| **Actividades realizadas** | | | | |
| Contribuyente que realiza la/s actividad/es | 100 | | | |
| Tipo de actividad/es realizada/s: clave indicativa *(véase la Guía)* | 101 | | | |
| Grupo o epígrafe IAE (de la actividad principal en caso de realizar varias actividades del mismo tipo) | 102 | | | |
| Modalidad aplicable del método de estimación directa — Normal | 103 | | | |
| Modalidad aplicable del método de estimación directa — Simplificada | 104 | | | |
| Si para la imputación temporal de los rendimientos opta por la aplicación del criterio de cobros y pagos, consigne una "X" *(Véase la Guía)* | 105 | | | |
| **Ingresos íntegros** | | | | |
| Ingresos de explotación | 106 | | | |
| Otros ingresos (incluidas subvenciones y otras transferencias) | 107 | | | |
| Autoconsumo de bienes y servicios | 108 | | | |
| **Total ingresos computables** ( 106 + 107 + 108 ) | 109 | | | |
| **Gastos fiscalmente deducibles** | | | | |
| Consumos de explotación | 110 | | | |
| Sueldos y salarios | 111 | | | |
| Seguridad Social a cargo de la empresa (incluidas las cotizaciones del titular) | 112 | | | |
| Otros gastos de personal | 113 | | | |
| Arrendamientos y cánones | 114 | | | |
| Reparaciones y conservación | 115 | | | |
| Servicios de profesionales independientes | 116 | | | |
| Suministros | 117 | | | |
| Otros servicios exteriores | 118 | | | |
| Tributos fiscalmente deducibles | 119 | | | |
| Gastos financieros | 120 | | | |
| Amortizaciones: dotaciones del ejercicio fiscalmente deducibles | 121 | | | |
| Incentivos al mecenazgo. Convenios de colaboración en actividades de interés general | 122 | | | |
| Incentivos al mecenazgo. Gastos en actividades de interés general | 123 | | | |
| Otros gastos fiscalmente deducibles (excepto provisiones) | 124 | | | |
| **Suma** ( 110 a 124 ) | 125 | | | |
| **Actividades en estimación directa (modalidad normal):** | | | | |
| Provisiones: dotaciones del ejercicio fiscalmente deducibles | 126 | | | |
| **Total gastos deducibles** ( 125 + 126 ) | 127 | | | |
| **Actividades en estimación directa (modalidad simplificada):** | | | | |
| Diferencia ( 109 – 125 ) | 128 | | | |
| Provisiones deducibles y gastos de difícil justificación *(véase la Guía)* | 129 | | | |
| **Total gastos deducibles** ( 125 + 129 ) | 130 | | | |
| **Rendimiento neto y rendimiento neto total** | | | | |
| **Rendimiento neto** ( 109 – 127 o 109 – 130 ) | 131 | | | |
| Reducciones de rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 32.1 de la Ley del Impuesto). *Véase la Guía* | 132 | | | |
| Diferencia ( 131 – 132 ) | 133 | | | |
| Rendimientos acogidos al régimen especial "Copa América 2007" Reducción (artículo 13 del Real Decreto 2146/2004) | 134 | | | |
| **Rendimiento neto reducido** ( 133 – 134 ) | 135 | | | |

## • Rendimiento neto reducido total de las actividades económicas en estimación directa

| | | |
|---|---|---|
| Suma de rendimientos netos reducidos (suma de las casillas 135 ) | 136 | |
| Reducción por el ejercicio de determinadas actividades económicas (artículo 32.2 de la Ley del Impuesto y artículo 26 del Reglamento). *Véase la Guía* | 137 | |
| **Rendimiento neto reducido total** ( 136 – 137 ) | 140 | |

E2 **Rendimientos de actividades económicas (excepto agrícolas, ganaderas y forestales) en estimación objetiva**

Si el número de actividades económicas previsto en esta hoja resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

## • Actividades económicas realizadas y rendimientos obtenidos

### Actividad 1.ª

Contribuyente titular de la actividad ..... 150

Clasificación IAE (grupo o epígrafe) ..... 151

MÓDULOS

| | Definición | N.º de unidades | Rendimiento por módulo antes de amortización |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |

**Rendimiento neto previo** (suma) ..... 152

**Minoraciones:** *(véase la Guía)*

Minoración por incentivos al empleo ..... 153

Minoración por incentivos a la inversión ..... 154

**Rendimiento neto minorado** ( 152 – 153 – 154 ) ..... 155

**Índices correctores** *(véase la Guía)*

1. Índice corrector especial ..... 156
2. Índice corrector para empresas de pequeña dimensión ..... 157
3. Índice corrector de temporada ..... 158
4. Índice corrector de exceso ..... 159
5. Índice corrector por inicio de nueva actividad ..... 160

**Rendimiento neto de módulos** ..... 161

Gastos extraordinarios por circunstancias excepcionales ..... 162
*(véase la Guía)*

Otras percepciones empresariales ..... 163
*(véase la Guía)*

**Rendimiento neto de la actividad** ( 161 – 162 + 163 ) .... 164

Reducciones de rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 32.1 de la Ley del Impuesto) ..... 165

**Rendimiento neto reducido** ( 164 – 165 ) ..... 168

### Actividad 2.ª

Contribuyente titular de la actividad ..... 150

Clasificación IAE (grupo o epígrafe) ..... 151

MÓDULOS

| | Definición | N.º de unidades | Rendimiento por módulo antes de amortización |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |

**Rendimiento neto previo** (suma) ..... 152

**Minoraciones:** *(véase la Guía)*

Minoración por incentivos al empleo ..... 153

Minoración por incentivos a la inversión ..... 154

**Rendimiento neto minorado** ( 152 – 153 – 154 ) ..... 155

**Índices correctores** *(véase la Guía)*

1. Índice corrector especial ..... 156
2. Índice corrector para empresas de pequeña dimensión ..... 157
3. Índice corrector de temporada ..... 158
4. Índice corrector de exceso ..... 159
5. Índice corrector por inicio de nueva actividad ..... 160

**Rendimiento neto de módulos** ..... 161

Gastos extraordinarios por circunstancias excepcionales ..... 162
*(véase la Guía)*

Otras percepciones empresariales ..... 163
*(véase la Guía)*

**Rendimiento neto de la actividad** ( 161 – 162 + 163 ) .... 164

Reducciones de rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular (artículo 32.1 de la Ley del Impuesto) ..... 165

**Rendimiento neto reducido** ( 164 – 165 ) ..... 168

## • Rendimiento neto reducido total de las actividades económicas (excepto agrícolas, ganaderas y forestales) en estimación objetiva

**Rendimiento neto reducido total** (suma de las casillas 168 ) ..... 170

E3 **Rendimientos de actividades agrícolas, ganaderas y forestales en estimación objetiva**

Si el número de actividades económicas previsto en esta hoja resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

## ● Actividades agrícolas, ganaderas y forestales realizadas y rendimientos obtenidos

**Actividad 1.ª**

Contribuyente titular de la actividad ..... 171

Actividad realizada. Clave *(véase la Guía)* ..... 172

Si para la imputación temporal opta por el criterio de cobros y pagos, consigne una "X" *(véase la Guía)* ..... 173

***Atención:*** *la opción se referirá necesariamente a todas las actividades del mismo titular.*

| PRODUCTOS | | Ingresos íntegros | Índice | Rendimiento base producto |
|---|---|---|---|---|
| 1 | ..... | | | |
| 2 | ..... | | | |
| 3 | ..... | | | |
| 4 | ..... | | | |
| 5 | ..... | | | |
| 6 | ..... | | | |
| 7 | ..... | | | |
| 8 | ..... | | | |
| 9 | ..... | | | |
| 10 | ..... | | | |
| 11 | ..... | | | |
| 12 | ..... | | | |
| 13 | ..... | | | |
| Total ingresos .... | 174 | | | |

**Rendimiento neto previo** (suma de rendimientos base) ..... 175

Amortización del inmovilizado material e inmaterial ..... 178

**Rendimiento neto minorado** ( 175 – 178 ) ..... 179

**Índices correctores** *(véase la Guía)*

1. Por utilización de medios de producción ajenos en actividades agrícolas ..... 180
2. Por utilización de personal asalariado ..... 181
3. Por cultivos realizados en tierras arrendadas ..... 182
4. Por piensos adquiridos a terceros en más del 50 por 100 ..... 183
5. Por actividades de agricultura ecológica ..... 184
6. Por ser empresa cuyo rdto. neto minorado no supera 9.447,91 euros ..... 185
7. Índice corrector en determinadas actividades forestales ..... 186

**Rendimiento neto de módulos** ..... 187

Reducción agricultores jóvenes *(véase la Guía)* ..... 190
(disposición adicional sexta de la Ley del Impuesto)

Gastos extraordinarios por circunstancias excepcionales ..... 191
*(Véase la Guía)*

**Rendimiento neto de la actividad** ( 187 – 190 – 191 ) ..... 192

Reducciones de rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular ..... 193
(artículo 32.1 de la Ley del Impuesto)

**Rendimiento neto reducido** ( 192 – 193 ) ..... 194

**Actividad 2.ª**

Contribuyente titular de la actividad ..... 171

Actividad realizada. Clave *(véase la Guía)* ..... 172

Si para la imputación temporal opta por el criterio de cobros y pagos, consigne una "X" *(véase la Guía)* ..... 173

***Atención:*** *la opción se referirá necesariamente a todas las actividades del mismo titular.*

| PRODUCTOS | | Ingresos íntegros | Índice | Rendimiento base producto |
|---|---|---|---|---|
| 1 | ..... | | | |
| 2 | ..... | | | |
| 3 | ..... | | | |
| 4 | ..... | | | |
| 5 | ..... | | | |
| 6 | ..... | | | |
| 7 | ..... | | | |
| 8 | ..... | | | |
| 9 | ..... | | | |
| 10 | ..... | | | |
| 11 | ..... | | | |
| 12 | ..... | | | |
| 13 | ..... | | | |
| Total ingresos .... | 174 | | | |

**Rendimiento neto previo** (suma de rendimientos base) ..... 175

Amortización del inmovilizado material e inmaterial ..... 178

**Rendimiento neto minorado** ( 175 – 178 ) ..... 179

**Índices correctores** *(véase la Guía)*

1. Por utilización de medios de producción ajenos en actividades agrícolas ..... 180
2. Por utilización de personal asalariado ..... 181
3. Por cultivos realizados en tierras arrendadas ..... 182
4. Por piensos adquiridos a terceros en más del 50 por 100 ..... 183
5. Por actividades de agricultura ecológica ..... 184
6. Por ser empresa cuyo rdto. neto minorado no supera 9.447,91 euros ..... 185
7. Índice corrector en determinadas actividades forestales ..... 186

**Rendimiento neto de módulos** ..... 187

Reducción agricultores jóvenes *(véase la Guía)* ..... 190
(disposición adicional sexta de la Ley del Impuesto)

Gastos extraordinarios por circunstancias excepcionales ..... 191
*(Véase la Guía)*

**Rendimiento neto de la actividad** ( 187 – 190 – 191 ) ..... 192

Reducciones de rendimientos generados en más de 2 años u obtenidos de forma notoriamente irregular ..... 193
(artículo 32.1 de la Ley del Impuesto)

**Rendimiento neto reducido** ( 192 – 193 ) ..... 194

## ● Rendimiento neto reducido total de las actividades agrícolas, ganaderas y forestales en estimación objetiva

**Rendimiento neto reducido total** (suma de las casillas 194 ) ..... 195

## F Regímenes especiales (salvo los regímenes especiales de imputación de rentas inmobiliarias y para trabajadores desplazados)

### • Régimen de atribución de rentas: rendimientos del capital y de actividades económicas y ganancias y pérdidas patrimoniales

| Entidades y contribuyentes partícipes: | | Entidad 1.ª | Entidad 2.ª | Entidad 3.ª | Total |
|---|---|---|---|---|---|
| Contribuyente que es socio, comunero o partícipe de la entidad | 200 | | | | |
| NIF de la entidad en régimen de atribución de rentas | 201 | | | | |
| Porcentaje de participación del contribuyente en la entidad | 202 | % | % | % | |
| **Rendimientos del capital mobiliario:** | | | | | |
| ***Rendimientos a integrar en la base imponible general:*** | | | | | |
| Rendimiento neto atribuido por la entidad | 203 | | | | |
| Reducciones y minoraciones aplicables *(véase la Guía)* | 204 | | | | |
| Rendimiento neto computable ( 203 – 204 ) | 205 | | | | 220 |
| ***Rendimientos a integrar en la base imponible del ahorro:*** | | | | | |
| Rendimiento neto atribuido por la entidad. Importe computable | 206 | | | | 221 |
| **Rendimientos del capital inmobiliario:** | | | | | |
| Rendimiento neto atribuido por la entidad | 209 | | | | |
| Reducciones y minoraciones aplicables *(véase la Guía)* | 210 | | | | |
| Rendimiento neto computable ( 209 – 210 ) | 211 | | | | 222 |
| **Rendimientos de actividades económicas:** | | | | | |
| Rendimiento neto atribuido por la entidad | 212 | | | | |
| Reducciones y minoraciones aplicables *(véase la Guía)* | 213 | | | | |
| Rendimiento neto computable ( 212 – 213 ) | 214 | | | | 223 |
| **Ganancias y pérdidas patrimoniales imputables a 2007:** | | | | | |
| ***No derivadas de la transmisión de elementos patrimoniales:*** | | | | | |
| Ganancias patrimoniales atribuidas por la entidad | 215 | | | | 224 |
| Pérdidas patrimoniales atribuidas por la entidad | 216 | | | | 225 |
| ***Derivadas de la transmisión de elementos patrimoniales:*** | | | | | |
| Ganancias patrimoniales atribuidas por la entidad | 217 | | | | 226 |
| Pérdidas patrimoniales atribuidas por la entidad | 218 | | | | 227 |
| **Retenciones e ingresos a cuenta:** | | | | | |
| Retenciones e ingresos a cuenta atribuidos | 219 | | | | 746 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

### • Imputaciones de agrupaciones de interés económico y uniones temporales de empresas (arts. 48 a 52 del texto refundido de la LIS)

| | | Entidad 1.ª | Entidad 2.ª | Entidad 3.ª | Total |
|---|---|---|---|---|---|
| Contribuyente a quien corresponden las imputaciones | 230 | | | | |
| Nº de identificación fiscal (NIF) de la entidad | 231 | | | | |
| Criterio de imputación temporal. Clave *(véase la Guía)* | 232 | | | | |
| **Imputaciones de bases imponibles y deducciones:** | | | | | |
| Base imponible imputada | 233 | | | | 245 |
| Deducciones por inversión empresarial (bases imputadas) | 234 | | | | |
| Deducciones por creación de empleo (importe deducible imputado) | 235 | | | | |
| Deducción por rentas obtenidas en Ceuta o Melilla (base imputada) | 236 | | | | |
| Deducción por doble imposición internacional (base imputada) | 237 | | | | |
| **Imputaciones de retenciones e ingresos a cuenta:** | | | | | |
| Retenciones e ingresos a cuenta imputados | 239 | | | | 747 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

### • Imputaciones de rentas en el régimen de transparencia fiscal internacional (art.º 91 de la Ley del Impuesto)

| | | Entidad 1.ª | Entidad 2.ª | Entidad 3.ª | Total |
|---|---|---|---|---|---|
| Contribuyente que debe efectuar la imputación | 250 | | | | |
| Denominación de la entidad no residente participada | 251 | | | | |
| Criterio de imputación temporal. Clave *(véase la Guía)* | 252 | | | | |
| **Importe de la imputación** | 253 | | | | 255 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

### • Imputación de rentas por la cesión de derechos de imagen (art.º 92 de la Ley del Impuesto)

| | | |
|---|---|---|
| Contribuyente que debe efectuar la imputación como consecuencia de la cesión del derecho de imagen | 260 | |
| Persona o entidad primera cesionaria de los derechos de imagen: NIF (si es residente en territorio español) o denominación | 261 | |
| Persona o entidad con la que el contribuyente mantiene la relación laboral: NIF (si es residente en territorio español) o denominación | 262 | |
| **Cantidad a imputar** | 265 | |

### • Imputación de rentas por la participación en Instituciones de Inversión Colectiva constituidas en paraísos fiscales (art.º 95 de la Ley del Impuesto)

| | | Institución Inv. Colectiva 1.ª | Institución Inv. Colectiva 2.ª | Institución Inv. Colectiva 3.ª | Total |
|---|---|---|---|---|---|
| Contribuyente que debe efectuar la imputación | 270 | | | | |
| Denominación de la Institución de Inversión Colectiva | 271 | | | | |
| **Importe de la imputación** | 272 | | | | 275 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

## G1 Ganancias y pérdidas patrimoniales que no derivan de la transmisión de elementos patrimoniales

### • Premios obtenidos por la participación en juegos, concursos, rifas o combinaciones aleatorias

| | | | | |
|---|---|---|---|---|
| Premios en metálico. Importe total | | | | 300 |
| | Valoración | Ingresos a cuenta | Ingresos a cuenta repercutidos | Importe computable (301 + 302 – 303) |
| Premios en especie | 301 | 302 | 303 | 304 |

### • Otras ganancias y pérdidas patrimoniales que no derivan de la transmisión de elementos patrimoniales

| | |
|---|---|
| Subvenciones o ayudas destinadas a la adquisición o rehabilitación de la vivienda habitual o a la reparación de defectos estructurales en la misma. Importe imputable a 2007 | 310 |
| Ganancias patrimoniales obtenidas por los vecinos en 2007 como consecuencia de aprovechamientos forestales en montes públicos | 311 |
| Otras ganancias patrimoniales imputables a 2007, no derivadas de la transmisión de elementos patrimoniales | 312 |
| Pérdidas patrimoniales imputables a 2007, no derivadas de la transmisión de elementos patrimoniales | 313 |

## G2 Ganancias y pérdidas patrimoniales derivadas de la transmisión de elementos patrimoniales

### • Ganancias y pérdidas patrimoniales sometidas a retención o ingreso a cuenta derivadas de transmisiones o reembolsos de acciones o participaciones de instituciones de inversión colectiva (sociedades y fondos de Inversión)

| **Acciones o participaciones transmitidas y titulares:** | Sociedad / Fondo 1 | Sociedad / Fondo 2 | Sociedad / Fondo 3 | Totales |
|---|---|---|---|---|
| Contribuyente titular de las acciones o participaciones | 320 | 320 | 320 | |
| NIF de la sociedad o fondo de Inversión | 321 | 321 | 321 | |
| **Resultados netos:** | | | | |
| Positivos: Ganancias patrimoniales netas | 322 | 322 | 322 | 329 |
| Negativos: Pérdidas patrimoniales netas | 323 | 323 | 323 | 330 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

### • Ganancias y pérdidas patrimoniales derivadas de transmisiones de acciones o participaciones negociadas en mercados oficiales

| **Acciones o participaciones transmitidas y titulares:** | Entidad emisora 1 | Entidad emisora 2 | Entidad emisora 3 | Totales |
|---|---|---|---|---|
| Contribuyente titular de los valores transmitidos | 340 | 340 | 340 | |
| Denominación de los valores transmitidos (entidad emisora) | 341 | 341 | 341 | |
| Importe global de las transmisiones efectuadas en 2007 | 342 | 342 | 342 | |
| Valor de adquisición global de los valores transmitidos | 343 | 343 | 343 | |
| **Resultados:** | | | | |
| Ganancias patrimoniales. Importe obtenido | 344 | 344 | 344 | |
| Ganancias patrimoniales. Importe reducido | 345 | 345 | 345 | 349 |
| Pérdidas patrimoniales. Importe obtenido | 346 | 346 | 346 | |
| Pérdidas patrimoniales. Importe imputable a 2007 | 347 | 347 | 347 | 350 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

### • Ganancias y pérdidas patrimoniales derivadas de transmisiones de otros elementos patrimoniales

| **Titularidad y datos del elemento patrimonial transmitido:** | Elemento patrimonial 1 | Elemento patrimonial 2 | Totales |
|---|---|---|---|
| Contribuyente titular del elemento patrimonial transmitido | 360 | 360 | |
| Tipo de elemento patrimonial. Clave *(véase la Guía)* | 361 | 361 | |
| En caso de inmuebles: Situación. Clave *(véase la Guía)* | 362 | 362 | |
| Referencia catastral | 363 | 363 | |
| **Fechas y valores de transmisión y de adquisición:** | | | |
| Fecha de transmisión (día, mes y año) | 364 | 364 | |
| Fecha de adquisición (día, mes y año) | 365 | 365 | |
| Valor de transmisión | 366 | 366 | |
| Valor de adquisición (actualizado en caso de inmuebles) | 367 | 367 | |
| **Si la diferencia [366] – [367] es negativa:** | | | |
| Pérdida patrimonial obtenida: diferencia ( 366 – 367 ) negativa | 368 | 368 | |
| Pérdida patrimonial imputable a 2007 | 369 | 369 | 383 |
| **Si la diferencia [366] – [367] es positiva:** | | | |
| Ganancia patrimonial obtenida: diferencia ( 366 – 367 ) positiva | 370 | 370 | |
| **Elementos no afectos a actividades económicas:** | | | |
| Parte de la ganancia patrimonial susceptible de reducción | 371 | 371 | |
| N.º de años de permanencia hasta el 31-12-1994, en su caso | 372 | 372 | |
| Reducción aplicable (disp. transitoria 9.ª de la Ley del Impuesto) | 373 | 373 | |
| Ganancia patrimonial reducida ( 370 – 373 ) | 374 | 374 | |
| Ganancia exenta por reinversión (sólo vivienda habitual) | 375 | 375 | |
| Ganancia patrimonial reducida no exenta ( 374 – 375 ) | 376 | 376 | |
| Ganancia patrimonial reducida no exenta imputable a 2007 | 377 | 377 | 384 |
| **Elementos afectos a actividades económicas:** | | | |
| Reducción (licencia municipal autotaxis en estimación objetiva) | 378 | 378 | |
| Ganancia patrimonial reducida ( 370 – 378 ) | 379 | 379 | |
| Ganancia patrimonial reducida imputable a 2007 | 380 | 380 | 385 |

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ....

## G2 Ganancias y pérdidas patrimoniales derivadas de la transmisión de elementos patrimoniales (continuación)

### • Imputación a 2007 de ganancias y pérdidas patrimoniales derivadas de transmisiones efectuadas en ejercicios anteriores

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ☐

| **Imputación de ganancias patrimoniales:** | Ganancia patrimonial 1 | Ganancia patrimonial 2 | Ganancia patrimonial 3 | Total |
|---|---|---|---|---|
| Contribuyente a quien corresponde la imputación | 390 | 390 | 390 | |
| Importe de la ganancia patrimonial que procede imputar a 2007 | 391 | 391 | 391 | 395 |

| **Imputación de pérdidas patrimoniales:** | Pérdida patrimonial 1 | Pérdida patrimonial 2 | Pérdida patrimonial 3 | Total |
|---|---|---|---|---|
| Contribuyente a quien corresponde la imputación | 400 | 400 | 400 | |
| Importe de la pérdida patrimonial que procede imputar a 2007 | 401 | 401 | 401 | 405 |

### • Imputación a 2007 de ganancias patrimoniales acogidas a diferimiento por reinversión (derivadas de elementos afectos a actividades económicas)

Si las columnas previstas en este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan ☐

| **Imputación de ganancias patrimoniales:** | Ganancia patrimonial 1 | Ganancia patrimonial 2 | Ganancia patrimonial 3 | Total |
|---|---|---|---|---|
| Contribuyente a quien corresponde la imputación diferida | 410 | 410 | 410 | |
| Importe de la ganancia patrimonial que procede imputar a 2007 | 411 | 411 | 411 | 415 |
| Método de integración. Clave *(véase la Guía)* | 412 | 412 | 412 | |

## G3 Exención por reinversión de la ganancia patrimonial obtenida en 2007 por la transmisión de la vivienda habitual

| | |
|---|---|
| Importe obtenido por la transmisión de la vivienda habitual que es susceptible de reinversión a efectos de la exención *(véase la Guía)* | 420 |
| Ganancia patrimonial obtenida como consecuencia de la transmisión de la vivienda habitual | 421 |
| Importe reinvertido hasta el 31-12-2007 en la adquisición de una nueva vivienda habitual | 422 |
| Importe que el contribuyente se compromete a reinvertir, en los dos años siguientes a la transmisión, en la adquisición de una nueva vivienda habitual | 423 |
| Ganancia patrimonial exenta por reinversión | 424 |

## G4 Opción por el régimen especial de fusiones, escisiones y canje de valores de entidades no residentes en España

Cumplimentarán este apartado los contribuyentes que, siendo socios de entidades no residentes en España, se hayan visto afectados en 2007 por operaciones de fusión, escisión o canje de valores realizadas por dichas entidades y que, deseando optar por el régimen especial previsto en el Capítulo VIII del Título VII del texto refundido de la Ley del Impuesto sobre Sociedades, deban hacerlo en la forma establecida en el artículo 43 del Reglamento de dicho Impuesto.

| | | | |
|---|---|---|---|
| Contribuyente que opta: | 430 | N.º de operaciones: | 431 |
| Contribuyente que opta: | 432 | N.º de operaciones: | 433 |

## G5 Integración y compensación de las ganancias y pérdidas patrimoniales imputables a 2007

| | | | |
|---|---|---|---|
| **Ganancias y pérdidas patrimoniales a integrar en la base imponible general:** | Suma de ganancias patrimoniales ( 224 + 300 + 304 + 310 + 311 + 312 + 415 ) | 440 | |
| | Suma de pérdidas patrimoniales ( 225 + 313 ) | 441 | |
| Saldo neto de las ganancias y pérdidas patrimoniales imputables a 2007 a integrar en la base imponible general | Si la diferencia ( 440 – 441 ) es positiva | | 450 |
| | Si la diferencia ( 440 – 441 ) es negativa | 442 | |
| **Ganancias y pérdidas patrimoniales a integrar en la base imponible del ahorro:** | Suma de ganancias patrimoniales ( 226 + 329 + 349 + 384 + 385 + 395 ) | 443 | |
| | Suma de pérdidas patrimoniales ( 227 + 330 + 350 + 383 + 405 ) | 444 | |
| Saldo neto de las ganancias y pérdidas patrimoniales imputables a 2007 a integrar en la base imponible del ahorro | Si la diferencia ( 443 – 444 ) es positiva | | 457 |
| | Si la diferencia ( 443 – 444 ) es negativa | 445 | |

## H Base imponible general y base imponible del ahorro

**Base imponible general:**

**Saldo neto positivo de las ganancias y pérdidas patrimoniales imputables a 2007 a integrar en la base imponible general** 450

Saldos netos negativos de ganancias y pérdidas patrimoniales de 2003 a 2006 a integrar en la parte general de la renta del período impositivo (como máximo, el importe de la casilla 450 ) 451

**Saldo neto de los rendimientos a integrar en la base imponible general y de las imputaciones de renta** 452
( 021 + 050 + 080 + 085 + 140 + 170 + 195 + 220 + 222 + 223 + 245 + 255 + 265 + 275 )

**Compensaciones** (si la casilla 452 es positiva y con el límite conjunto del 25 por 100 de su importe)**:**

Resto de los saldos netos negativos de ganancias y pérdidas patrimoniales de 2003 a 2006 a integrar en la parte general de la renta del período impositivo 453

Saldo neto negativo de las ganancias y pérdidas patrimoniales imputables a 2007 a integrar en la base imponible general 454

**Base imponible general** ( 450 – 451 + 452 – 453 – 454 ) 455

Saldo neto negativo de las ganancias y pérdidas patrimoniales imputables a 2007 a integrar en la base imponible general: importe pendiente de compensar en los 4 ejercicios siguientes ( 442 – 454 ) 456

**Base imponible del ahorro:**

**Saldo neto positivo de las ganancias y pérdidas patrimoniales imputables a 2007 a integrar en la base imponible del ahorro** 457

**Compensación** (si la casilla 457 es positiva y hasta el máximo de su importe)**:**

Saldos netos negativos de ganancias y pérdidas patrimoniales de 2003 a 2006 a integrar en la parte especial de la renta del período impositivo 458

**Saldo de los rendimientos del capital mobiliario a integrar en la base imponible del ahorro** (suma de las casillas 035 y 221 de las páginas 3 y 8 de la declaración)

| | |
|---|---|
| Si el saldo es negativo | 459 |
| Si el saldo es positivo | 460 |

**Base imponible del ahorro** ( 457 – 458 + 460 ) 465

## I Reducciones de la base imponible

### • Reducción por tributación conjunta

**Reducción para unidades familiares que opten por la tributación conjunta.** Importe *(véase la Guía)* ..... 470

### • Reducciones por aportaciones y contribuciones a sistemas de previsión social

**Régimen general**

| | | | | |
|---|---|---|---|---|
| Contribuyente que realiza, o a quien se imputan, las aportaciones y contribuciones | 480 | | 480 | |
| Excesos pendientes de reducir de aportaciones y contribuciones de los ejercicios 2002 a 2006 | 481 | | 481 | |
| Aportaciones y contribuciones del ejercicio 2007. *Cuantía máxima: véase la Guía* | 482 | | 482 | **Total con derecho a reducción** |
| Importes con derecho a reducción ( 481 + 482 ). *Límite máximo y condiciones: véase la Guía* | 483 | | 483 | 500 |

**Aportaciones a sistemas de previsión social de los que es partícipe, mutualista o titular el cónyuge del contribuyente**

**Total con derecho a reducción** *Límite máximo y condiciones: véase la Guía* ..... 505

### • Reducciones por aportaciones y contribuciones a sistemas de previsión social constituidos a favor de personas con discapacidad

| | | | |
|---|---|---|---|
| Contribuyente que realiza las aportaciones con derecho a reducción | 510 | 510 | Si las dos columnas de este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan .... |
| N.º de identificación fiscal (NIF) de la persona con discapacidad partícipe, mutualista o asegurada | 511 | 511 | |
| Excesos pendientes de reducir de aportaciones y contribuciones de los ejercicios 2003 a 2006 | 512 | 512 | |
| Aportaciones realizadas en 2007 por la propia persona con discapacidad **(*)** | 513 | 513 | **(*)** *Cuantía máxima: véase la Guía.* |
| Aportaciones realizadas en 2007 por parientes o tutores de la persona con discapacidad **(*)** | 514 | 514 | |

**Total con derecho a reducción**. *Límite máximo y condiciones: véase la Guía* ..... 530

### • Reducciones por aportaciones a patrimonios protegidos de personas con discapacidad

| | | | |
|---|---|---|---|
| Contribuyente que realiza las aportaciones con derecho a reducción | 540 | 540 | Si las dos columnas de este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan .... |
| N.º de identificación fiscal (NIF) de la persona con discapacidad titular del patrimonio protegido | 541 | 541 | |
| Excesos pendientes de reducir de aportaciones realizadas en los ejercicios 2004 a 2006 | 542 | 542 | |
| Aportaciones realizadas en 2007 al patrimonio protegido de la persona con discapacidad | 543 | 543 | |

**Total con derecho a reducción**. *Límite máximo y condiciones: véase la Guía* ..... 560

### • Reducciones por pensiones compensatorias a favor del cónyuge y anualidades por alimentos, excepto en favor de los hijos

| | | | |
|---|---|---|---|
| Contribuyente que abona las pensiones o anualidades | 570 | 570 | Si las dos columnas de este apartado fuesen insuficientes, indique el número de hojas adicionales que se adjuntan .... |
| N.º de identificación fiscal (NIF) de la persona que recibe cada pensión o anualidad | 571 | 571 | |
| Importe de la pensión o anualidad satisfecha en 2007 por decisión judicial | 572 | 572 | |

**Total con derecho a reducción** ..... 585

### • Reducciones por aportaciones a la mutualidad de previsión social de deportistas profesionales

| | | | |
|---|---|---|---|
| Contribuyente que realiza las aportaciones con derecho a reducción | 590 | 590 | |
| Aportaciones realizadas en 2007 con derecho a reducción. *Cuantía máxima: véase la Guía* | 591 | 591 | |

**Total con derecho a reducción**. *Límite máximo y condiciones: véase la Guía* ..... 600

## J Base liquidable general y base liquidable del ahorro

### • Determinación de la base liquidable general

**Base imponible general** (traslade el importe de esta misma casilla de la página 10 de la declaración) ..... 455

**Reducciones de la base imponible general** (si la casilla 455 es positiva y hasta el límite máximo de su importe**:**

| | | |
|---|---|---|
| Por tributación conjunta. Importe de la casilla 470 que se aplica | 610 | |
| Por aportaciones y contribuciones a sistemas de previsión social (régimen general). Importe de la casilla 500 que se aplica | 611 | |
| Por aportaciones a sistemas de previsión social de los que es partícipe, mutualista o titular el cónyuge. Importe de la casilla 505 que se aplica | 612 | |
| Por aportaciones y contribuciones a sistemas de previsión social constituidos a favor de personas con discapacidad. Importe de la casilla 530 que se aplica | 613 | |
| Por aportaciones a patrimonios protegidos de personas con discapacidad. Importe de la casilla 560 que se aplica | 614 | |
| Por pensiones compensatorias y anualidades por alimentos. Importe de la casilla 585 que se aplica | 615 | |
| Por aportaciones a la mutualidad de previsión social de deportistas profesionales. Importe de la casilla 600 que se aplica | 616 | |
| Cuotas de afiliación y demás aportaciones a los partidos políticos realizadas por afiliados, adheridos y simpatizantes (máx. con derecho a reducción: 600 euros) | 617 | |

**Base liquidable general** ( 455 – 610 – 611 – 612 – 613 – 614 – 615 – 616 – 617 ) ..... 618

**Compensación** (si la casilla 618 es positiva y hasta el límite máximo de su importe**):** Bases liquidables generales negativas de 2003 a 2006 ..... 619

**Base liquidable general sometida a gravamen** ( 618 – 619 ) ..... 620

### • Determinación de la base liquidable del ahorro

**Base imponible del ahorro** (traslade el importe de esta misma casilla de la página 10 de la declaración) ..... 465

**Remanente de determinadas reducciones no aplicadas anteriormente** (si la casilla 465 es positiva y hasta el límite máximo de su importe**):**

| | | |
|---|---|---|
| Reducción por tributación conjunta. Remanente de la casilla 470 que se aplica | 621 | |
| Reducción por pensiones compensatorias y anualidades por alimentos. Remanente de la casilla 585 que se aplica | 622 | |
| Cuotas de afiliación y demás aportaciones a los partidos políticos realizadas por afiliados, adheridos y simpatizantes. Importe no aplicado en la casilla 617 | 623 | |

**Base liquidable del ahorro** ( 465 – 621 – 622 – 623 ) ..... 630

## K Reducciones de la base imponible no aplicadas en 2007 que podrán aplicarse en ejercicios siguientes

### • Exceso no reducido de las aportaciones y contribuciones a sistemas de previsión social (régimen general)

Cumplimentarán este apartado los contribuyentes que, por insuficiencia de base imponible o por exceder del límite porcentual previsto en el artículo 52.1.a) de la Ley del Impuesto, no hubieran podido reducir en esta declaración la totalidad de las aportaciones y contribuciones del ejercicio 2007 que figuran en las casillas **482** de la página 11 de la declaración.

| | | | | |
|---|---|---|---|---|
| Contribuyente con derecho a reducción | 640 | | 640 | |
| Aportaciones y contribuciones de 2007 no aplicadas cuyo importe se solicita poder reducir en los 5 ejercicios siguientes *(véase la Guía)* | 641 | | 641 | |

### • Exceso no reducido de las aportaciones y contribuciones a sistemas de previsión social constituidos a favor de personas con discapacidad

Cumplimentarán este apartado los contribuyentes que, por insuficiencia de base imponible, no hubieran podido reducir en esta declaración la totalidad de las aportaciones y contribuciones del ejercicio 2007 que figuran en las casillas **513** ó **514** de la página 11 de la declaración.

| | | | | |
|---|---|---|---|---|
| Contribuyente con derecho a reducción | 650 | | 650 | |
| Aportaciones y contribuciones de 2007 no aplicadas cuyo importe se solicita poder reducir en los 5 ejercicios siguientes *(véase la Guía)* | 651 | | 651 | |

### • Exceso no reducido de las aportaciones a patrimonios protegidos de personas con discapacidad

Cumplimentarán este apartado los contribuyentes que, por exceder de los límites máximos establecidos o por insuficiencia de base imponible, no hubieran podido reducir en esta declaración la totalidad de las aportaciones y contribuciones del ejercicio 2007 que figuran en las casillas **543** de la página 11 de la declaración.

| | | | | |
|---|---|---|---|---|
| Contribuyente con derecho a reducción | 660 | | 660 | |
| Aportaciones de 2007 no aplicadas cuyo importe podrá reducirse en los 4 ejercicios siguientes *(véase la Guía)* | 661 | | 661 | |

### • Exceso no reducido de las aportaciones a la mutualidad de previsión social de deportistas profesionales

Cumplimentarán este apartado los contribuyentes que, por insuficiencia de base imponible o por exceder del límite previsto en el apartado Uno.5.a) de la disposición adicional undécima de la Ley del Impuesto, no hubieran podido reducir en esta declaración la totalidad de las aportaciones del ejercicio 2007 que figuran en las casillas **591** de la página 11 de la declaración.

| | | | | |
|---|---|---|---|---|
| Contribuyente con derecho a reducción | 670 | | 670 | |
| Aportaciones y contribuciones de 2007 no aplicadas cuyo importe se solicita poder reducir en los 5 ejercicios siguientes *(véase la Guía)* | 671 | | 671 | |

## L Adecuación del impuesto a las circunstancias personales y familiares: mínimo personal y familiar

| | | | | |
|---|---|---|---|---|
| Mínimo del contribuyente. Importe *(véase la Guía)* | 680 | | Mínimo por ascendientes. Importe *(véase la Guía)* | 682 | |
| Mínimo por descendientes. Importe *(véase la Guía)* | 681 | | Mínimo por discapacidad. Importe *(véase la Guía)* | 683 | |

**Mínimo personal y familiar** ( 680 + 681 + 682 + 683 ) ..... 684

**Importe del mínimo personal y familiar que forma parte de la base liquidable general:** la menor de las cantidades consignadas en las casillas 620 y 684 ..... 685
(Si la casilla 620 es negativa o igual a cero, consigne el número cero en la casilla 685 )

**Importe del mínimo personal y familiar que forma parte de la base liquidable del ahorro:** la menor de la diferencia ( 684 – 685 ) y la casilla 630 ..... 686

## M Cálculo del impuesto y resultado de la declaración

### • Datos adicionales: rentas exentas con progresividad y anualidades por alimentos satisfechas a los hijos por decisión judicial

**Atención:** si cumplimenta alguna de estas casillas, la determinación de los importes a que se refieren las casillas **689**, **690**, **691** y **692** se realizará según las indicaciones específicas que figuran en la Guía de la declaración.

| | | |
|---|---|---|
| Importe de las rentas obtenidas que están exentas del IRPF, excepto para determinar el tipo de gravamen aplicable a las demás rentas *(véase la Guía)* | 687 | |
| Importe de las anualidades por alimentos en favor de los hijos satisfechas por decisión judicial | 688 | |

### • Determinación de los gravámenes estatal y autonómico

| | Parte estatal | Parte autonómica |
|---|---|---|
| **Gravamen de la base liquidable general:** | | |
| Aplicación de las escalas del Impuesto al importe de la casilla 620 . Importes resultantes *(véase la Guía)* | 689 | 690 |
| Aplicación de las escalas del Impuesto al importe de la casilla 685 . Importes resultantes *(véase la Guía)* | 691 | 692 |
| **Cuotas correspondientes a la base liquidable general** ( 693 = 689 – 691 ; 694 = 690 – 692 ) | 693 | 694 |
| Tipos medios de gravamen ( TME = 693 x 100 ÷ 620 ; TMA = 694 x 100 ÷ 620 ) | TME | TMA |
| **Gravamen de la base liquidable del ahorro:** | | |
| Base liquidable del ahorro sometida a gravamen ( 630 – 686 ) ..... 695 | | |
| **Cuotas correspondientes a la base liquidable del ahorro** *(véase la Guía)* (Importes resultantes de la aplicación de los tipos de gravamen del ahorro al importe de la casilla 695 ). | 696 | 697 |
| **Cuotas integras** ( 698 = 693 + 696 ; 699 = 694 + 697 ) | 698 | 699 |
| **Deducciones generales:** | | |
| Por inversión en vivienda habitual (traslade los importes de estas mismas casillas del anexo A) | 700 | 701 |
| Por inversiones o gastos de interés cultural (traslade los importes de estas mismas casillas del anexo A) | 702 | 703 |
| Por donativos (traslade los importes de estas mismas casillas del anexo A) | 704 | 705 |
| Deducciones en actividades económicas: | | |
| Por incentivos y estímulos a la inversión empresarial (traslade los importes de estas mismas casillas del anexo C) | 706 | 707 |
| Por dotaciones a la Reserva para Inversiones en Canarias (Ley 19/1994) *(véase la Guía)* | 708 | 709 |
| Por rendimientos derivados de la venta de bienes corporales producidos en Canarias (Ley 19/1994) *(véase la Guía)* | 710 | 711 |
| Por rentas obtenidas en Ceuta o Melilla (traslade los importes de estas mismas casillas del anexo A) | 712 | 713 |
| Por cantidades depositadas en cuentas ahorro-empresa (traslade los importes de estas mismas casillas del anexo A) | 714 | 715 |
| **Deducciones autonómicas** (traslade el importe de esta misma casilla del anexo B.1, B.2 o B.3, según corresponda) | | 716 |
| **Cuota liquida estatal** ( 698 – 700 – 702 – 704 – 706 – 708 – 710 – 712 – 714 ) | 720 | |
| **Cuota liquida autonómica** ( 699 – 701 – 703 – 705 – 707 – 709 – 711 – 713 – 715 – 716 ) | | 721 |

## M Cálculo del impuesto y resultado de la declaración (continuación)

### • Determinación de los gravámenes estatal y autonómico (continuación)

**Incremento de las cuotas líquidas por pérdida del derecho a determinadas deducciones de ejercicios anteriores:**

| | | | Parte estatal | Parte autonómica |
|---|---|---|---|---|
| Deducciones de 1996 y ejercicios anteriores: | Importe de las deducciones a las que se ha perdido el derecho en 2007 | 722 | | |
| | Intereses de demora correspondientes a las deducciones anteriores | 723 | | |
| Deducciones generales de 1997 a 2006: | Importe de las deducciones a las que se ha perdido el derecho en 2007. Parte estatal | 724 | | |
| | Intereses de demora correspondientes a las deducciones anteriores | 725 | | |
| | Importe de las deducciones a las que se ha perdido el derecho en 2007. Parte autonómica | 726 | | |
| | Intereses de demora correspondientes a las deducciones anteriores | 727 | | |
| Deducciones autonómicas de 1998 a 2006: | Importe de las deducciones autonómicas a las que se ha perdido el derecho en 2007 | 728 | | |
| | Intereses de demora correspondientes a las deducciones anteriores | 729 | | |
| **Cuotas líquidas incrementadas** ( 730 = 720 + 722 + 723 + 724 + 725 ; 731 = 721 + 726 + 727 + 728 + 729 ) | | 730 | | 731 |

### • Cuota resultante de la autoliquidación

| | | |
|---|---|---|
| **Cuota líquida incrementada total** ( 730 + 731 ) | | 732 |
| Deducciones por doble imposición de dividendos pendientes de aplicar, procedentes de los ejercicios 2003 a 2006. Importe que se aplica | 733 | |
| Deducción por doble imposición internacional, por razón de las rentas obtenidas y gravadas en el extranjero | 734 | |
| Deducción por doble imposición internacional en los supuestos de aplicación del régimen de transparencia fiscal internacional | 735 | |
| Deducción por doble imposición en los supuestos de aplicación del régimen de imputación de rentas derivadas de la cesión de derechos de imagen | 736 | |
| **Compensaciones fiscales:** | | |
| Por deducción en adquisición de vivienda habitual, para viviendas adquiridas antes del 20-01-2006 *(véase la Guía)* | 737 | |
| Por percepción de determinados rendimientos del capital mobiliario con período de generación superior a dos años *(véase la Guía)* | 738 | |
| **Retenciones deducibles correspondientes a rendimientos bonificados** (disposición transitoria 11.ª del texto refundido de la Ley del Impuesto sobre Sociedades) | | |
| Importe de las retenciones no practicadas efectivamente que, no obstante, tienen la consideración de deducibles de la cuota | 739 | |
| **Cuota resultante de la autoliquidación** ( 732 – 733 – 734 – 735 – 736 – 737 – 738 – 739 ) | | 741 |

### • Retenciones y demás pagos a cuenta

| | | | | | |
|---|---|---|---|---|---|
| Por rendimientos del trabajo | 742 | | Ingresos a cuenta del artículo 92.8 de la Ley del Impuesto | 748 | |
| Por rendimientos del capital mobiliario | 743 | | Por ganancias patrimoniales, incluidos premios | 749 | |
| Por arrendamientos de inmuebles urbanos | 744 | | Pagos fraccionados ingresados (actividades económicas) | 750 | |
| Por rendimientos de actividades económicas **(*)** | 745 | | Bonificaciones programa PREVER (art. 3 de la Ley 39/1997) | 751 | |
| Atribuidos por entidades en régimen de atribución de rentas | 746 | | Cuotas del Impuesto sobre la Renta de no Residentes **(**)** | 752 | |
| Imputados por agrupaciones de interés económico y UTE's | 747 | | Retenciones art. 11 de la Directiva 2003/48/CE, del Consejo | 753 | |

**(*)** *Salvo las retenciones e ingresos a cuenta por arrendamientos de inmuebles urbanos, que se incluirán en la casilla anterior.*

**(**)** *Contribuyentes que hayan adquirido la condición de tales por cambio de residencia a territorio español.*

**Total pagos a cuenta** (suma de las casillas 742 a 753 ) 754

### • Cuota diferencial y resultado de la declaración

| | | |
|---|---|---|
| **Cuota diferencial** ( 741 – 754 ) | | 755 |
| Deducción por maternidad: Importe de la deducción *(véase la Guía)* | 756 | |
| Deducción por maternidad: Importe del abono anticipado de la deducción correspondiente a 2007 | | 757 |
| Deducción por nacimiento o adopción: Importe de la deducción *(véase la Guía)* | 758 | |
| Deducción por nacimiento o adopción: Importe del abono anticipado de la deducción | | 759 |
| **Resultado de la declaración** ( 755 – 756 + 757 – 758 + 759 ) | | 760 |

## N Regularización mediante declaración complementaria (sólo en caso de declaración complementaria del ejercicio 2007)

| | | |
|---|---|---|
| Resultados a ingresar de anteriores autoliquidaciones o liquidaciones administrativas correspondientes al ejercicio 2007 | 761 | |
| Devoluciones acordadas por la Administración como consecuencia de la tramitación de anteriores autoliquidaciones correspondientes al ejercicio 2007 | 762 | |
| **Resultado de la declaración complementaria** ( 760 – 761 + 762 ) | | 765 |

## O Solicitud de suspensión del ingreso de un cónyuge / Renuncia del otro cónyuge al cobro de la devolución

**Si el resultado de esta declaración es positivo (a ingresar).** Cumplimentarán estas casillas los contribuyentes casados y no separados legalmente que tributen individualmente y que, al amparo de lo previsto en el artículo 97.6 de la Ley del Impuesto, deseen solicitar la suspensión del ingreso de la cantidad resultante de su declaración en el importe que se indica en la casilla **768**, por cumplir las condiciones establecidas en dicho artículo y, en particular, por haber renunciado su cónyuge al cobro efectivo de la devolución resultante de su declaración en un importe igual al del ingreso cuya suspensión se solicita.

| | | |
|---|---|---|
| Importe del resultado a ingresar de su declaración (casilla 760 ) cuya suspensión se solicita *(véase la Guía)* | 768 | |
| **Resto a ingresar del resultado de su declaración:** diferencia ( 760 – 768 ) positiva o igual a cero | | 770 |

**Si el resultado de esta declaración es negativo (a devolver).** Cumplimentarán estas casillas los contribuyentes casados y no separados legalmente que tributen individualmente y que, al amparo de lo previsto en el artículo 97.6 de la Ley del Impuesto, deseen renunciar al cobro efectivo de la devolución resultante de su declaración en el importe que se indica en la casilla **769**, aceptando expresamente que dicha cantidad sea aplicada al pago del importe del resultado positivo de la declaración de su cónyuge cuya suspensión ha sido solicitada por éste.

| | | |
|---|---|---|
| Importe del resultado a devolver de su declaración (casilla 760 ) a cuyo cobro efectivo se renuncia *(véase la Guía)* | 769 | |
| **Resto del resultado de su declaración cuya devolución se solicita:** diferencia ( 760 – 769 ) negativa o igual a cero. Si es negativa, consígnela con signo menos | | 770 |

Con independencia de que renuncie al cobro efectivo de la totalidad del resultado negativo de su declaración, sírvase consignar los datos de la cuenta en la que desearía recibir la devolución a la que eventualmente pudiera tener derecho como consecuencia de las posteriores comprobaciones realizadas por la Administración tributaria.

771 Entidad | Oficina | DC | Número de cuenta

Ejercicio 2007 | Primer declarante | NIF | Apellidos y nombre | **Anexo A**

## Deducción por inversión en vivienda habitual

### • Adquisición, construcción, rehabilitación o ampliación de la vivienda habitual y cuentas vivienda. Inversión máxima deducible: 9.015 euros

| | Inversión con derecho a deducción (*) | | Parte estatal | Parte autonómica |
|---|---|---|---|---|
| **Adquisición de la vivienda habitual** | A | **Importe de la deducción** *(véase la Guía)* | 780 | 781 |
| **Construcción, rehabilitación o ampliación de la vivienda habitual** | B | **Importe de la deducción** *(véase la Guía)* | 782 | 783 |
| **Cantidades depositadas en cuentas vivienda para la primera adquisición o rehabilitación de vivienda habitual** | C | **Importe de la deducción** *(véase la Guía)* | 784 | 785 |

(*) *Los importes consignados en estas casillas tienen como límite máximo conjunto la cantidad de 9.015 euros.*

**Identificación de cuentas vivienda:**
*Datos obligatorios para todos los contribuyentes que practiquen deducción por cantidades depositadas en cuentas vivienda.*
*Cada contribuyente sólo puede ser titular de una cuenta vivienda.*

| | Titular de la cuenta | Fecha de apertura | Entidad | Oficina | DC | Número de cuenta |
|---|---|---|---|---|---|---|
| Cuenta 1 | | | | | | |
| Cuenta 2 | | | | | | |

### • Obras e instalaciones de adecuación de la vivienda habitual de personas con discapacidad. Inversión máxima deducible: 12.020 euros

| | | Parte estatal | Parte autonómica |
|---|---|---|---|
| Cantidades satisfechas con derecho a deducción *(límite máximo: 12.020 euros)* | D | **Importe de la deducción** *(véase la Guía)* | 786 | 787 |

### • Importe total de la deducción por inversión en vivienda habitual

| | | |
|---|---|---|
| **Deducción por inversión en vivienda habitual** | **Parte estatal** ( 780 + 782 + 784 + 786 ) | 700 |
| | **Parte autonómica** ( 781 + 783 + 785 + 787 ) | 701 |

### • Deducción por inversión en vivienda habitual: datos adicionales

**En su caso, pagos efectuados al promotor o constructor de la vivienda habitual o de las obras e instalaciones de adecuación de la misma:** Importe de los pagos realizados en el ejercicio al promotor o al constructor: 790 — NIF del promotor o constructor: 791

**En caso de deducción por adquisición de la vivienda habitual:** Fecha de adquisición de la vivienda por la que se practica la deducción ..... 792

Si la adquisición de la vivienda se financió, total o parcialmente, mediante un único préstamo hipotecario, consigne el número de identificación de dicho préstamo y la parte del mismo efectivamente destinada a la adquisición de la vivienda habitual. En caso de cambio de préstamo, consigne los datos del vigente a 31-12-2007.

Número de identificación del préstamo hipotecario ..... 793

Porcentaje del importe total del préstamo hipotecario que se ha destinado efectivamente a la adquisición de la vivienda: 794

## Deducción por inversiones o gastos de interés cultural

| | Importes con derecho a deducción (*) | Porcentaje de deducción | Importe de la deducción |
|---|---|---|---|
| Inversiones y gastos para la protección y difusión del Patrimonio Histórico Español y de las ciudades, conjuntos y bienes situados en España declarados Patrimonio Mundial por la UNESCO | E | 15 por 100 | 795 |

(*) Límite máximo: el 10 por 100 de la suma de las casillas **618** y **630** de la página 11 de la declaración.

| | | |
|---|---|---|
| **Deducción por inversiones y gastos de interés cultural** | **Parte estatal:** el 67 por 100 de 795 | 702 |
| | **Parte autonómica:** el 33 por 100 de 795 | 703 |

## Deducciones por donativos

| | Importe con derecho a deducción (*) | Porcentaje de deducción | Importe de la deducción |
|---|---|---|---|
| Donativos con límite del 15% de la base liquidable *(véase la Guía)* | F | 30 por 100 | 796 |
| Donativos con límite del 10% de la base liquidable *(véase la Guía)* | G | 10 ó 25 por 100 *(véase la Guía)* | 797 |

(*) Límite máximo: el 15 por 100 de la suma de las casillas **618** y **630** de la página 11 de la declaración.

(**) Límite máximo: el 10 por 100 de la suma de las casillas **618** y **630** de la página 11 de la declaración, menos el importe consignado en la casilla **F**.

| | | |
|---|---|---|
| **Deducciones por donativos** | **Parte estatal:** el 67 por 100 de la suma ( 796 + 797 ) | 704 |
| | **Parte autonómica:** el 33 por 100 de la suma ( 796 + 797 ) | 705 |

## Deducción por rentas obtenidas en Ceuta o Melilla

| | | |
|---|---|---|
| Importe total de la deducción por razón de las rentas obtenidas en Ceuta o en Melilla *(véase la Guía)* | | 798 |
| **Deducción por rentas obtenidas en Ceuta o Melilla** | **Parte estatal:** el 67 por 100 de 798 | 712 |
| | **Parte autonómica:** el 33 por 100 de 798 | 713 |

## Deducción por cantidades depositadas en cuentas ahorro-empresa

| | Base de la deducción | Porcentaje de deducción | Importe de la deducción |
|---|---|---|---|
| Cantidades depositadas en el ejercicio con derecho a deducción *(véase la Guía)* *(límite máximo: 9.000 euros)* | H | 15 por 100 | 799 |

| | | |
|---|---|---|
| **Deducción por cantidades depositadas en cuentas ahorro-empresa** | **Parte estatal:** el 67 por 100 de 799 | 714 |
| | **Parte autonómica:** el 33 por 100 de 799 | 715 |

**Identificación de cuentas ahorro-empresa:**
*Datos obligatorios para todos los contribuyentes que practiquen esta deducción.*
*Cada contribuyente sólo puede ser titular de una cuenta ahorro-empresa.*

| | Titular de la cuenta | Fecha de apertura | Entidad | Oficina | DC | Número de cuenta |
|---|---|---|---|---|---|---|
| Cuenta 1 | | | | | | |
| Cuenta 2 | | | | | | |

Ejercicio 2007

Primer declarante | NIF | Apellidos y nombre

**Anexo B.1**

## Deducciones autonómicas (aplicables únicamente por los residentes en 2007 en las Comunidades Autónomas que se indican)

### • Comunidad Autónoma de Andalucía

| | | |
|---|---|---|
| Para los beneficiarios de las ayudas familiares | | 800 |
| Para los beneficiarios de las ayudas a viviendas protegidas | | 801 |
| Por inversión en vivienda habitual que tenga la consideración de protegida y por las personas jóvenes | | 802 |
| Por cantidades invertidas en el alquiler de vivienda habitual | NIF del arrendador: 920 / Importe de la deducción | 803 |
| Para el fomento del autoempleo de los jóvenes emprendedores | | 804 |
| Para el fomento del autoempleo de las mujeres emprendedoras | | 805 |
| Por adopción de hijos en el ámbito internacional | | 806 |
| Para contribuyentes con discapacidad | | 807 |
| Para padre o madre de familia monoparental y, en su caso, con ascendientes mayores de 75 años | | 808 |
| Por asistencia a personas con discapacidad | | 809 |
| **Total deducciones autonómicas** (suma de las casillas 800 a 809 ) | | 716 |

### • Comunidad Autónoma de Aragón

| | | |
|---|---|---|
| Por nacimiento o adopción del tercer hijo o sucesivos o del segundo hijo, si éste es discapacitado | | 810 |
| Por adopción internacional de niños | | 812 |
| Por el cuidado de personas dependientes | | 813 |
| Por donaciones con finalidad ecológica | | 814 |
| **Total deducciones autonómicas** (suma de las casillas 810 a 814 ) | | 716 |

### • Comunidad Autónoma del Principado de Asturias

| | | |
|---|---|---|
| Por acogimiento no remunerado de mayores de 65 años | | 815 |
| Por adquisición o adecuación de vivienda habitual para contribuyentes discapacitados | | 816 |
| Por adquisición o adecuación de vivienda habitual para contribuyentes con los que convivan sus cónyuges, ascendientes o descendientes discapacitados | | 817 |
| Por inversión en vivienda habitual que tenga la consideración de protegida | | 818 |
| Por el arrendamiento de vivienda habitual | NIF del arrendador: 920 / Importe de la deducción | 819 |
| Para el fomento del autoempleo de las mujeres y los jóvenes emprendedores | | 820 |
| Para el fomento del autoempleo | | 821 |
| Por donación de fincas rústicas a favor del Principado de Asturias | | 822 |
| **Total deducciones autonómicas** (suma de las casillas 815 a 822 ) | | 716 |

### • Comunidad Autónoma de las Illes Balears

| | | |
|---|---|---|
| Por gastos de adquisición de libros de texto | | 823 |
| Para contribuyentes de edad igual o superior a 65 años | | 824 |
| Por adquisición o rehabilitación de vivienda habitual por jóvenes | | 825 |
| Por el arrendamiento de vivienda habitual por jóvenes | NIF del arrendador: 920 / Importe de la deducción | 826 |
| Para los declarantes con minusvalía física o psíquica o con descendientes con esa condición | | 827 |
| Para los declarantes que sean titulares de fincas o terrenos incluidos en áreas de suelo rústico protegido | | 828 |
| Por adopción de hijos | | 829 |
| **Total deducciones autonómicas** (suma de las casillas 823 a 829 ) | | 716 |

### • Comunidad Autónoma de Canarias

| | | |
|---|---|---|
| Por donaciones con finalidad ecológica | | 830 |
| Por donaciones para la rehabilitación o conservación del patrimonio histórico de Canarias | | 831 |
| Por cantidades destinadas por sus titulares a la restauración, rehabilitación o reparación de bienes inmuebles declarados de Interés Cultural | | 832 |
| Por gastos de estudios | | 833 |
| Por trasladar la residencia habitual a otra isla del Archipiélago para realizar una actividad laboral por cuenta ajena o una actividad económica | | 834 |
| Por donaciones en metálico a descendientes menores de 35 años para la adquisición o rehabilitación de su primera vivienda habitual | | 835 |
| Por nacimiento o adopción de hijos | | 836 |
| Por contribuyentes minusválidos y mayores de 65 años | | 837 |
| Por gastos de guardería | | 838 |
| Por familia numerosa | | 839 |
| Por inversión en vivienda habitual: a) Con carácter general: adquisición o rehabilitación de la vivienda habitual | | 922 |
| b) Obras de adecuación de la vivienda habitual por personas con discapacidad | | 923 |
| Por alquiler de vivienda habitual | NIF del arrendador: 920 / Importe de la deducción | 840 |
| **Total deducciones autonómicas** (suma de las casillas 830 a 840 ) | | 716 |

Ejercicio 2007

Primer declarante | NIF | Apellidos y nombre

**Anexo B.2**

## Deducciones autonómicas (aplicables únicamente por los residentes en 2007 en las Comunidades Autónomas que se indican)

### • Comunidad Autónoma de Cantabria

| | | | |
|---|---|---|---|
| Por arrendamiento de vivienda habitual por jóvenes, mayores y discapacitados ..... NIF del arrendador: | 920 | Importe de la deducción ..... | 841 |
| Por cuidado de familiares | | | 842 |
| Por adquisición o rehabilitación de segunda vivienda en municipios con problemas de despoblación | | | 843 |
| Por donativos a fundaciones | | | 844 |
| Por acogimiento familiar de menores | | | 845 |
| **Total deducciones autonómicas** (suma de las casillas 841 a 845 ) | | | 716 |

### • Comunidad Autónoma de Castilla-La Mancha

| | |
|---|---|
| Por nacimiento o adopción de hijos | 846 |
| Por discapacidad del contribuyente | 847 |
| Por discapacidad de ascendientes o descendientes | 848 |
| Para contribuyentes mayores de 75 años | 849 |
| Por el cuidado de ascendientes mayores de 75 años | 850 |
| Por cantidades donadas al Fondo Castellano-Manchego de Cooperación | 851 |
| **Total deducciones autonómicas** (suma de las casillas 846 a 851 ) | 716 |

### • Comunidad de Castilla y León

| | | | |
|---|---|---|---|
| Por familia numerosa | | | 852 |
| Por nacimiento o adopción de hijos | | | 853 |
| Por adopción internacional | | | 854 |
| Por cuidado de hijos menores | | | 855 |
| Para contribuyentes de 65 años o más afectados por minusvalía | | | 856 |
| Por adquisición de viviendas por jóvenes en núcleos rurales | | | 857 |
| Por cantidades donadas para la recuperación del patrimonio histórico, cultural y natural | | | 858 |
| Por cantidades invertidas en la recuperación del patrimonio histórico, cultural y natural | | | 859 |
| Por alquiler de vivienda habitual para jóvenes ..... NIF del arrendador: | 920 | Importe de la deducción ..... | 860 |
| Para el fomento del autoempleo de las mujeres y los jóvenes | | | 861 |
| **Total deducciones autonómicas** (suma de las casillas 852 a 861 ) | | | 716 |

### • Comunidad Autónoma de Cataluña

| | | | |
|---|---|---|---|
| Por nacimiento o adopción de hijos | | | 862 |
| Por donaciones a determinadas entidades | | | 863 |
| Por alquiler de la vivienda habitual ..... NIF del arrendador: | 920 | Importe de la deducción ..... | 864 |
| Por el pago de intereses de préstamos al estudio universitario de tercer ciclo | | | 865 |
| Por la donación de cantidades a descendientes para la adquisición de su primera vivienda habitual | | | 866 |
| Para los contribuyentes que queden viudos | | | 867 |
| **Total deducciones autonómicas** (suma de las casillas 862 a 867 ) | | | 716 |

### • Comunidad Autónoma de Extremadura

| | | | |
|---|---|---|---|
| Por adquisición de vivienda habitual para jóvenes y para víctimas del terrorismo | | | 868 |
| Por trabajo dependiente | | | 869 |
| Por donaciones de bienes integrantes del Patrimonio Histórico y Cultural Extremeño | | | 870 |
| Por cantidades destinadas por sus titulares a la conservación, reparación, restauración, difusión y exposición de bienes del Patrimonio Histórico y Cultural Extremeño | | | 871 |
| Por alquiler de vivienda habitual para jóvenes, familias numerosas y minusválidos ..... NIF del arrendador: | 920 | Importe de la deducción ..... | 872 |
| Por cuidado de familiares discapacitados | | | 873 |
| Por acogimiento de menores | | | 874 |
| **Total deducciones autonómicas** (suma de las casillas 868 a 874 ) | | | 716 |

Ejercicio 2007

Primer declarante | NIF | Apellidos y nombre

**Anexo B.3**

## Deducciones autonómicas (aplicables únicamente por los residentes en 2007 en las Comunidades Autónomas que se indican)

### • Comunidad Autónoma de Galicia

| | | | |
|---|---|---|---|
| Por nacimiento o adopción de hijos | | | 875 |
| Por familia numerosa | | | 876 |
| Por cuidado de hijos menores | | | 877 |
| Por contribuyentes minusválidos de edad igual o superior a 65 años que precisen ayuda de terceras personas | | | 878 |
| Por gastos dirigidos al uso de nuevas tecnologías en los hogares gallegos | | | 879 |
| Por alquiler de la vivienda habitual | NIF del arrendador: 920 | Importe de la deducción | 880 |
| Para el fomento del autoempleo de los hombres menores de 35 años y las mujeres, cualquiera que sea su edad | | | 881 |
| **Total deducciones autonómicas** (suma de las casillas 875 a 881) | | | 716 |

### • Comunidad de Madrid

| | | | |
|---|---|---|---|
| Por nacimiento o adopción de hijos | | | 882 |
| Por adopción internacional de niños | | | 883 |
| Por acogimiento familiar de menores | | | 884 |
| Por acogimiento no remunerado de mayores de 65 años y/o discapacitados | | | 885 |
| Por arrendamiento de vivienda habitual por menores de 35 años | NIF del arrendador: 920 | Importe de la deducción | 886 |
| Por donativos a fundaciones | | | 887 |
| Para compensar la carga tributaria de determinadas ayudas | | | 888 |
| **Total deducciones autonómicas** (suma de las casillas 882 a 888) | | | 716 |

### • Comunidad Autónoma de la Región de Murcia

| | | | |
|---|---|---|---|
| Por inversión en vivienda habitual por jóvenes menores de 35 años | | | 889 |
| Por donativos para la protección del patrimonio histórico de la Región de Murcia | | | 890 |
| Por gastos de guardería para hijos menores de tres años | | | 891 |
| Por inversión en instalaciones de recursos energéticos renovables | | | 892 |
| Por inversiones en dispositivos domésticos de ahorro de agua | | | 893 |
| **Total deducciones autonómicas** (suma de las casillas 889 a 893) | | | 716 |

### • Comunidad Autónoma de La Rioja

| | | | |
|---|---|---|---|
| Por el nacimiento o adopción del segundo o ulterior hijo | | | 894 |
| Por inversión en la adquisición o rehabilitación de vivienda habitual para jóvenes | | | 895 |
| Por adquisición o rehabilitación de segunda vivienda en el medio rural | | | 896 |
| Por inversión no empresarial en la adquisición de ordenadores personales | | | 897 |
| **Total deducciones autonómicas** (suma de las casillas 894 a 897) | | | 716 |

### • Comunitat Valenciana

| | | | |
|---|---|---|---|
| Por el nacimiento o adopción de hijos | | | 898 |
| Por nacimiento o adopción múltiples | | | 899 |
| Por nacimiento o adopción de hijos discapacitados | | | 900 |
| Por familia numerosa | | | 901 |
| Por la custodia en guarderías y centros de primer ciclo de educación infantil de hijos menores de tres años | | | 902 |
| Por conciliación del trabajo con la vida familiar | | | 903 |
| Por contribuyentes discapacitados de edad igual o superior a 65 años | | | 904 |
| Por ascendientes mayores de 75 años o mayores de 65 años que sean discapacitados | | | 905 |
| Por la realización por uno de los cónyuges de labores no remuneradas en el hogar | | | 906 |
| Por adquisición de su primera vivienda habitual por contribuyentes de edad igual o inferior a 35 años | | | 907 |
| Por adquisición de vivienda habitual por discapacitados | | | 908 |
| Por cantidades destinadas a la adquisición o rehabilitación de vivienda habitual, procedentes de ayudas públicas | | | 909 |
| Por arrendamiento de la vivienda habitual | NIF del arrendador: 920 | Importe de la deducción | 910 |
| Por arrendamiento de una vivienda por actividades en distinto municipio | NIF del arrendador: 921 | Importe de la deducción | 911 |
| Por cantidades destinadas a inversiones para el aprovechamiento de fuentes de energía renovables en la vivienda habitual | | | 912 |
| Por donaciones con finalidad ecológica | | | 913 |
| Por donaciones de bienes integrantes del Patrimonio Cultural Valenciano | | | 914 |
| Por cantidades donadas para la conservación, reparación y restauración de bienes integrantes del Patrimonio Cultural Valenciano | | | 915 |
| Por cantidades destinadas por sus titulares a la conservación, reparación y restauración de bienes integrantes del Patrimonio Cultural Valenciano | | | 916 |
| Por donaciones destinadas al fomento de la lengua valenciana | | | 917 |
| **Total deducciones autonómicas** (suma de las casillas 898 a 917) | | | 716 |

Ejercicio 2007 | Primer declarante | NIF | Apellidos y nombre | **Anexo C**

## Deducciones por incentivos y estímulos a la inversión empresarial

### • Régimen general de la Ley del I. sobre Sociedades y regímenes especiales de apoyo a acontecimientos de excepcional interés público

| **Deducciones de ejercicios anteriores (saldos pendientes de aplicar)** | Límite | Saldo anterior | | Aplicado en esta declaración | Pendiente de aplicación |
|---|---|---|---|---|---|
| Deducciones acogidas al régimen general de la Ley del Impuesto sobre Sociedades | | | 940 | | |
| Regímenes especiales de apoyo a acontecimientos de excepcional interés público | | | 941 | | |
| **Deducciones del ejercicio 2007** | | | | | |
| **Régimen general de la Ley del Impuesto sobre Sociedades (LIS):** | | Deducción 2007 | | Aplicado en esta declaración | Pendiente de aplicación |
| Actividades de investigación y desarrollo e innovación tecnológica (art.º 35 de la LIS) | 35% (*) | | 942 | | |
| Fomento de las tecnologías de la información y de la comunicación (art.º 36 de la LIS) | | | 943 | | |
| Actividades de exportación (art.º 37 de la LIS) | | | 944 | | |
| Inversiones o gastos a que se refiere el artículo 38 de la LIS | | | 945 | | |
| Inversiones medioambientales (art.º 39 de la LIS) | | | 946 | | |
| Gastos de formación profesional (art.º 40 de la LIS) | | | 947 | | |
| Creación de empleo para trabajadores minusválidos (art.º 41 de la LIS) | | | 948 | | |
| Contribuciones empresariales y aportaciones a que se refiere el artículo 43 de la LIS | | | 949 | | |
| **Regímenes especiales de apoyo a acontecimientos de excepcional interés público:** | | | | | |
| Régimen especial "Copa América 2007" | | | 950 | | |
| Régimen especial "Pekín 2008" | | | 951 | | |
| Régimen especial "Año Lebaniego 2006" | | | 952 | | |
| Régimen especial "Expo Zaragoza 2008" | | | 953 | | |
| Régimen especial "Alicante 2008. Vuelta al Mundo a Vela" | | | 954 | | |
| Régimen especial "Barcelona World Race" | | | 955 | | |
| Régimen especial "Año Jubilar Guadalupense 2007" | | | 956 | | |

(*) Cumpliéndose las condiciones establecidas en el artículo 44.1, último párrafo, de la Ley del Impuesto sobre Sociedades, este límite se eleva al 50 por 100 para las deducciones del régimen general.

### • Régimen especial para inversiones en Canarias (art.º 94 de la Ley 20/1991)

| **Deducciones de ejercicios anteriores (saldos pendientes de aplicar)** | Límite | Saldo anterior | | Aplicado en esta declaración | Pendiente de aplicación |
|---|---|---|---|---|---|
| Inversiones en la adquisición de activos fijos | 50/70% | | 960 | | |
| Restantes modalidades | | | 961 | | |
| **Deducciones del ejercicio 2007** | | | | | |
| **Modalidades de la Ley del Impuesto sobre Sociedades (LIS):** | | Deducción 2007 | | Aplicado en esta declaración | Pendiente de aplicación |
| Actividades de investigación y desarrollo e innovación tecnológica (art.º 35 de la LIS) | 70% (*) | | 962 | | |
| Fomento de las tecnologías de la información y de la comunicación (art.º 36 de la LIS) | | | 963 | | |
| Actividades de exportación (art.º 37 de la LIS) | | | 964 | | |
| Inversiones o gastos a que se refiere el artículo 38 de la LIS | | | 965 | | |
| Inversiones medioambientales (art.º 39 de la LIS) | | | 966 | | |
| Gastos de formación profesional (art.º 40 de la LIS) | | | 967 | | |
| Creación de empleo para trabajadores minusválidos (art.º 41 de la LIS) | | | 968 | | |
| Contribuciones empresariales y aportaciones a que se refiere el artículo 43 de la LIS | | | 969 | | |
| **Inversiones en la adquisición de activos fijos** | 50% | | 970 | | |

(*) Cumpliéndose las condiciones establecidas en el artículo 44.1, último párrafo, de la Ley del Impuesto sobre Sociedades, este límite se eleva al 90 por 100.

### • Importe aplicado en esta declaración en concepto de deducciones por incentivos y estímulos a la inversión empresarial

Importe total de las deducciones por incentivos y estímulos a la inversión empresarial que se aplican en esta declaración (suma de las casillas 940 a 970) ..... 975

**Deducciones por incentivos y estímulos a la inversión empresarial** .....
- **Parte estatal:** el 67 por 100 de 975 ..... 706
- **Parte autonómica:** el 33 por 100 de 975 ..... 707

## Reserva para Inversiones en Canarias (Ley 19/1994). Dotaciones, materializaciones e inversiones anticipadas

### • Reserva para inversiones en Canarias de 2003 a 2006. Importe de las dotaciones y de las materializaciones efectuadas en 2007

| | Importe de las dotaciones | Materializaciones en 2007 | | Clave (*) | | Pendiente de materializar |
|---|---|---|---|---|---|---|
| Reserva para Inversiones en Canarias 2003 | | 980 | | 981 | | |
| Reserva para Inversiones en Canarias 2004 | | 982 | | 983 | | |
| Reserva para Inversiones en Canarias 2005 | | 984 | | 985 | | |
| Reserva para Inversiones en Canarias 2006 | | 986 | | 987 | | |

(*) Se consignará la clave numérica que proceda de las que se indican en la Guía de la declaración.

### • Reserva para inversiones en Canarias de 2007. Importe de la dotación y de las materializaciones e inversiones anticipadas efectuadas en 2007

| | | Detalle de las inversiones según el artículo 27.4 de la Ley 19/1994 | | |
|---|---|---|---|---|
| | Importe de la dotación | Inversiones previstas en las letras A, B y D (1.º) del art.º 27.4 | Inversiones previstas en las letras C y D (2.º a 6.º) del art.º 27.4 | Pendiente de materializar |
| RIC 2007. Dotación y materializaciones efectuadas en 2007 | 990 | 991 | 992 | 993 |
| Inversiones anticipadas de futuras dotaciones a la RIC, efectuadas en 2007 | | 994 | 995 | |

## B.II A Recount of Wealth Taxation in Spain

The Spanish wealth tax was adopted in 1978 (Law 50/1977) aimed at complementing the personal income tax (Law 44/1977), but with an extraordinary and censal character. As it is common for standard wealth taxes, it was a progressive annual tax on the sum of all individual wealth components net of debts. Wealth must be recorded as of December 31st of every year. The tax was filed jointly in the case of marriage, the joint assets had to be declared by the one administering them under a regime of community property or declared by the man (unless disabled) under a regime of separation of ownership. The only exempted assets were historical and artistic monuments as well as some artworks of particular cultural importance. It was not until 1978 (RD 1382/1978) when it was clearly specified when these monuments and artworks could be exempted.

All regions were obliged to implement this tax, including Basque Country and Navarre, which have never been part of the Common Fiscal Regime (*Régimen Fiscal Común*) and manage their taxes independently. Both residents (under *personal obligation*) and non-residents (under *real obligation*) were obliged to file if they had a positive net taxable base. Initially, its main purpose was not to raise revenue, since the tax had a high exemption threshold (4,000,000 pesetas or 24,040.5 euros for non-married residents and 6,000,000 pesetas or 36,060.7 euros for married residents), other large exemptions (500,000 pesetas or 3,000.06 euros for each child under 25 and 1,000,000 pesetas or 6,000.12 euros for every disabled child) and the maximum tax rate was 2%. In 1979 a cap was introduced on the personal income and wealth tax liability payed (RD 2615/1979). In particular, the sum of the personal income and wealth tax liability could not be larger than 55% of the personal income tax base. If the sum was larger, the wealth tax liability was reduced up until satisfying the limit, so that some filers ended up paying no wealth tax. For the calculation of the limit, the wealth tax liability only included assets whose generated income was subject to the personal income tax.

The first important reform was introduced in 1982 (Royal Decree Law 23/1982 and Law 5/1983). The exemption threshold was increased up to 6,000,000 pesetas or 36.060,73 euros for non-married residents, 9,000,000 pesetas or 54,091.09 euros for married residents, 750,000 pesetas or 4,507.59 euros for each child under 25 subject to a personal income tax relief and 1,500,000 pesetas or 9,015.18 euros for every disabled child subject to a personal income tax relief. The 74/1980 Law allowed to report the value of non-listed shares as the capitalized profits (dividends and reserves) generated in the last three years at the rate of 8%. The 9/1983 Law raised the limit of the sum of the personal income and wealth tax liability from 55% to 65%. In 1988 the exemptions were further increased (Royal-Decree Law 6/1988). The exemption threshold was raised up to 9,000,000 pesetas or 54,091.09 euros for non-married residents, 18,000,000 pesetas or 108,182.18 euros for married residents, 1,500,000 pesetas or 9,015.18 for each child under 25

subject to a personal income tax relief and 3,000,000 pesetas or 18,030.36 euros for every disabled child subject to a personal income tax relief.

In 1989, another reform was introduced which allowed individual filing among married couples. Each member of a married couple had to declare half of their joint assets under a regime of community property or the legal ownership share of each asset under a regime of separation of ownership (Law 20/1989). Nonetheless, in cases in which the couple was filing the personal income tax jointly, the Ministry could ask filers to also file the wealth tax jointly. The exemptions for having children under 25 or disabled children subject to a personal income tax relief were reduced for parents living together (750,000 pesetas or 4,507.59 for each child under 25 and 1,500,000 pesetas or 9,015.18 euros for every disabled child). The Law 20/1989 also specified that in case married couples were filing jointly the personal income tax, the limit to the personal income and wealth tax liability had to be calculated by adding up both the personal income and wealth tax liabilities of each member of the couple. The wealth tax liability reduction was then split proportionally to the wealth tax liability of each member of the couple. All these changes in the law were in place until the new wealth tax law was introduced in 1991 (Law 19/1991).

With the new 1991 law (still in place at present), the wealth tax ceased to have the initial transitory and extraordinary character, asset valuation rules were improved and many changes were introduced to the former wealth tax system (Law 19/1991). Collectibles and consumer durables (excluding mainly vehicles, boats, planes, jewelry and antiques) started to be exempted, as well as pension and property rights in the author's ownership. In addition, all individuals filing under *personal obligation* and having gross wealth over 100,000,000 pesetas (601,012.1 euros) were obliged to file even though their taxable base was below the new minimum exempted of 15,000,0000 pesetas or 90,151.82 euros. Filers under *real obligation* were obliged to file whatever net wealth they had, as it was stated in the 1977 law. The exemptions for having children under 25 or disabled children disappeared from the wealth tax and the maximum tax rate was raised up to 2.5%. A reduction of 50% of the wealth tax liability was introduced on the reported assets located in Ceuta or Melilla. Finally, the 1991 law also modified the personal income and wealth tax liability cap by raising the limit of the sum of the personal income and wealth tax liability from 65% to 70% of the personal income tax base and introducing a reduction limit of 80% of the wealth tax liability.

The first important reform after the new 1991 law was the introduction of the exemption on business assets and company shares (except from shares in property investment companies) in 1993 (Law 22/1993, RD 2481/1994). For the assets to qualify as business assets, the activity had to be the taxpayer's main source of income (at least 50% of its total taxable income) and be carried out by the taxpayer on his own account and on a habitual basis. For company shares to be exempted, the ownership share had to be at least 20% of the capital of the entity and the

individual had to lead it receiving at least 50% of their total business and labor income from this company. In 1995 the minimum exempted was increased up to 17,000,000 pesetas (102,172.1 euros) and the brackets were slightly increased (Law 41/1994). Moreover, for company shares to be exempted, the ownership share condition for the taxpayer was modified to be at least 15% of the capital of the company. The brackets were further increased in 1995 (Law 12/1995).

Since 1996 the rights to modify the minimum exempted and the tax rates were ceded to the regions under the condition of keeping the same minimum bracket and marginal tax rate than the national one (Law 14/1996). In 1997 the exemption on business assets was modified for married couples. All assets belonging to both members of the couple and used for the business activity could be exempted under the same old conditions. For company shares, the ownership share condition was modified to be at least 15% of the capital of the company for the individual or 20% together with a family member. In 1998 the exemption threshold was increased up to 17,300,000 pesetas (103,975.1 euros), the brackets were slightly raised and the valuation rules for undertakings for collective investment in transferable securities (*Instituciones de inversión colectiva)*) were modified (Law 49/1998). In 1999, the exemption threshold was further raised up to 18,000,000 pesetas (108,182.2 euros) and the brackets were also slightly increased (Law 54/1999).

The first important reform in the wealth tax of the 2000s was the introduction of an exemption in primary residence of 25,000,000 pesetas or 150,253.03 euros in 2000 (Royal Decree Law 3/2000). In 2001, the regions were ceded the right to change or include deductions in the wealth tax and the condition of keeping the same minimum bracket and minimum marginal tax rate than the national one was suppressed (Law 21/2001). Nonetheless, all regions kept the national wealth tax schedule (0.2-2.5%) during the late 1990's and beginning of the 2000's (only a few regions changed the minimum exempted and Cantabria changed the wealth tax schedule in 2006). In 2002, the personal income and wealth tax liability cap was reduced from 70 to 60% of the personal income tax base (Law 46/2002), the ownership share condition for the exemption of company shares was modified to be at least 5% of the capital of the company for the individual (Law 51/2002) and the reduction on the wealth tax liabilities for assets located in Ceuta or Melilla was raised up to 75% (Law 53/2002). In 2003, the exemption of company shares was also extended to those owning them under life usufruct (Law 62/2003).

In 2008, the wealth tax was suppressed (Law 4/2008) and reintroduced with a temporal character with the aim of reducing public deficit for years 2011 and 2012 (Royal Decree Law 13/2011). With the reintroduction some of the main features of the wealth tax system were modified. The exemption on primary residence was raised up to 300,000 euros, all individuals under *personal obligation* having gross wealth over 2,000,000 euros were obliged to file and the new minimum exempted was raised up to 700,000 euros. Hence, since 2011 the number of wealth

taxpayers was considerably reduced (from 981,498—2.7% of the adult population +20—in 2007 to 130,216—0.3% of the adult population +20—in 2011). With Law 16/2012 the wealth tax was extended until 2013 and with Laws 22/2013, 36/2014, 48/2015, 6/2018 and RD-Law 3/2016, the wealth tax was extended for an indefinite number of years, so that it is still currently in place.

After the reintroduction in 2011, the differences in the wealth tax schedule across regions have become significant. For instance, Madrid decided to keep the suppression of the wealth tax after 2011, contrary to regions such as Catalonia and Extremadura who have raised the top marginal tax rates (up to 2.75% and 3.75%, respectively) above the national tax rate (2.5%).

FIGURE B2: Wealth Tax Form D-714 (2007)

MINISTERIO DE ECONOMÍA Y HACIENDA

Agencia Tributaria

Teléfono: 901 33 55 33
www.agenciatributaria.es

# Impuesto sobre el Patrimonio

## Declaración — Ejercicio 2007

Página 1

Modelo **D-714**

## Sujeto pasivo

**Espacio reservado para la etiqueta identificativa del declarante.** Si no dispone de etiquetas, consigne sus datos identificativos y, en su caso, adjunte una fotocopia del documento acreditativo de su número de identificación fiscal (NIF).

NIF | Primer apellido | Segundo apellido | Nombre

**Importante:** los contribuyentes que tengan la consideración de empresarios o profesionales y hayan cambiado de domicilio habitual, deberán comunicar dicho cambio presentando la preceptiva declaración censal de modificación (modelo 036 ó 037), en los términos previstos en la Orden EHA/1274/2007, de 26 de abril.

**Sujetos pasivos que en el ejercicio 2007 han tenido su residencia habitual en las Comunidades Autónomas de Andalucía, Canarias, Cantabria, Cataluña, Extremadura, Galicia, Comunidad de Madrid y Comunitat Valenciana:**

Si el sujeto pasivo es una persona con discapacidad, indique en esta casilla, expresado en porcentaje, el grado de minusvalía que tiene reconocido ..... 9

**Domicilio habitual actual del sujeto pasivo**

15 Tipo de Vía (1) | 16 Nombre de la Vía Pública

17 Tipo de numeración (2) | 18 Número de casa (3) | 19 Calificador del número (4) | 20 Bloque | 21 Portal | 22 Escalera | 23 Planta | 24 Puerta

25 Datos complementarios del domicilio (5) | 26 Localidad / Población (6) (si es distinta del municipio)

27 Código Postal | 28 Nombre del Municipio

29 Provincia | 30 Teléf. fijo | 31 Teléf. móvil | 32 N.º de FAX

Si el domicilio está situado en el extranjero:

35 Domicilio / Adress

36 Datos complementarios del domicilio | 37 Población/Ciudad

38 e-mail | 39 Código Postal (ZIP) | 40 Provincia/Región/Estado

41 País | 42 Código País (7) | 43 Teléf. fijo | 44 Teléf. móvil | 45 N.º de FAX

**Notas:**

(1) Consigne la denominación correspondiente al tipo o clase de vía pública: calle, plaza, avenida, glorieta, carretera, bajada, cuesta, pasaje, paseo, rambla, ... etc.
(2) Indique el tipo de numeración que proceda: número (NÚM.), kilómetro (KM.), sin número (S/N), ... etc.
(3) Número identificativo de la casa o, en su caso, punto kilométrico.
(4) En su caso, consigne el dato que completa el número de la casa (BIS, duplicado –DUP.–, moderno –MOD.–, antiguo –ANT.–, ... etc.) o el punto kilométrico (metros).
(5) En su caso, se harán constar los datos adicionales que sean necesarios para la completa identificación del domicilio (por ejemplo: Urbanización El Alcotán, Edificio La Peñota, Polígono Miralcampo, ..., etc.).
(6) Nombre de la localidad o población, cuando sea distinta del Municipio.
(7) Código alfabético de dos dígitos correspondiente al país o territorio de que se trate, según la relación de códigos de países o territorios que figura en la última página de la Guía de la declaración.

## Modalidades especiales de tributación

**Atención:** no deberán cumplimentar este apartado los sujetos pasivos residentes en territorio español sometidos al Impuesto sobre el Patrimonio por obligación personal ni tampoco los representantes o funcionarios del Estado español en el extranjero a que se refiere el artículo 10 de la Ley 35/2006, de 28 de noviembre, del Impuesto sobre la Renta de las Personas Físicas.

Si en 2007 ha tenido su residencia habitual fuera del territorio español y tributa por obligación real, marque una "X" en esta casilla ..... 1

Si en 2007 ha dejado de ser residente en territorio español pero opta por seguir tributando en España por obligación personal, marque una "X" en esta casilla..... 2

Si en 2007 ha tenido su residencia fiscal en España, pero está sujeto por obligación real al Impuesto sobre el Patrimonio por haber optado por el régimen especial previsto en el artículo 93 de la Ley 35/2006, de 28 de noviembre, del Impuesto sobre la Renta de las Personas Físicas, marque una "X" en esta casilla..... 4

## Régimen económico del matrimonio

En caso de matrimonio, marque con una "X" la casilla que corresponda al régimen económico del mismo.

**Gananciales**..... 5 **Separación de bienes** ..... 6 **Otro régimen económico** ..... 7

## Representante

NIF | Apellidos y nombre o razón social

## Comunidad o Ciudad Autónoma de residencia en 2007

**Clave de la Comunidad Autónoma o de la Ciudad con Estatuto de Autonomía en la que tuvo su residencia habitual en 2007** *(Véase la Guía)* ..... 8

## Declaración complementaria

Si esta declaración es complementaria de otra declaración anterior del mismo ejercicio 2007, indíquelo marcando con una "X" esta casilla ..... 10

## Fecha y firma

Manifiesto que son ciertos los datos consignados en la presente declaración.

En _____ a ___ de _____ de ____

Firma del declarante o de su representante:

## 1 Bienes y derechos

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### A. Bienes inmuebles de naturaleza urbana

**A1. Vivienda habitual** (incluidos, en su caso, los derechos reales de uso y disfrute sobre la misma de los que sea titular el sujeto pasivo)

| Clave (*) | Referencia catastral | Situación (vía pública, número, municipio y provincia) | Valoración (euros) |
|---|---|---|---|
| | | | |

(*) Se utilizarán las siguientes claves:
**P**: Pleno dominio.
**U**: Usufructo y demás derechos reales de uso y disfrute.

| | | |
|---|---|---|
| Valor total de la vivienda habitual susceptible de exención ..... | 60 | |
| Valor exento (máximo: 150.253,03 euros) ..... | 61 | |
| Valor no exento (diferencia 60 – 61 positiva o cero) ..... | 62 | |

**A2. Otros inmuebles urbanos**

| Clave (*) | Tipo (**) | Referencia catastral | Situación del inmueble (vía pública, número, municipio y provincia) | Valoración (euros) |
|---|---|---|---|---|
| | | | | |

| | | |
|---|---|---|
| Total ..... | 63 | |

**Total bienes inmuebles de naturaleza urbana** ( 62 + 63 ) ..... 01

(*) Se utilizarán las siguientes claves: **P**: Pleno dominio; **N**: Nuda Propiedad; **M**: Multipropiedad, propiedad a tiempo parcial o fórmulas similares, con titularidad parcial del bien.
(**) Para indicar el tipo de inmueble se utilizarán las siguientes letras: **V**: Viviendas; **L**: Locales; **O**: Otros inmuebles urbanos.

### B. Bienes inmuebles de naturaleza rústica

| Clave (*) | Referencia catastral | Situación del inmueble (municipio y provincia) | Valoración (euros) |
|---|---|---|---|
| | | | |

| | | |
|---|---|---|
| Total ..... | 02 | |

(*) Se utilizarán las siguientes claves: **P**: Pleno dominio; **N**: Nuda Propiedad; **M**: Multipropiedad, propiedad a tiempo parcial o fórmulas similares, con titularidad parcial del bien.

## 1 Bienes y derechos (continuación)

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### C. Bienes y derechos no exentos afectos a actividades empresariales y profesionales

#### $C_1$. Bienes y derechos no exentos afectos a actividades empresariales y profesionales (excepto inmuebles)

| Epígrafe IAE | Domicilio de la actividad | Descripción del bien o derecho | Valoración (euros) |
|---|---|---|---|
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| | | Total ..... (a) | |

#### $C_2$. Bienes inmuebles no exentos afectos a actividades empresariales y profesionales

| Epígrafe IAE | Clave (*) | Referencia catastral | Situación (vía pública, número, municipio y provincia) | Valoración (euros) |
|---|---|---|---|---|
| | | | | |
| | | | | |
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| | | | Total ..... (b) | |

**Total bienes y derechos no exentos afectos a actividades empresariales y profesionales** ((a)+(b)) ..... 03

(*) Se utilizarán las siguientes claves: **U**: Inmueble urbano; **R**: Inmueble rústico.

### D. Bienes y derechos exentos afectos a actividades empresariales y profesionales

| Epígrafe IAE | Clave (*) | Referencia catastral (en caso de inmuebles) | Descripción de los bienes y derechos y de las deudas derivadas de la actividad | Valoración (euros) |
|---|---|---|---|---|
| | | | | |
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| | | | Total (neto de deudas) ..... 04 | |

(*) Tratándose de bienes inmuebles, se utilizarán las siguientes claves: **U**: Inmueble urbano; **R**: Inmueble rústico.

## 1 Bienes y derechos (continuación)

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### E. Depósitos en cuenta corriente o de ahorro, a la vista o a plazo, cuentas financieras y otros tipos de imposiciones en cuenta

| Entidad de depósito | Número de cuenta o depósito | Valor (euros) |
|---|---|---|
| | | |

Total ..... 05

### F. Valores representativos de la cesión a terceros de capitales propios

#### $F_1$. Deuda pública, obligaciones, bonos y demás valores equivalentes, negociados en mercados organizados

| Descripción | Valor (euros) |
|---|---|
| | |

Total ..... 06

#### $F_2$. Obligaciones, bonos, certificados de depósito, pagarés y demás valores equivalentes, no negociados en mercados organizados

| Descripción | Valor (euros) |
|---|---|
| | |

Total ..... 07

## 1 Bienes y derechos (continuación)

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### G. Valores no exentos representativos de la participación en los fondos propios de cualquier tipo de entidad

**$G_1$. Acciones y participaciones en el capital social o en el fondo patrimonial de Instituciones de Inversión Colectiva (Sociedades y Fondos de Inversión), negociadas en mercados organizados**

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 08 | |

**$G_2$. Acciones y participaciones en el capital social o en los fondos propios de cualesquiera otras entidades jurídicas, negociadas en mercados organizados**

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 09 | |

**$G_3$. Acciones y participaciones en el capital social o en el fondo patrimonial de Instituciones de Inversión Colectiva (Sociedades y Fondos de Inversión), no negociadas en mercados organizados**

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 10 | |

## 1 Bienes y derechos (continuación)

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### G. Valores no exentos representativos de la participación en los fondos propios de cualquier tipo de entidad (continuación)

**$G_4$. Acciones y participaciones en el capital social o en los fondos propios de cualesquiera otras entidades jurídicas, no negociadas en mercados organizados, incluidas las participaciones en el capital social de Cooperativas**

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 11 | |

### H. Valores exentos representativos de la participación en los fondos propios de entidades jurídicas

**$H_1$. Acciones y participaciones exentas en el capital social o en los fondos propios de entidades jurídicas, negociadas en mercados organizados**

| Descripción | Valor (euros) |
|---|---|
| | |
| Total (neto de deudas) ..... 12 | |

**$H_2$. Acciones y participaciones exentas en el capital social o en los fondos propios de entidades jurídicas, no negociadas en mercados organizados, incluidas las participaciones exentas en el capital social de Cooperativas**

| Descripción | Valor (euros) |
|---|---|
| | |
| Total (neto de deudas) ..... 13 | |

### I. Seguros de vida

| Entidad aseguradora | Valor (euros) |
|---|---|
| | |
| Total ..... 14 | |

### J. Rentas temporales y vitalicias

| Persona o entidad pagadora | Clave (*) | Importe anualidad (euros) | Valor (euros) |
|---|---|---|---|
| | | | |
| Total ..... 15 | | | |

(*) Se utilizarán las siguientes claves: **T**: Renta temporal; **V**: Renta vitalicia.

## 1 Bienes y derechos (continuación)

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### K. Vehículos, joyas, pieles de carácter suntuario, embarcaciones y aeronaves

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 16 | |

### L. Objetos de arte y antigüedades

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 17 | |

### M. Derechos reales de uso y disfrute (excluidos los que, en su caso, recaigan sobre la vivienda habitual del sujeto pasivo)

| Clave (*) | Referencia catastral (en caso de derechos reales sobre inmuebles) | Descripción / Situación del bien | Valor del bien (euros) | Valor del derecho (euros) |
|---|---|---|---|---|
| | | | | |
| Total ..... 18 | | | | |

(*) Se utilizarán las siguientes claves: **U**: Usufructo; **D**: Derechos de aprovechamiento por turno de bienes inmuebles; y **O**: Otros derechos reales de uso y disfrute.

### N. Concesiones administrativas

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 19 | |

## 1 Bienes y derechos (continuación)

Si el espacio previsto en alguno de los apartados de esta página resulta insuficiente, indique el número de hojas adicionales que se adjuntan ..... ☐

### O. Derechos derivados de la propiedad intelectual o industrial

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 20 | |

### P. Opciones contractuales

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 21 | |

### Q. Demás bienes y derechos de contenido económico

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 22 | |

## 2 Deudas deducibles

| Descripción | Valor (euros) |
|---|---|
| | |
| Total ..... 24 | |

## 3 Resumen del patrimonio neto: base liquidable

**Bienes y derechos no exentos**

| | | |
|---|---|---|
| **A. Bienes inmuebles de naturaleza urbana** | 01 | |
| **B. Bienes inmuebles de naturaleza rústica** | 02 | |
| **C. Bienes y derechos no exentos afectos a actividades empresariales y profesionales** | 03 | |
| **E. Depósitos en cuenta corriente o de ahorro, a la vista o a plazo, cuentas financieras y otros tipos de imposiciones en cuenta** | 05 | |
| **F. Valores representativos de la cesión a terceros de capitales propios.** | | |
| $F_1$. Deuda pública, obligaciones, bonos y demás valores equivalentes, negociados en mercados organizados | 06 | |
| $F_2$. Obligaciones, bonos, certificados de depósito, pagarés y demás valores equivalentes, no negociados en mercados organizados | 07 | |
| **G. Valores no exentos representativos de la participación en los fondos propios de cualquier tipo de entidad.** | | |
| $G_1$. Acciones y participaciones en el capital social o en el fondo patrimonial de Instituciones de Inversión Colectiva (Sociedades y Fondos de Inversión), negociadas en mercados organizados | 08 | |
| $G_2$. Acciones y participaciones en el capital social o en los fondos propios de cualesquiera otras entidades jurídicas, negociadas en mercados organizados | 09 | |
| $G_3$. Acciones y participaciones en el capital social o en el fondo patrimonial de Instituciones de Inversión Colectiva (Sociedades y Fondos de Inversión), no negociadas en mercados organizados | 10 | |
| $G_4$. Acciones y participaciones en el capital social o en los fondos propios de cualesquiera otras entidades jurídicas, no negociadas en mercados organizados, incluidas las participaciones en el capital social de Cooperativas | 11 | |
| **I. Seguros de vida** | 14 | |
| **J. Rentas temporales y vitalicias** | 15 | |
| **K. Vehículos, joyas, pieles de carácter suntuario, embarcaciones y aeronaves** | 16 | |
| **L. Objetos de arte y antigüedades** | 17 | |
| **M. Derechos reales de uso y disfrute** (excluidos los que, en su caso, recaigan sobre la vivienda habitual del sujeto pasivo) | 18 | |
| **N. Concesiones administrativas** | 19 | |
| **O. Derechos derivados de la propiedad intelectual o industrial** | 20 | |
| **P. Opciones contractuales** | 21 | |
| **Q. Demás bienes y derechos de contenido económico** | 22 | |
| **Total bienes y derechos no exentos** ( 01 + 02 + 03 + 05 + 06 + 07 + 08 + 09 + 10 + 11 + 14 + 15 + 16 + 17 + 18 + 19 + 20 + 21 + 22 ) | 23 | |

**Deudas deducibles**

| | | |
|---|---|---|
| **Total deudas deducibles** | 24 | |

**Base imponible y base liquidable**

| | | |
|---|---|---|
| **Base imponible** ( 23 – 24 ) | 25 | |
| **Reducción para sujetos pasivos por obligación personal** *(véase la Guía)* | 26 | |
| **Base liquidable** ( 25 – 26 ) | 27 | |

## 4 Resumen de los bienes y derechos exentos

| | | |
|---|---|---|
| **A. Bienes inmuebles de naturaleza urbana:** | | |
| $A_1$. Vivienda habitual: valor total susceptible de exención | 60 | |
| $A_2$. Vivienda habitual: valor exento | 61 | |
| **D. Bienes y derechos exentos afectos a actividades empresariales y profesionales** | 04 | |
| **H. Valores exentos representativos de la participación en los fondos propios de entidades jurídicas:** | | |
| $H_1$. Acciones y participaciones exentas en el capital social o en los fondos propios de entidades jurídicas, negociadas en mercados organizados | 12 | |
| $H_2$. Acciones y participaciones exentas en el capital social o en los fondos propios de entidades jurídicas, no negociadas en mercados organizados, incluidas las participaciones exentas en el capital social de Cooperativas | 13 | |

## 5 Patrimonio exento con progresividad (solamente sujetos pasivos por obligación personal de contribuir)

En su caso, se consignará en esta casilla la valoración de los bienes y derechos situados o que deban cumplirse o ejercitarse en un Estado con el que España tenga suscrito un Convenio bilateral para evitar la doble imposición en materia de impuestos sobre el patrimonio, en virtud del cual dichos bienes y derechos estén exentos del Impuesto sobre el Patrimonio español, pero deban ser tenidos en cuenta para calcular el impuesto correspondiente a los restantes elementos patrimoniales del sujeto pasivo.

| | | |
|---|---|---|
| **Bienes y derechos exentos, excepto para determinar el tipo de gravamen aplicable al resto del patrimonio** | 28 | |

## 6 Liquidación

### • Cuota íntegra

**Cuota íntegra** (cuota resultante de aplicar la escala del Impuesto a la base liquidable consignada en la casilla [27] ) ..... [29]

***Atención:*** *si ha cumplimentado la casilla 28, la determinación de la cuota íntegra se efectuará siguiendo las indicaciones específicas que figuran en la Guía de la declaración.*

### • Límite de la cuota íntegra (únicamente para sujetos pasivos por obligación personal)

Suma de las bases imponibles del Impuesto sobre la Renta de las Personas Físicas (suma de las casillas [455] y [465] de la declaración del IRPF) ..... [30]

Dividendos y participaciones en beneficios a que se refiere el apartado 6.a) de la disposición transitoria vigésima segunda del texto refundido de la Ley del Impuesto sobre Sociedades, obtenidos en el ejercicio y no integrados en la declaración del IRPF *(véase la Guía)* ..... [31]

Parte de la base imponible del ahorro del IRPF constituida por el saldo positivo de las ganancias y pérdidas patrimoniales obtenidas por transmisiones de elementos patrimoniales adquiridos con más de un año de antelación a la fecha de la transmisión *(véase la Guía)* ..... [32]

**Límite conjunto de cuotas del Impuesto sobre el Patrimonio y del IRPF:** 60% de ( [30] + [31] – [32] ) ..... [33]

Cuotas íntegras del IRPF (suma de las casillas [698] y [699] de la declaración del IRPF) ..... [34]

Parte de las cuotas íntegras del IRPF correspondiente al saldo positivo de las ganancias y pérdidas patrimoniales obtenidas por transmisiones de elementos patrimoniales adquiridos con más de un año de antelación a la fecha de la transmisión *(véase la Guía)* ..... [35]

Parte de la cuota íntegra del Impuesto sobre el Patrimonio susceptible de limitación *(véase la Guía)* ..... [36]

**Suma de cuotas a efectos del límite conjunto** ( [34] – [35] + [36] ) ..... [37]

- Si la casilla [33] es mayor o igual que la casilla [37], traslade el importe de la casilla [29] a la casilla [40].
- Si la casilla [33] es menor que la casilla [37], la reducción es igual a la menor de las dos cantidades siguientes:

a) Exceso ( [37] – [33] ) ..... [38]

b) 80 por 100 de la cuota íntegra del Impuesto sobre el Patrimonio (80% de la casilla [29] ) ..... [39]

### • Total cuota íntegra

**Total cuota íntegra** (casilla [29] menos la cantidad menor de las consignadas en las casillas [38] y [39] ) ..... [40]

### • Deducción por impuestos satisfechos en el extranjero

Tipo medio efectivo de gravamen: TM = [40] ÷ [27] x 100 ..... [TM]

Impuestos efectivamente satisfechos en el extranjero ..... (a)

Parte de la base liquidable gravada en el extranjero ..... (b)

**Importe de la deducción** *(véase la Guía)* ..... [41]

### • Bonificación de la cuota en Ceuta y Melilla

Valor neto de los bienes y derechos en Ceuta y Melilla ..... [42]

Parte de la cuota que proporcionalmente corresponde a dichos bienes y derechos ( [42] ÷ [25] x [40] ) ..... [43]

**Bonificación:** 75 por 100 de la casilla [43] (máximo: 75 por 100 de la casilla [40] ) ..... [44]

### • Cuota minorada

**Cuota minorada** ( [40] – [41] – [44] ) ..... [45]

### • Bonificaciones autonómicas

**Comunidad Autónoma de Cataluña: bonificación de los patrimonios protegidos de las personas con discapacidad**

Valor neto de los bienes y derechos con derecho a bonificación *(véase la Guía)* ..... [46]

Parte de la cuota minorada que proporcionalmente corresponde a dichos bienes y derechos ( [46] ÷ [25] x [45] ) ..... [47]

**Bonificación:** 99 por 100 de la casilla [47] (máximo: 99 por 100 de la casilla [45] ) ..... [48]

**Comunitat Valenciana: bonificación en favor de miembros de entidades relacionadas con la celebración de la "Copa América 2007"**

Valor neto de los bienes y derechos con derecho a bonificación *(véase la Guía)* ..... [49]

Parte de la cuota minorada que proporcionalmente corresponde a dichos bienes y derechos ( [49] ÷ [25] x [45] ) ..... [50]

**Bonificación:** 99,99 por 100 de la casilla [50] (máximo: 99,99 por 100 de la casilla [45] ) ..... [51]

### • Cuota a ingresar

**Cuota a ingresar** ( [45] – [48] – [51] ) ..... [52]

# C Identifying Housing Booms and Busts

The identification of housing booms and busts requires two steps. The first step identifies house price cycles and the second step involves the choice of a cut-off value for a house price increase (decrease) which is considered large enough to denote a boom (bust).

House price cycles can be identified in the level of the reference variable or as fluctuations in economic activity around a long-run trend. For this study, the first approach is more suitable. Detrending might not be robust to the inclusion of newly available data (the inclusion of new data can affect the estimated trend and hence the identification of a cycle) and it involves an arbitrary distinction between trend and cycle (there is no consensus about the parametric assumptions that need to be made). Since the aim of this paper is to uncover novel empirical regularities between house boom-bust cycles and wealth inequality and make comparisons across countries, I avoid restrictive parametric assumptions and look at cycles in the level of real house prices.

When identifying house price cycles, one can detect turning points and then choose a cut-off value for a house price increase (decrease) which is considered large enough to denote a boom (bust). Instead, one can also directly choose an increase (decrease) in the growth rate of housing prices large enough to determine what is a housing boom (bust).

First, using the quarterly Spanish real housing price series of Mack and Martínez-García [2011] over the period 1984-2015, I use Harding and Pagan [2002]'s BBQ algorithm to detect turning points. The algorithm is denominated BBQ because it is a quarterly (Q) application of the Bry and Boschan [1971] algorithm designed to find business cycles in monthly data. The algorithm's procedure consists in finding a series of local maxima and minima that allow the segmentation of the time series into expansions and contractions. These types of methods were first proposed by Burns and Mitchell [1946] and later formalized by Bry and Boschan [1971]. For the purpose of identifying house price cycles, this method has been used among others by Huber [2018], Bordo and Landon-Lane [2014], Bracke [2013], Igan and Loungani [2012], Claessens et al. [2012], Kose et al. [2011], Girouard et al. [2006] and Borio and McGuire [2004]. Bracke [2013] illustrates the implementation of the algorithm on a quarterly series following three steps:

1. Identification rule: Identification of points which are higher or lower than a window of surrounding observations. Using a window of $j$ quarters on each side, a local maximum $q_t^{max}$ is defined as an observation of the house price series such that $(q_{t-j}, ..., q_{t-1}) < q_t^{max} > (q_{t+1}, ..., q_{t+j})$. Symmetrically, a local minimum $q_t^{min}$ satisfies $(q_{t-j}, ..., q_{t-1}) > q_t^{min} < (q_{t+1}, ..., q_{t+j})$.

2. Alternation rule: A local maximum must be followed by a local minimum, and vice versa. In the case of two consecutive maxima (minima), the highest (lowest) $q_t$ is chosen.

3. Censoring rule: The distance between two turning points has to be at least $n$ quarters, where $n$ is chosen by the analyst in order to retrieve only the significant series movements and

avoid some of the series noise.

I follow Borio and McGuire [2004], Bracke [2013] and Huber [2018] and choose a rolling window of 13 quarters ($j = 6$) for the identification rule of house price cycles. For the censoring rule, I follow Girouard et al. [2006], Bracke [2013] and Huber [2018] and choose six quarters as minimum distance between two turning points ($n = 6$). I find that Spain had two local maxima during this period of time, the first one in the fourth quarter of 1991 and the second one in the first quarter of 2007. The two local minima were reached on the third quarter of 1996 and the second quarter of 2014.[42]

Once having identified the house price cycles, the second step involves the choice of a threshold which is considered large enough to denote housing booms and busts. The choice of cut-off is rather arbitrary and varies across studies. Girouard et al. [2006] consider housing booms and busts episodes when real house price changes exceed 15%. Kose et al. [2011], Helbling [2005] and Helbling and Terrones [2003] use the quartile as cut-off value. Bordo and Landon-Lane (2014) identify booms when the house price increase is at least 10% within two years. Huber [2018] uses different cut-off values (10%, 15%, 20% and 80% cumulative housing price increase or decrease). No matter which cut-off is chosen, the two Spanish house price cycles (1985-1996 and 1998-2014) are considered housing booms and busts.

Second, I also identify housing booms and busts following the methodology of Bordo and Jeanne [2002] and International Monetary Fund [2009] in which turning points are not determined. In particular, International Monetary Fund [2009] defines housing booms (housing busts) as periods when the four-quarter moving average of the annual growth rate of real housing prices falls above (below) 5%. This methodology is more restrictive in choosing the time frame of a housing boom and bust. Hence, I will follow a similar approach and identify housing boom and busts as periods when the four-quarter moving average of the annual growth rate of real housing prices falls above (below) 2.5%. Under this methodology, the two Spanish house price cycles last from 1985-1995 and from 1998-2014.[43] This is the methodology I use to identify the benchmark time frame for the two Spanish housing booms and busts. These results are robust to the choice of all the above proposed cut-offs of housing price increases or decreases.

# D Accounting for Offshore Wealth to Measure the Wealth Distribution

Tax records, such as the ones used in this paper, are the best available data source to study the top-end of the distribution. Contrary to surveys, they do not suffer from sampling errors

[42] Note that to determine this last local minimum I only rely on four quarters since the series is available until the second quarter of 2015.

[43] I also use the more restrictive alternative growth rate of 5% and results are very similar: 1986-1993 and 2001-2014.

and rely on solid information sources such as employee payroll data and bank records. However, this data source is not perfectly accurate due mainly to tax evasion. Our estimated series would not be biased if evasion does not vary over time nor along the distribution. Nonetheless, evasion might vary over time due to changes in tax enforcement strategies, and along the distribution because different groups might have different income sources and/or assets, which are more easy to evade.

Alstadsæter et al. [2019] find using micro-data leaked from offshore financial institutions and population-wide wealth records in Norway, Sweden, and Denmark, that the probability to disclose evading taxes rises steeply with wealth. Torregrosa [2015] also finds that evasion in the personal income tax is increasing as we move towards the top of the income distribution in Spain. Hence, by not incorporating offshore wealth in our wealth distribution series, both total assets and wealth concentration would be substantially underestimated.[44]

In Spain, as in most countries, official financial data fail to capture a large part of the wealth held by households abroad, such as portfolios of equities, bonds, and mutual fund shares held by Spanish persons through offshore financial institutions in tax havens[45]. Zucman [2013] estimates that around 8% of households' financial wealth is held through tax havens, three-quarters of which goes unrecorded. Moreover, he also provides evidence that the share of offshore wealth has increased considerably since the 1970s. This fraction is even larger for Spain. According to Zucman [2015], wealth held by Spanish residents in tax havens amounted to approximately 80 billion euros in 2012, which accounts for more than 9% of household's net financial wealth.

In order to adjust the wealth distribution series for offshore assets I use the historical series of offshore wealth of Artola Blanco et al. [2019]. They rely on two main data sources: Zucman [2013, 2014], whose series mainly come from the Swiss National Bank (SNB) statistics, and the unique information provided by the 720 tax-form. Since 2012, Spanish residents holding more than 50,000 euros abroad are obliged to file this form specifying the type of asset (real estate, stocks, investment funds, deposits, etc.), value, and country of location. This new form aims to reduce evasion by imposing large fines in case taxpayers are caught not reporting or misreporting their wealth. In an attempt to increase future revenue and reduce further evasion, the Tax Agency also introduced a tax amnesty in 2012.

Artola Blanco et al. [2019] calculate separately reported assets, that is, claims held abroad by

[44] Self-employees might also evade taxes and indeed Torregrosa [2015] finds widespread tax evasion among them in the Spanish context. However, Alstadsæter et al. [2019] report that self-employment income accounts for less than 10% of factor-cost GDP in Spain and they argue that the self-employed are scattered throughout the wealth distribution. Hence, non-compliance by these individuals does not appear to be enough to generate sizable evasion rates in any specific segment of the wealth distribution which could bias the wealth distribution estimates. For these reasons and the lack of accurate estimates of self-employment income evasion rates along the income or the wealth distribution, I will only correct my series for unreported offshore assets.

[45] The Bank of Spain clearly explains in its *Nota Metodólogica de las Cuentas Financieras de la Economía Española (2011)* what it is included and what it is not in the Spanish Financial Accounts.

Spanish residents and declared to the Spanish tax authorities, from unreported offshore wealth. Given that the Spanish Tax Agency cross-checks across all taxes reported income and wealth by taxpayers, income generated by reported assets in the wealth tax and 720 tax-form should be included in personal income taxes. Hence, I will only correct the wealth distribution series for unreported offshore assets. Artola Blanco et al. [2019] derive the series of unreported financial offshore wealth by first comparing total wealth held in Switzerland by Spanish residents with assets declared in this country in the 720 tax-form. In 2012, the comparison shows that 23% of offshore wealth was reported to tax authorities. This figure is consistent with Zucman [2013] estimate that around three quarters of offshore wealth held abroad goes unrecorded. According to the 720 tax-form, Switzerland concentrated in 2012 24% of total offshore wealth held by Spanish residents in tax havens. They extrapolate this series by applying the fraction of unreported assets observed in Switzerland to the rest of tax havens that appear in the 720-tax form.[46]

The series ranges between 1999 and 2014, since the statistics on total offshore held in Switzerland are only available for this period of time. They extrapolate the series backwards using the total amount of offshore wealth that flourished in the 1991 Spanish tax amnesty (10,367 million euros) and the proportion of European financial wealth held in offshore havens estimated by Zucman [2014] for the years prior to 1991.[47]

The importance of offshore assets relative to total household financial assets increased rapidly during the 1990s and beginning of the 2000s and declined significantly after 2003, a period in which Spanish tax authorities have become stricter with tax evasion by carrying more audits, introducing the 720 tax-form and implementing a tax amnesty in 2012 (Figure A1, panel a). Unreported offshore wealth amounted to 158,915 million euros in 2012, which represents 9% of household financial wealth.[48] Investment funds represent 50% of total unreported offshore assets, followed by stocks with 30%, and deposits and life insurance with 18% and 2%, respectively (Figure A1, panel b).

I correct the wealth distribution series by assigning proportionally to the top 1% wealth group the annual estimate of unreported offshore wealth. In doing this, I follow Alstadsæter et al. [2019] who find that the top 1% wealth group in Scandinavian countries accumulates almost all the disclosed assets of tax amnesties. According to the authors, there is nothing unique to Scandinavia that could explain the high evasion rates we find at the top. Moreover, this is consistent with an official document of the Spanish Tax Agency (*Efecto del 720 y el 750*

[46] Note that the series of unreported offshore assets excludes real assets since most of them are declared to be in non-tax havens.

[47] For a more detailed explanation of how the series of unreported and reported offshore assets are constructed, read the appendix of Artola Blanco et al. [2019].

[48] This figure is larger than the estimate of 80,000 million euros in Zucman [2015]. Note that Zucman's estimate is an extrapolation using Swiss National Banks statistics, but that Artola Blanco et al. [2019] use administrative data on reported wealth held by Spanish residents abroad.

*en el Impuesto sobre el Patrimonio, Nota de presa (2016)*) stating that the majority of reported foreign assets by Spanish residents are held by top wealtholders.

Including offshore assets increases the top 1% wealth share on average from 22.7% to 25.7% over the period 1984-2015 (Figure A2). This difference is quite remarkable, taking into account that during that period of time the country experienced a housing boom and both non-financial and financial assets held in Spain grew considerably, as it was discussed at the beginning of the section. In line with other advanced countries (Alstadsæter et al. [2019]), this finding suggests that the historical decline in Spanish wealth inequality over the twentieth century (Alvaredo and Artola [2017]), may be much less spectacular in actual facts than suggested by tax data.

# E Wealth Distribution in Spain by Age

The high level of dissagregation of the wealth distribution series allows me to analyze the wealth inequality dynamics by age.[49] I find that average wealth is always very small at age 20 (less than 20% of average adult wealth), then rises sharply with age until age 60-70 reaching 150-170% of average adult wealth, and moderately decreases at ages above 60-70 (Figure A4a). Contrary to the pure life-cycle model with no bequest (the standard Modigliani triangle), average wealth does not seem to sharply decline at high ages and it remains at very high levels, which means that old-age individuals die with substantial wealth and transmit it to their offspring. This age-wealth profile has changed over the 2002-2015 period. Old individuals (+60) are better-off in 2015 than in 2007 and even more so than in 2002. Furthermore, the age at which individuals reach the maximum average wealth relative to total wealth has increased with the passing of time. In 2002 the maximum average wealth was reached at age 63, in 2007 at age 67 and in 2015 at age 75. In contrast, the young (20-39) are worse-off in 2015 than in 2007 and even more so than in 2002. Hence, the old have benefited from the economic crisis at the expense of the worsening-off of the young. This is consistent with the large increase in youth unemployment (Scarpetta et al. [2010]), the difficult access to housing for young individuals after the burst of the housing crisis, and at the same time the stability in Social Security pension payments.

When decomposing the wealth distribution series by age, I find that wealth inequality is more pronounced for the young (20-39) than for the old (+60) and middle-old (40-59), for which wealth inequality is slightly lower than for the population taken as a whole (Figure A4b). Wealth concentration among the young has significantly increased during the housing bust. This is consistent with larger differences in saving rates and bequests received between the young-rich and the young-poor.

[49] I only carry the analysis for the period 1999-2015, since the old personal income tax panel (1984-1998) does not include any information about age.

# F Wealth Mobility and Synthetic Saving Rates

The total saving rates and the asset-specific saving rates calculated using the wealth accumulation decomposition are synthetic, so that the identity of individuals in each wealth group $g$ might change over time due to wealth mobility. Hence, one might think that the large fluctuations in saving rates for the top wealth group are simply due to increasing mobility of individuals from bottom groups to upper groups and viceversa during the crisis. To prove that the results are not driven by mobility, I need a longitudinal dataset so that I can follow individuals over time. I rely on the 1999-2014 personal income tax panel elaborated by the Spanish Statistical Institute in collaboration with the Spanish Tax Agency.[50] I reconstruct the wealth distribution series and carry the wealth accumulation decomposition using the panel and the same mixed capitalization-survey method as for the calculation of the benchmark series. No matter which data source is used (cross-sectional or panel tax data), wealth shares are almost identical (Figure A9).

My first exercise is to follow Kuhn et al. [2018] and explore wealth mobility across the three groups in the analysis: bottom 50%, middle 40% and top 10%. Table A11 shows the share of individuals who remain within their respective wealth group between subsequent years. The shares are always above 50% and larger for the top 10% wealth group (78% on average) than for the middle 40% (61% on average) and bottom 50% (65% on average).[51] Most individuals that move out of their wealth group between years, remain close to their group. The large fluctuations in saving rates for the top 10% wealth group do not seem to be driven by wealth mobility since the share of individuals who remain within the top 10% wealth group remained quite stable over the years around the peak of the housing boom.

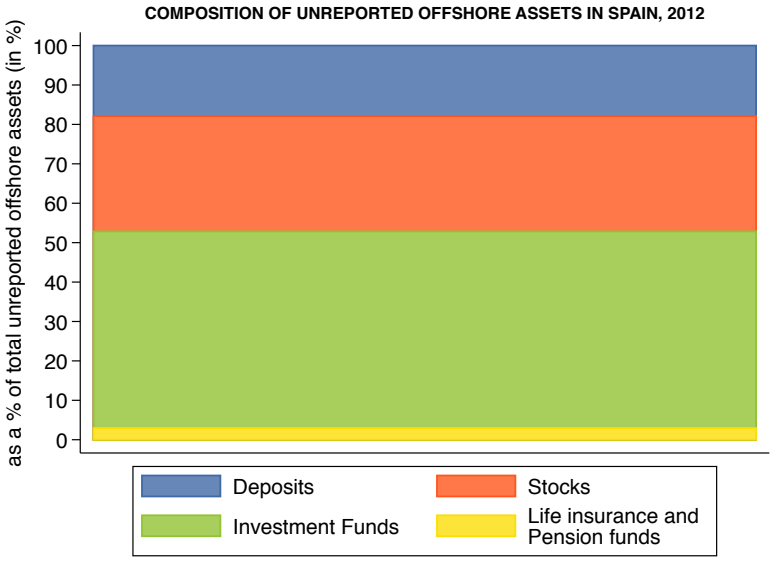
To further prove that mobility is not explaining the findings, I calculate the asset composition of individuals who remain within their respective wealth group between subsequent years. I then use this asset composition to recalculate the asset-specific saving rates. Figure A10 in the appendix depicts the distribution of real capital gains, saving rates and asset-specific saving rates using the asset composition based on the restricted sample excluding movers. All previous results hold. Figure A10a shows that capital gains are larger for the middle and bottom of the distribution during the boom and they converge during the bust. Figure A10b documents that saving rates are larger for the top than for the middle and the bottom. Figures A10c and A10d also shows that during the housing bust saving rates on housing for the top decline and saving rates on financial assets increase. Hence, these two exercises suggest that the results are by no means driven by mobility along the wealth distribution.

[50] To construct the benchmark wealth distribution series I rely on this panel only for years 1999-2001 since larger and richer cross-sectional personal income tax samples are available from 2002 onwards.

[51] This is consistent with Martínez-Toledano et al. [2019], who find using the Spanish Survey of Household Finances that wealth mobility is larger in bottom and middle deciles than in the top decile over the period 2002-2014.

# Appendix Figures and Tables


(a) Total Unreported Offshore Wealth in Spain, 1984-2015




(b) Composition of Unreported Offshore Wealth in Spain, 2012

FIGURE A1: OFFSHORE WEALTH IN SPAIN, 1984-2015

Notes: The panel (a) figure depicts total unreported financial offshore assets (investment funds, stocks, deposits and life (and other) insurance) held by Spanish residents in tax havens as a share of total household financial assets. This is the series used in order to correct the wealth distribution series for unreported offshore assets. The series comes from Artola Blanco et al. [2019] and has been estimated using Zucman [2013, 2014], whose data mainly come from the Swiss National Bank (SNB) statistics, and the unique information provided by the 720 tax-form. Since 2012, Spanish residents holding more than 50,000 euros abroad are obliged to file this form specifying the type of asset (stocks, investment funds, deposits, etc.), value, and country of location. The panel (b) figure displays the composition of unreported offshore assets in Spain using the information provided in the 2012 720 tax-form. For a more detailed explanation of how the series of unreported offshore assets are constructed, read the appendix of Artola Blanco et al. [2019].

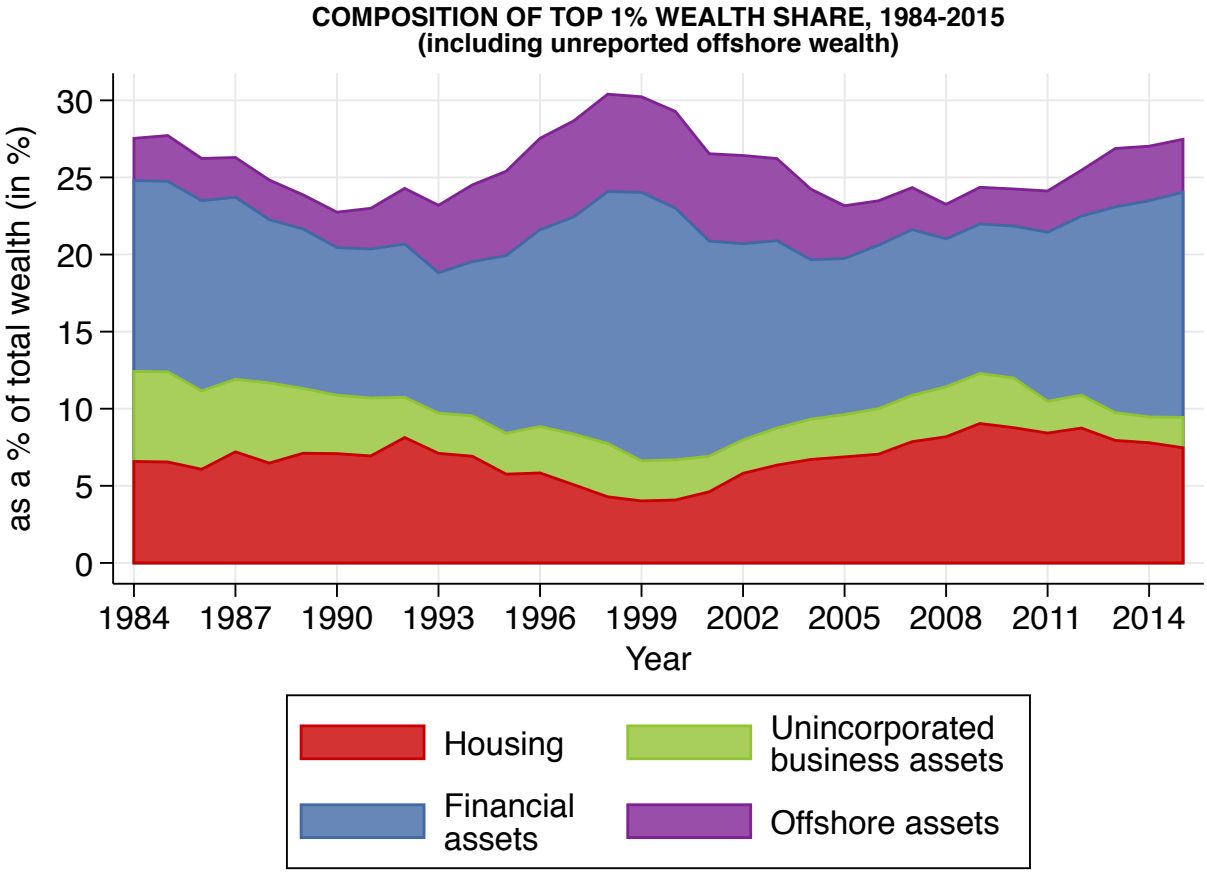
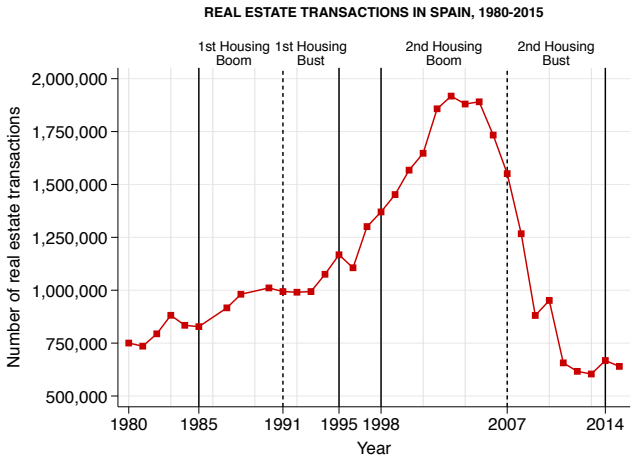
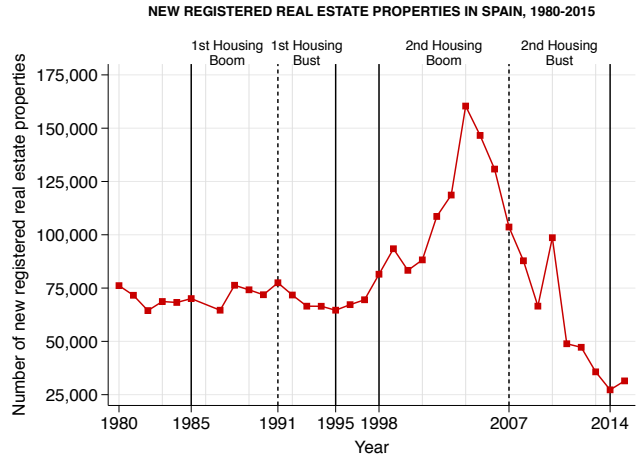



FIGURE A2: COMPOSITION OF TOP 1% WEALTH SHARE INCLUDING UNREPORTED OFFSHORE WEALTH IN SPAIN, 1984-2015

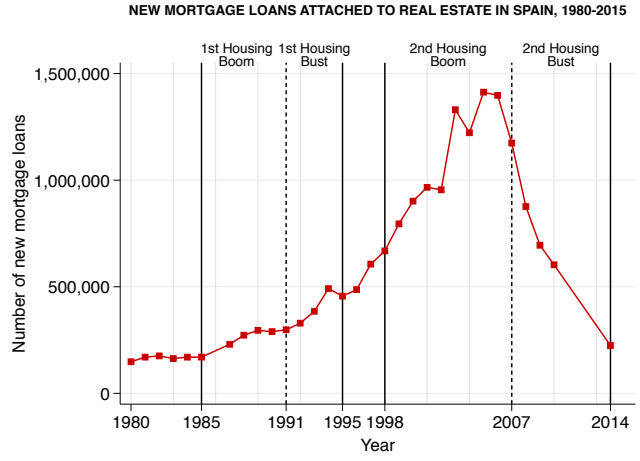
Notes: The figure depicts the composition of the top 1% wealth share in Spain including unreported offshore assets both in the numerator and in the denominator. The series of unreported offshore assets used is the one displayed in Figure A1a). Following Alstadsæter et al. [2019], unreported offshore assets are assigned proportionally to the top 1%.




(a) Number of Real Estate Transactions



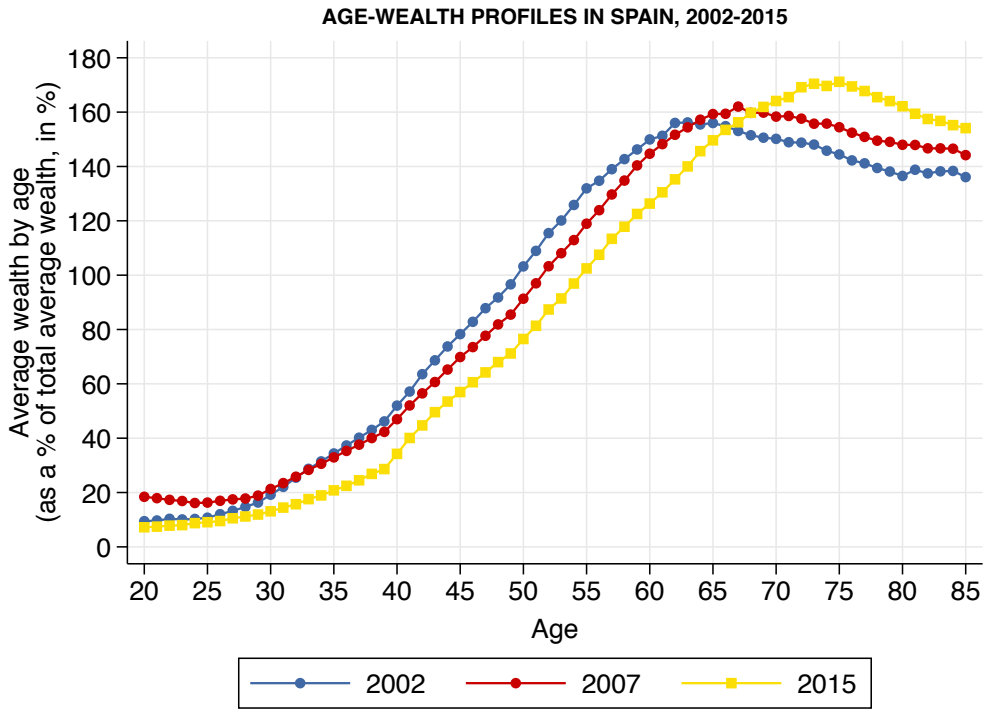

(b) Number of New Registered Real Estate Properties



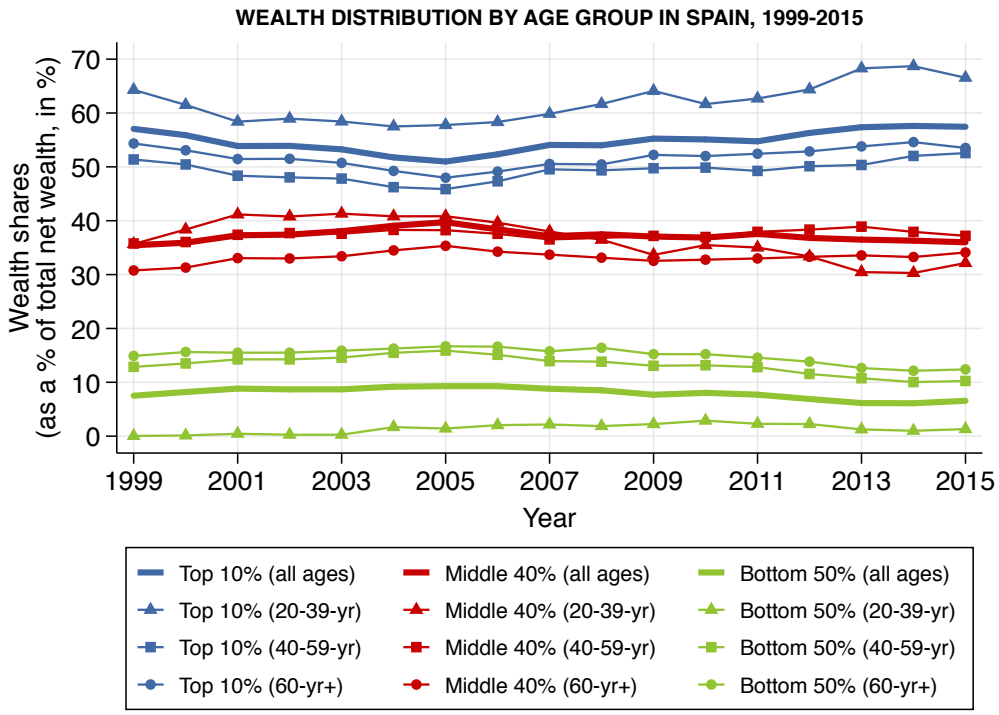

(c) Number of New Mortgage Loans attached to Real Estate

FIGURE A3: REAL ESTATE TRANSACTIONS AND MORTGAGE LOANS IN SPAIN, 1980-2015

Notes: This figure depicts the total number of real estate transactions (panel a), the total number of new registered real estate properties (panel b) and the total number of new mortgage loans attached to real estate (panel c) over the period 1980-2015 in Spain. All three figures are constructed after digitizing the Registrars' Yearbook since 1980 (*Anuario de la Dirección General de los Registros y del Notariado*). The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.



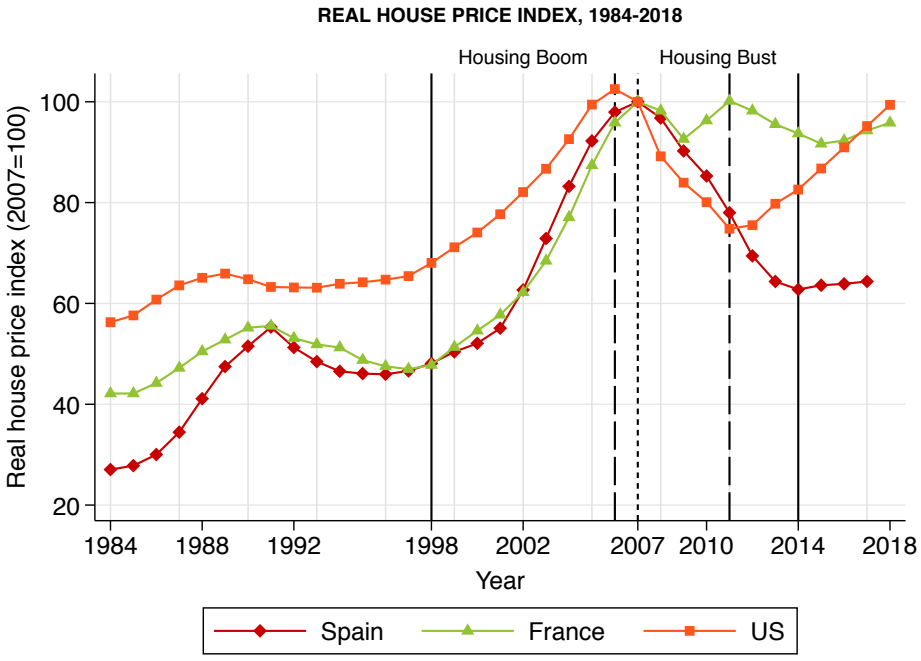

(a) Age-wealth profiles in Spain, 2002-2015



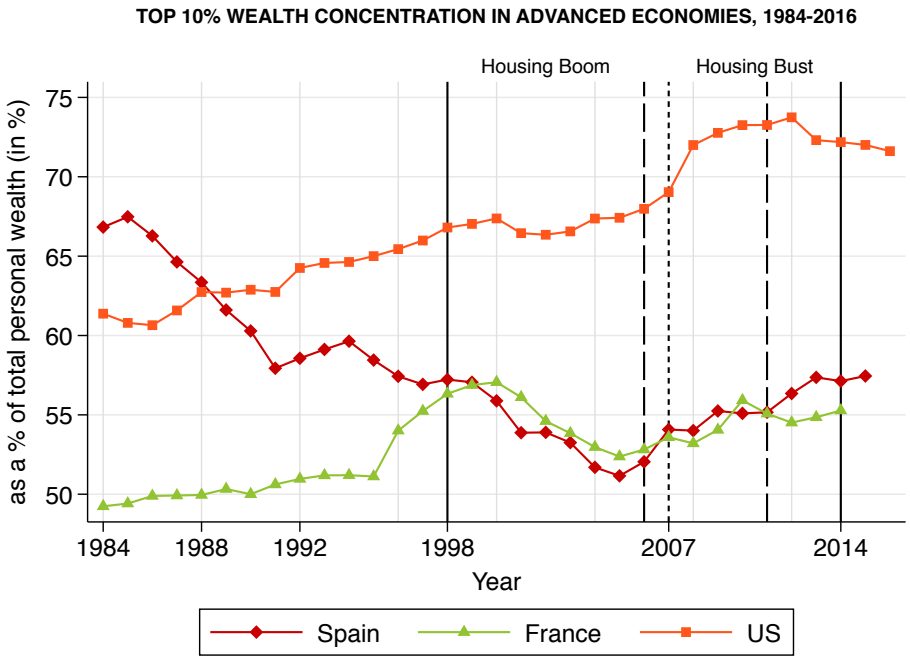

(b) Wealth distribution by age group, 1999-2015

FIGURE A4: WEALTH DISTRIBUTION BY AGE, 1999-2015

Notes: The figure in panel a displays age-wealth profiles as a % of average wealth for years 2002, 2007 and 2015 in Spain. The figure in panel b depicts the breakdown of the wealth distribution in Spain over the period 1999-2015 into three age groups: the young (20-39), the middle-old (40-59) and the old (+60). Both figures have been elaborated based on the benchmark series using the mixed capitalization-survey method. Results are only available from 1999 onwards, since there is no information available on age in the micro-files for previous years.



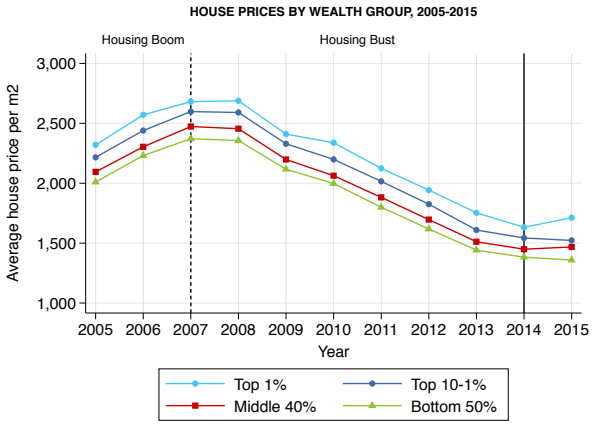

(a) Real House Price Index, 1984-2018



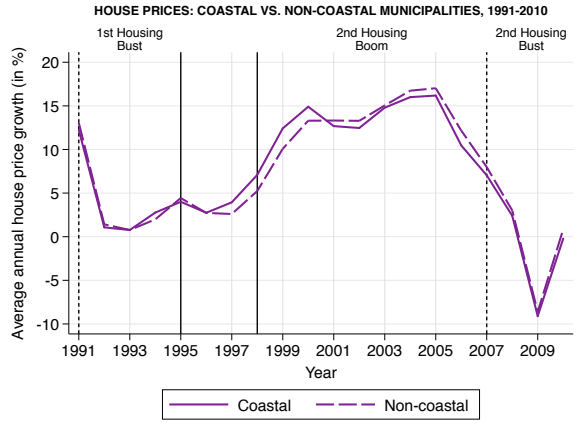

(b) Top 10% Wealth Concentration, 1984-2016

FIGURE A5: INTERNATIONAL COMPARISON OF REAL HOUSE PRICES AND TOP WEALTH SHARES

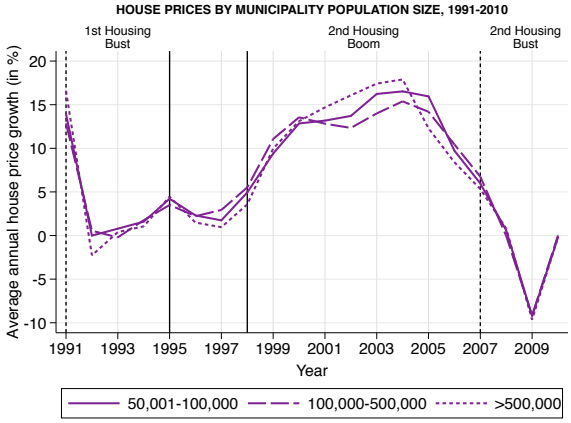
Notes: Panel a in the figure depicts the real house price index in Spain, France and the US over the period 1984-2018. The base year is set to 2007. The real house price series are the ones published by the OECD, except from Spain which is the series constructed by Mack and Martínez-García [2011]. Panel b in the figure depicts the top 10% wealth share in Spain, France and the US over the period 1984-2016. The series for France is the one constructed by Garbinti et al. [2018a] and for the US by Saez and Zucman [2016]. All three countries experienced a housing expansion starting in 1998 (vertical solid black line). However, the expansion ended in 2007 in France and Spain (vertical short-dashed black line) and one year earlier, in 2006, in the US (vertical long-dashed black line). The housing contraction ended up in 2014 (vertical solid black line) in Spain and France, and in 2011 in the US (vertical long-dashed black line).




(a) House Prices by Wealth Group, 2005-2015




(b) House Prices: Coastal vs. Non-coastal Municipalities, 1991-2010




(c) House Prices by Municipality Population Size, 1991-2010

FIGURE A6: HOUSE PRICE DISTRIBUTION IN SPAIN

Notes: This figure depicts the house price distribution in Spain. Panel a plots average house prices by wealth group in Spain for the period 2005-2015. The distribution of house prices is calculated by assigning to each individual in the wealth distribution the average house price in the municipality in which they report having their primary residence. The series of house prices used is elaborated by the Ministry of Public Works and it is based on property appraisals. Despite the large volatility in house prices during this period of of time, differences in house prices are on average very modest. Panels b and c show the annual average growth in house prices over the period 1991-2010 in coastal versus non-coastal municipalities (<25,000 inhabitants) and by municipality population size, respectively. The evolution has been quite similar in all type of municipalities. The series in the last two panels has been elaborated by the *Instituto Valenciano de Investigaciones Económicas*.

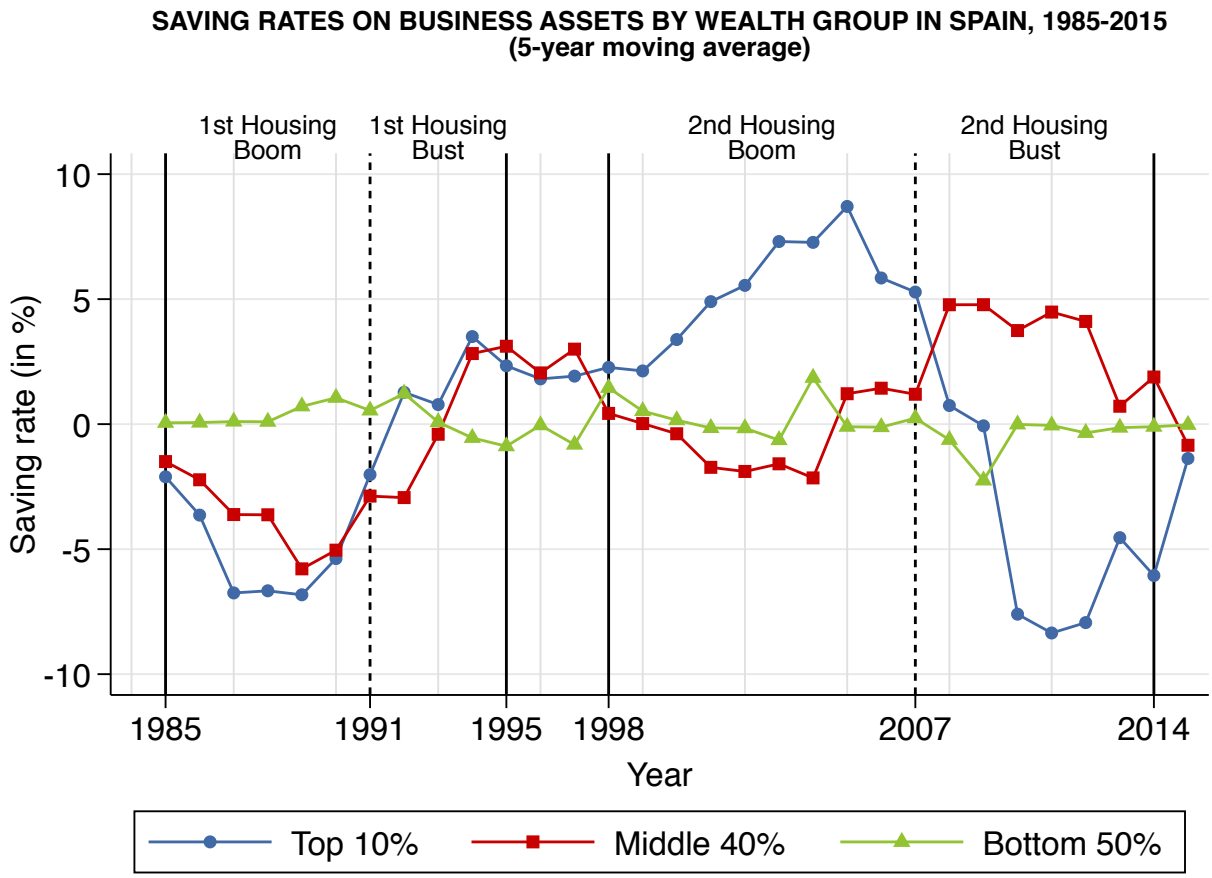
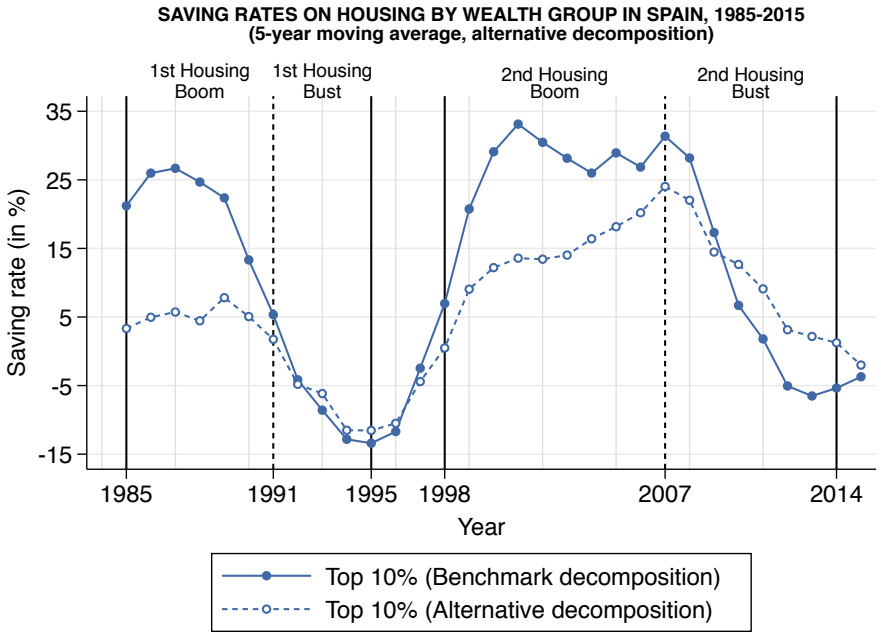
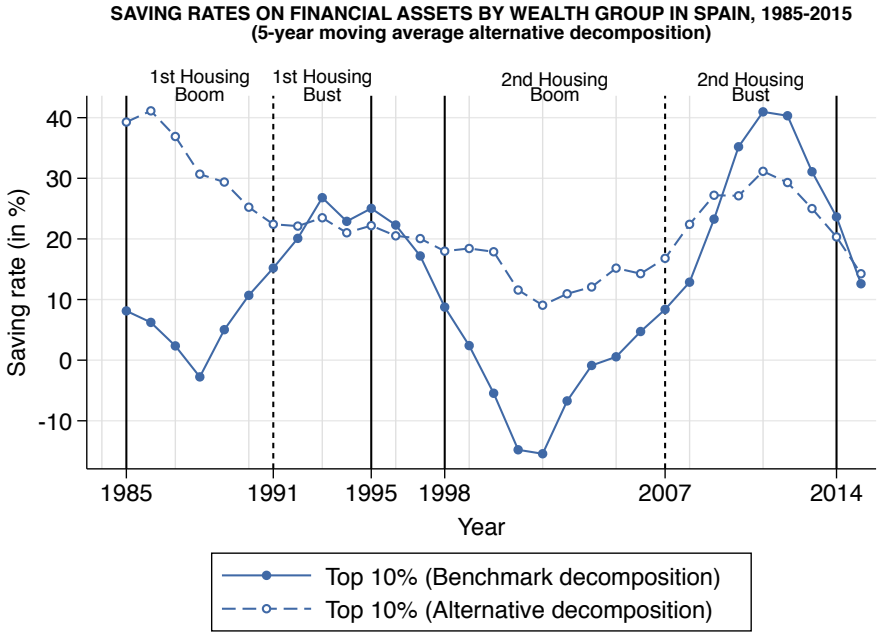



FIGURE A7: SAVING RATE ON UNINCORPORATED BUSINESS ASSETS BY WEALTH GROUP IN SPAIN, 1985-2015

Notes: This figure plots the synthetic saving rates on unincorporated business assets for the top 10%, middle 40%, and bottom 50%, respectively, using a five year moving average from 1985 up to to 2015. Synthetic saving rate $s^g_{A,t}$ for wealth group $g$ in year $t$ is defined so that $W^g_{A,t+1} = (1 + q^g_t)[W^g_{A,t} + s^g_{A,t}(Y^g_{L_t} + r^g_t W^g_{H,t})]$, where $W^g_{A,t}$ stands for the average value of asset $A$ (i.e. unincorporated business assets) of wealth group $g$ at time $t$, $s^g_{A,t}$ the synthetic saving rate on asset $A$ of wealth group $g$ at time $t$ and the rest of variables are the same as in Figure A5. For each wealth group, the sum of these this saving rate each year, together with the saving rate on net housing and financial assets is equal to the total annual saving rate by wealth group. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.




(a) Saving rate on housing for the top 10% wealth group




(b) Saving rate on financial assets for the top 10% wealth group

FIGURE A8: ALTERNATIVE ASSET-SPECIFIC DECOMPOSITION USING GROUP-AND-ASSET SPECIFIC RATES OF CAPITAL GAIN FOR SPAIN, 1984-2015

Notes: This figure compares the saving rates on housing (panel a) and financial assets (panel b) for the top 10% wealth group in Spain using the benchmark asset-specific decomposition of wealth accumulation with group-specific rates of capital gain, with the saving rates of an alternative asset-specific decomposition using group-and-asset specific rates of capital gain (e.g. $W^g_{H,t+1} = (1+q^g_{H,t})[W^g_{H,t} + s^g_{H,t}(Y^g_{L_t} + r^g_t W^{H,g}_t)]$). The levels differ, but dynamics are similar over the business cycle. The only exception are fluctuations of the saving rate on financial assets during the first housing boom. The rates on capital gain on financial assets were significantly low but increasing during the mid-1980s (Figure A22) and consequently, by construction, the saving rates with the alternative decomposition declining. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.

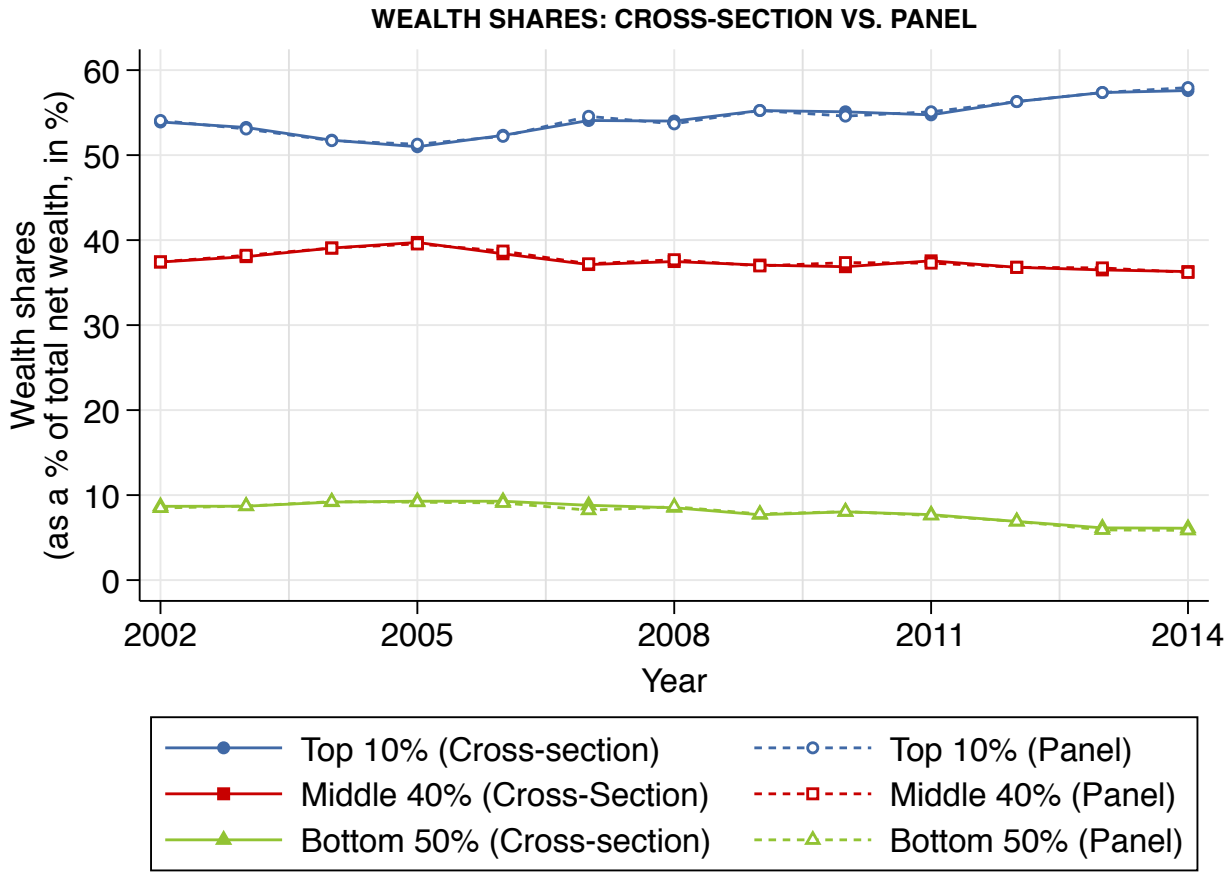
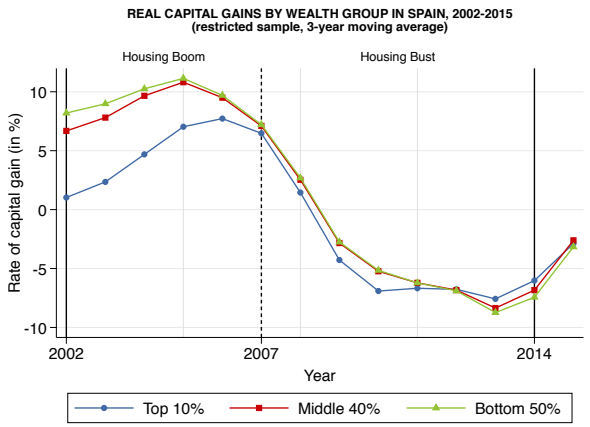
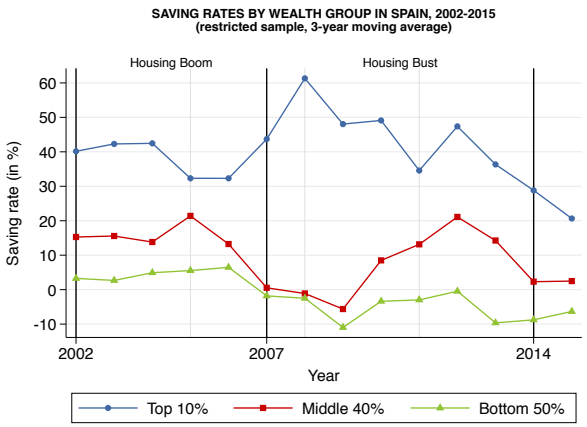



FIGURE A9: WEALTH SHARES: CROSS-SECTION VS. PANEL

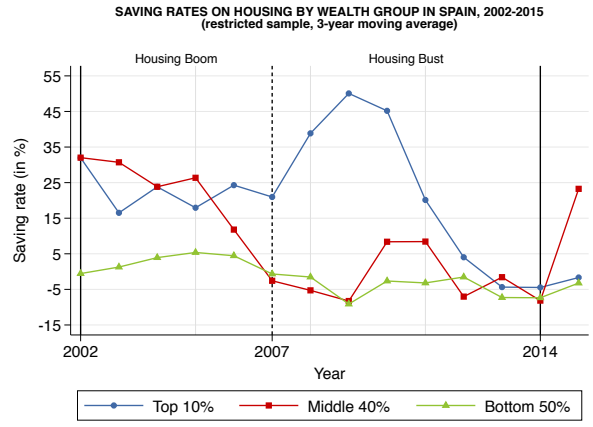
Notes: The figure compares the benchmark wealth distribution series using cross-sectional income tax samples with the wealth distribution series using a the personal income tax panel. All series have been constructed using the mixed capitalization-survey method. Both data sources have been elaborated by the Spanish Institute of Fiscal Studies in collaboration with the Spanish Tax Agency. No matter which of the two sources is used, the series are almost identical.



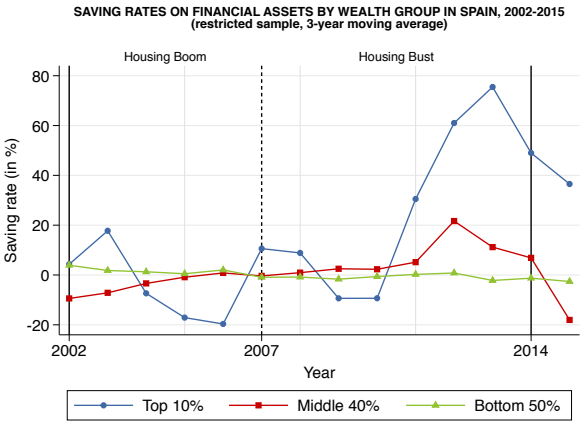

(a) Real capital gains by wealth group




(b) Saving rates by wealth group



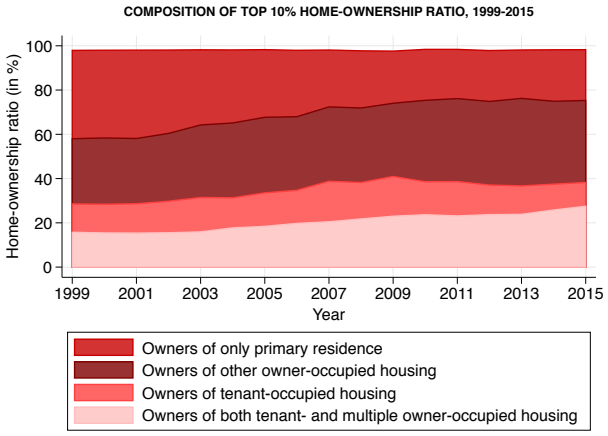

(c) Saving rates on housing by wealth group



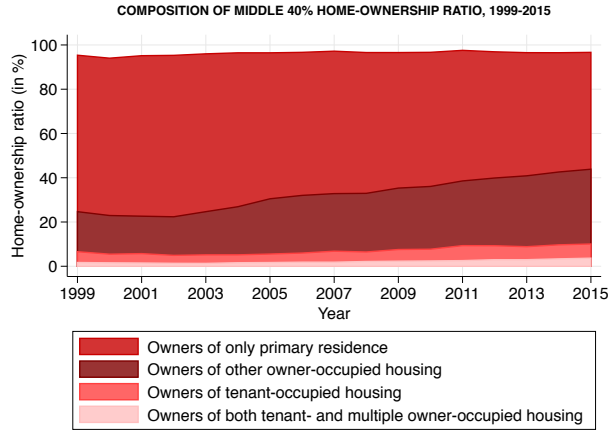

(d) Saving rates on financial assets by wealth group

FIGURE A10: REAL CAPITAL GAINS AND SAVING RATES BY WEALTH GROUP IN SPAIN, 2002-2015 (restricted sample)

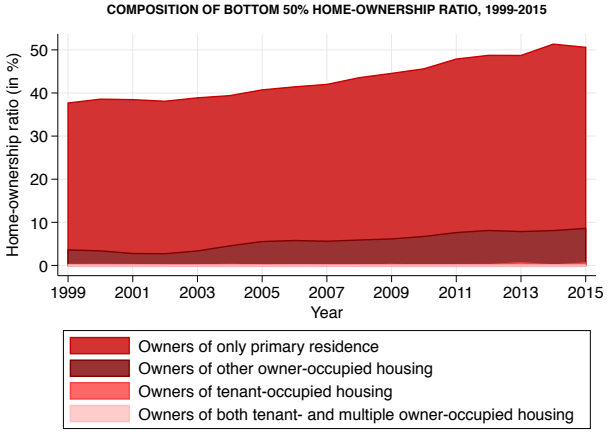
Notes: This figure depicts real capital gains (panel a), saving rates (panel b), saving rates on housing (panel c) and saving rates on financial assets (panel d) by wealth group in Spain, using the asset composition of those individuals who do not change of wealth group (top 10%, middle 40% and bottom 50%) from year $t$ to year $t+1$. This calculation has been done after reconstructing the wealth distribution series under the mixed capitalization-survey method and using a 1999-2014 personal income tax panel elaborated by the Spanish Institute of Fiscal Studies in collaboration with the Spanish Tax Agency. The aim with new calculation is analyze the evolution of real capital gains and saving rates by wealth group in the absence of wealth mobility.




(a) Composition of top 10% home-ownership ratio



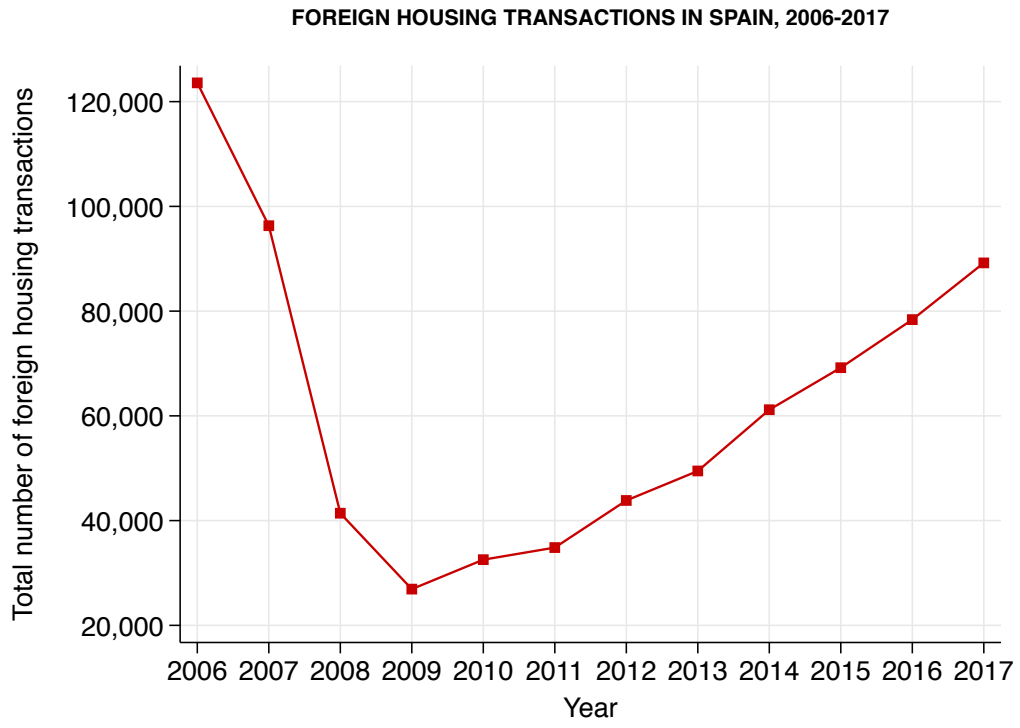

(b) Composition of middle 40% home-ownership ratio



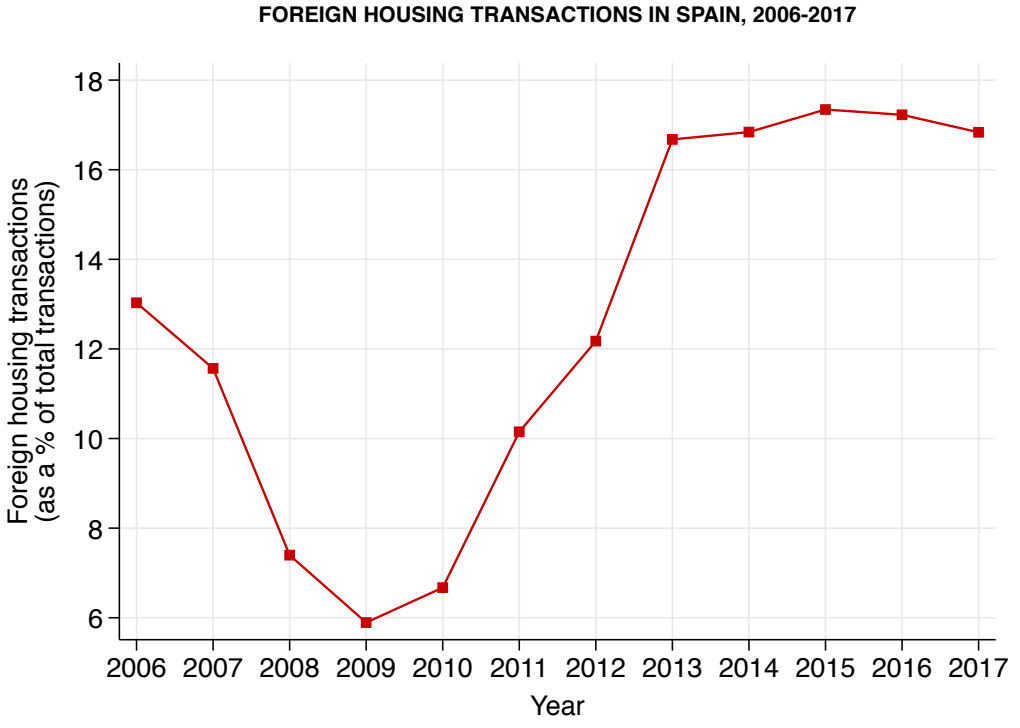

(c) Composition of bottom 50% home-ownership ratio

FIGURE A11: COMPOSITION OF HOME-OWNERSHIP RATIOS IN SPAIN, 1999-2015

Notes: The figure depicts the composition of home-ownership ratios for the bottom 50% (panel a), middle 40% (panel b) and top 10% (panel c) wealth groups over the period 1999-2015. The home-ownership ratio is decomposed into the share of individuals who only own their primary residence, those who own at least another residence which they occupy on top of their primary residence (other owner-occupied housing), those who own at least another residence which they rent out (tenant-occupied housing) and finally, those who own both tenant- and other owner-occupied housing on top of their primary residence. The decomposition is not shown for the period 1984-1998 since tax records do not present such level of disaggregation. This decomposition is carried based on the available information in tax records and the mixed capitalization-survey method used to construct the wealth distribution.



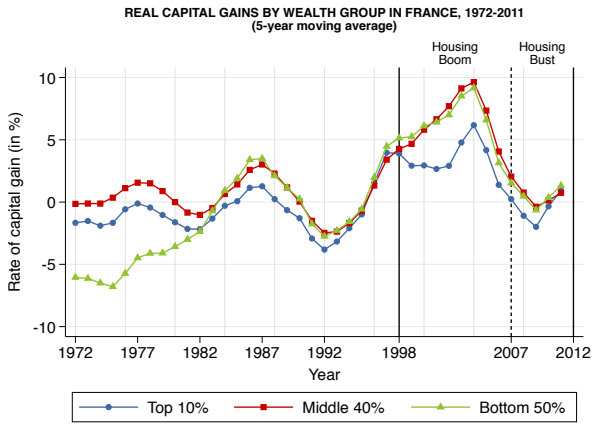

(a) Total number of foreign housing transactions



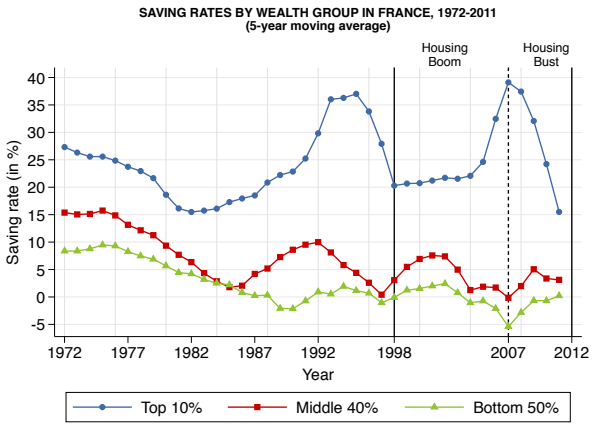

(b) Foreign housing transactions (as a % of total transactions)

FIGURE A12: FOREIGN HOUSING TRANSACTIONS IN SPAIN, 2006-2017

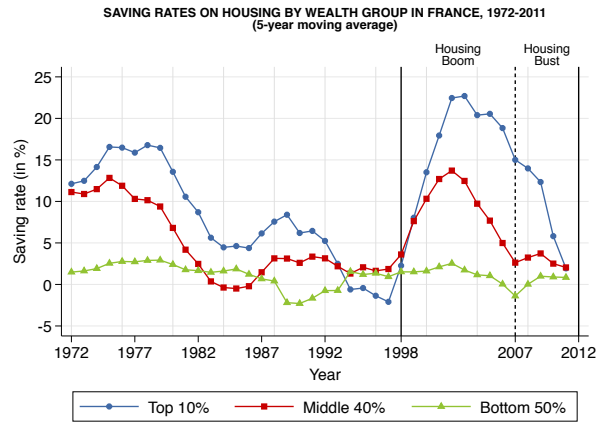
Notes: This figure depicts the evolution of foreign housing transactions in Spain over the period 2006-2017. Panel a shows the evolution of the total number of foreign transactions and panel b the same evolution but as a share of total transactions. Foreigners include both residents and non-residents at the time of the purchase. This series is provided by the Ministry of Public Works.



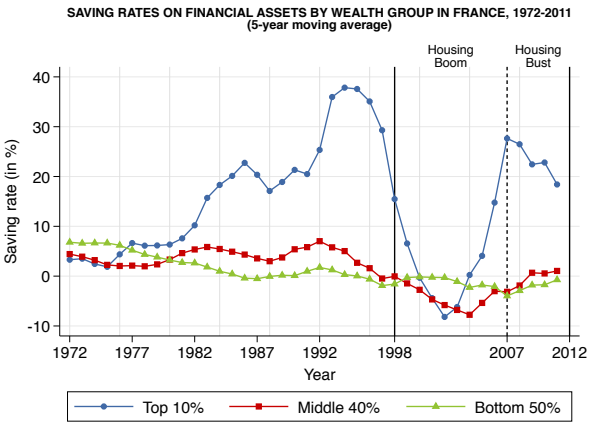

(a) Real capital gains by wealth group




(b) Saving rates by wealth group



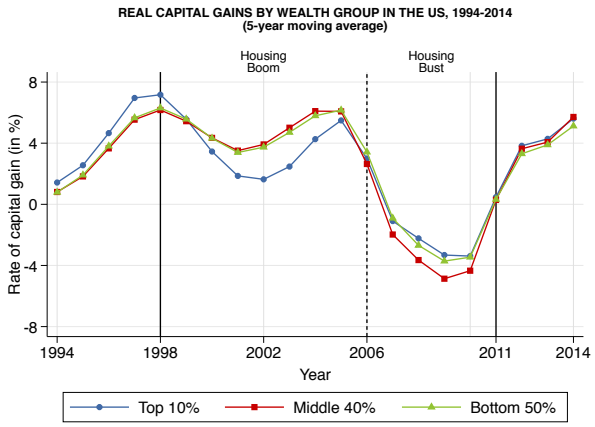

(c) Saving rates on housing by wealth group



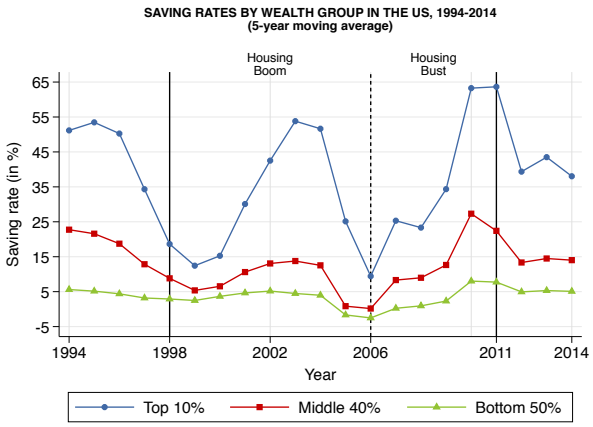

(d) Saving rates on fin. assets by wealth group

FIGURE A13: REAL CAPITAL GAINS AND SAVING RATES BY WEALTH GROUP IN FRANCE, 1972-2011

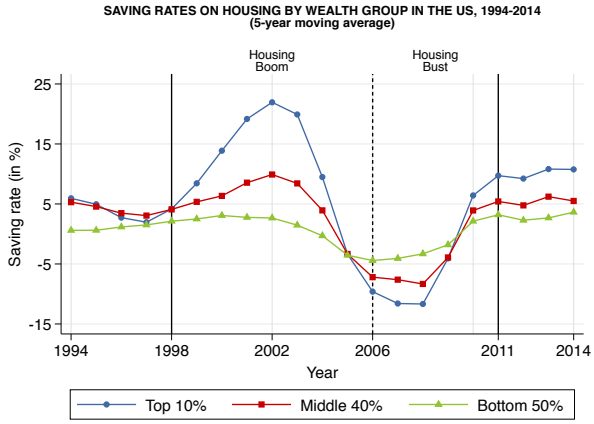
Notes: The figure depicts the distribution of real capital gains (panel a), synthetic saving rates (panel b), synthetic saving rates on housing (panel c) and synthetic saving rates on financial assets (panel d) among the top 10%, middle 40% and bottom 50% wealth groups using a five year moving average over the period 1972-2011 in France. These calculations have been derived using the wealth distribution series of Garbinti et al. [2018a].



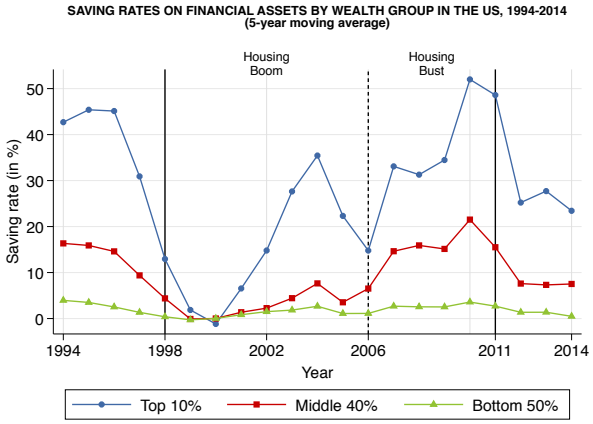

(a) Real capital gains by wealth group




(b) Saving rates by wealth group



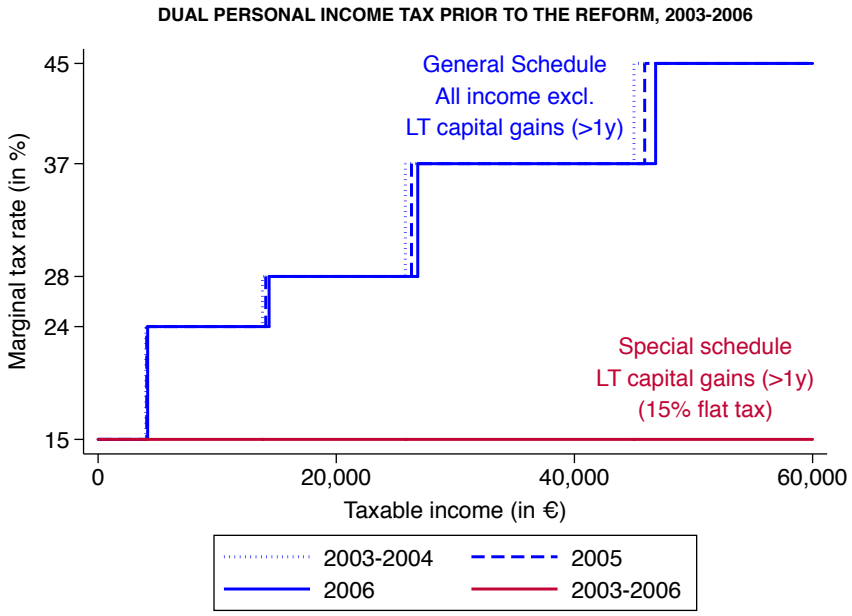

(c) Saving rates on housing by wealth group



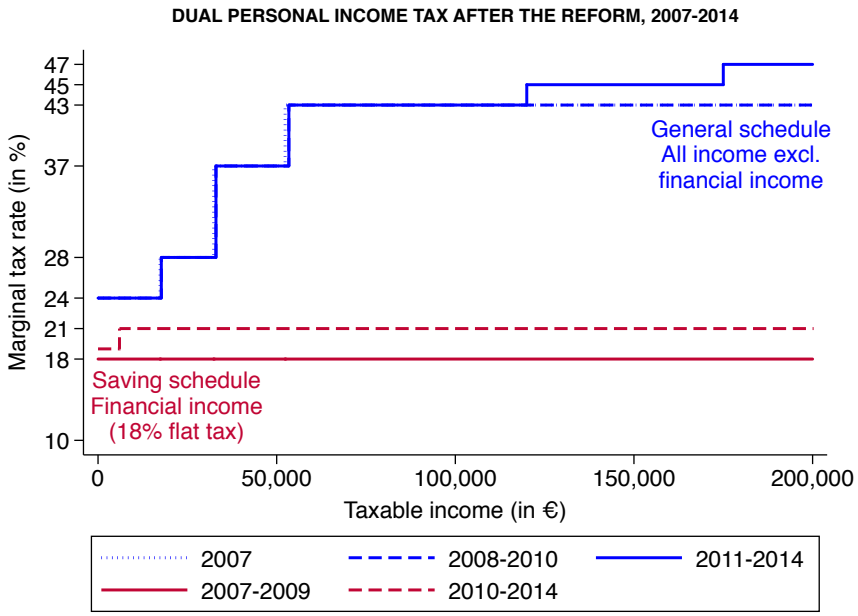

(d) Saving rates on fin. assets by wealth group

FIGURE A14: REAL CAPITAL GAINS AND SAVING RATES BY WEALTH GROUP IN THE US, 1994-2014

Notes: The figure depicts the distribution of real capital gains (panel a), synthetic saving rates (panel b), synthetic saving rates on housing (panel c) and synthetic saving rates on financial assets (panel d) among the top 10%, middle 40% and bottom 50% wealth groups using a five year moving average over the period 1994-2014 in the US. These calculations have been derived using the wealth distribution series of Saez and Zucman [2016].



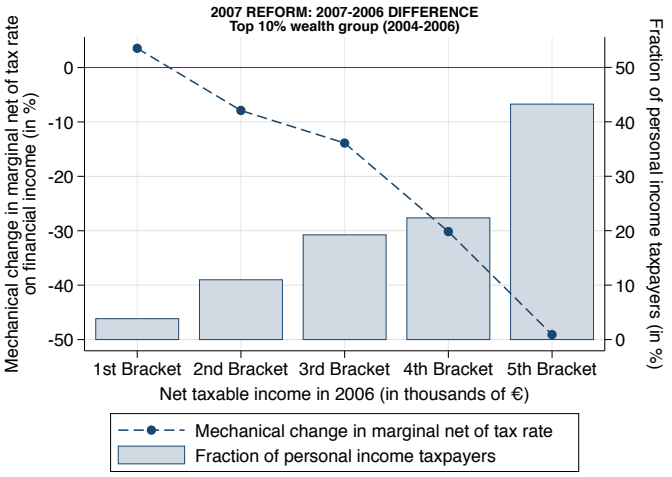

(a) Dual Personal Income Tax Schedule before the reform, 2003-2006



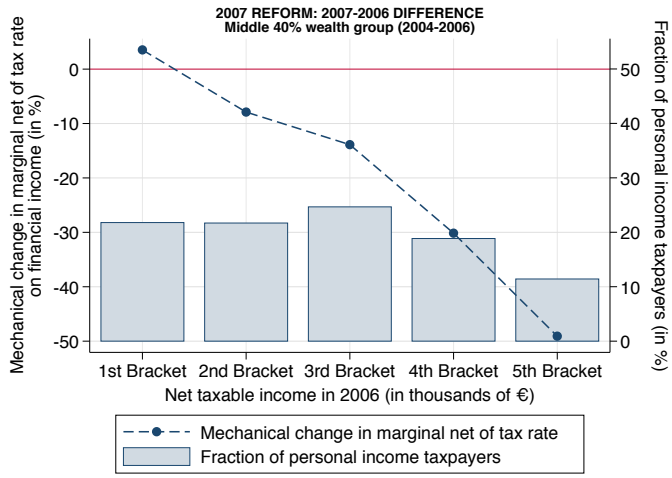

(b) Dual Personal Income Tax Schedule after the reform, 2007-2014

FIGURE A15: DUAL PERSONAL INCOME TAX SCHEDULE BEFORE AND AFTER THE REFORM IN SPAIN, 2003-2014

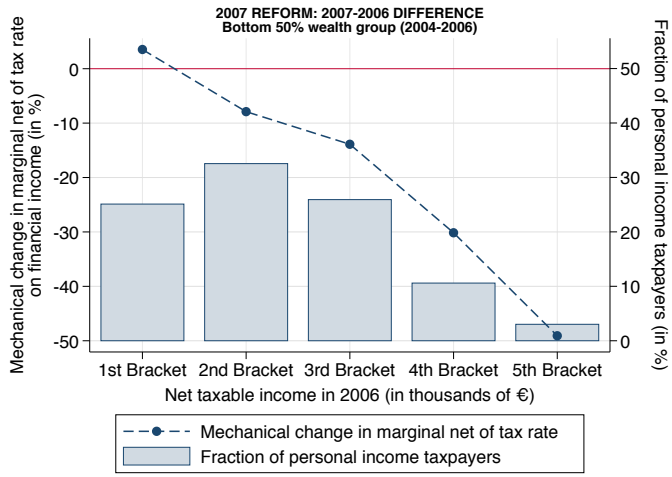
Notes: This figure presents the dual personal income tax schedule before and after the reform in Spain. Panel a depicts the dual personal income tax schedule over the period 2003-2006, the years prior to the reform. All income components were subject to the general progressive tax schedule (upper panel), except from long-term capital gains (those generated over more than one year), which were subject under a special schedule to a 15% flat tax. Panel b presents the dual personal income tax schedule in Spain over the period 2007-2014, the years after the reform. The general tax schedule was slightly modified and all income components were subject to it, except from financial income (interest, dividends and capital gains), which was subject under a new saving schedule to a 18% flat tax over the period 2007-2009. The saving schedule was slightly modified over the period 2010-2014 with a tax rate of 19% for the first 6,000 euros of reported financial income and a 21% rate for financial income above 6,000 euros.




(a) Top 10% wealth group



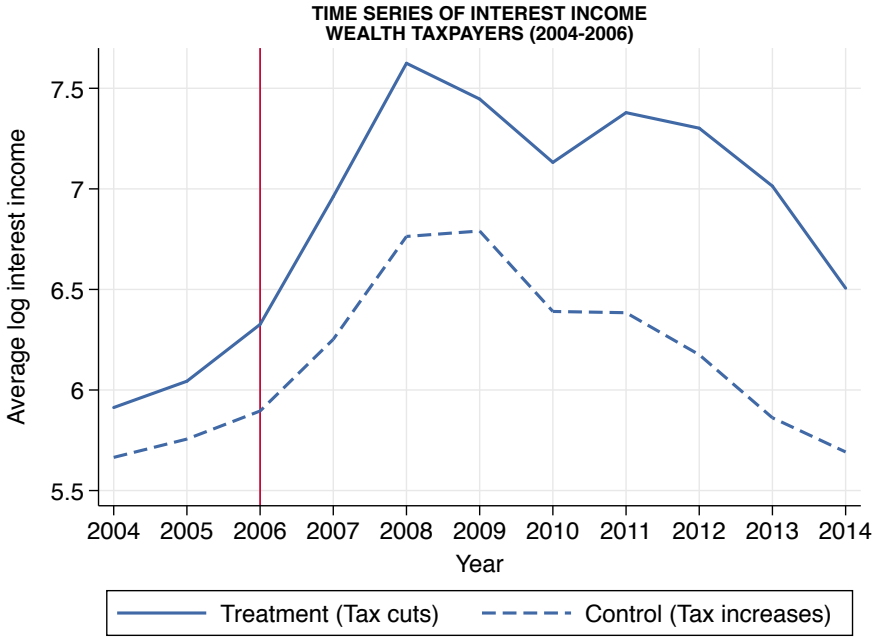

(b) Middle 40% wealth group



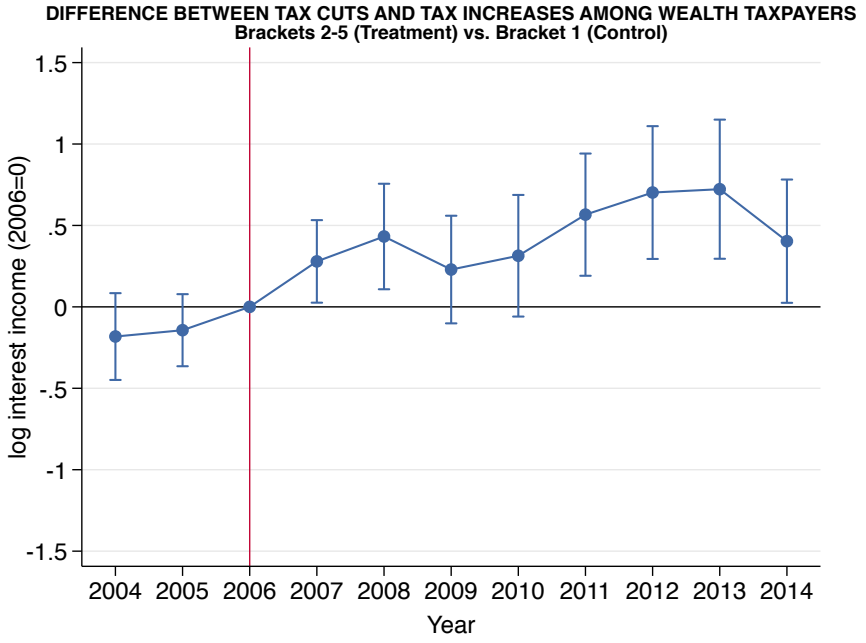

(c) Bottom 50% wealth group

FIGURE A16: MECHANICAL CHANGES IN MARGINAL NET OF TAX RATES ON FINANCIAL INCOME BY WEALTH GROUP

Notes: This figure depicts the mechanical changes in marginal net of tax rates (dashed lines) due to the 2007 reform among personal income taxpayers within the top 10% wealth group (upper panel) middle 40% wealth group (middle panel) and bottom 50% wealth group. Each panel shows the 2007-2006 differences in percent. The figure also shows the size of each group as a share of all taxpayers (bars).




(a) Time Series of Interest Income among Wealth Taxpayers, 2004-2014




(b) Differences-in-Differences Results

FIGURE A17: EFFECTS OF THE 2007 PERSONAL INCOME TAX REFORM AMONG WEALTH TAXPAYERS

Notes: The figure shows the evolution of log reported interest income for groups that were affected differently by the 2007 reform. The figure is based on a balanced panel of wealth taxpayers who are observed throughout the period 2004-2014. The vertical line at 2006 denotes the last pre-reform year. The treatment-control definition is based on the reform-induced tax variation (2004-2006) for the different groups shown in Figure 12b, with treatments being an aggregation of groups who experience an increase in the marginal net-of-tax rate due to the reform (2nd-5th bracket) and the control being the group who experiences a decline in the marginal net-of-tax rate (1st bracket). Panel a compares the evolution of log reported interest income in the two comparison groups and panel b shows using a DD event-study the differences between these two series normalized to zero in the pre-reform year 2006. 95% confidence intervals are based on standard errors clustered at the individual level.

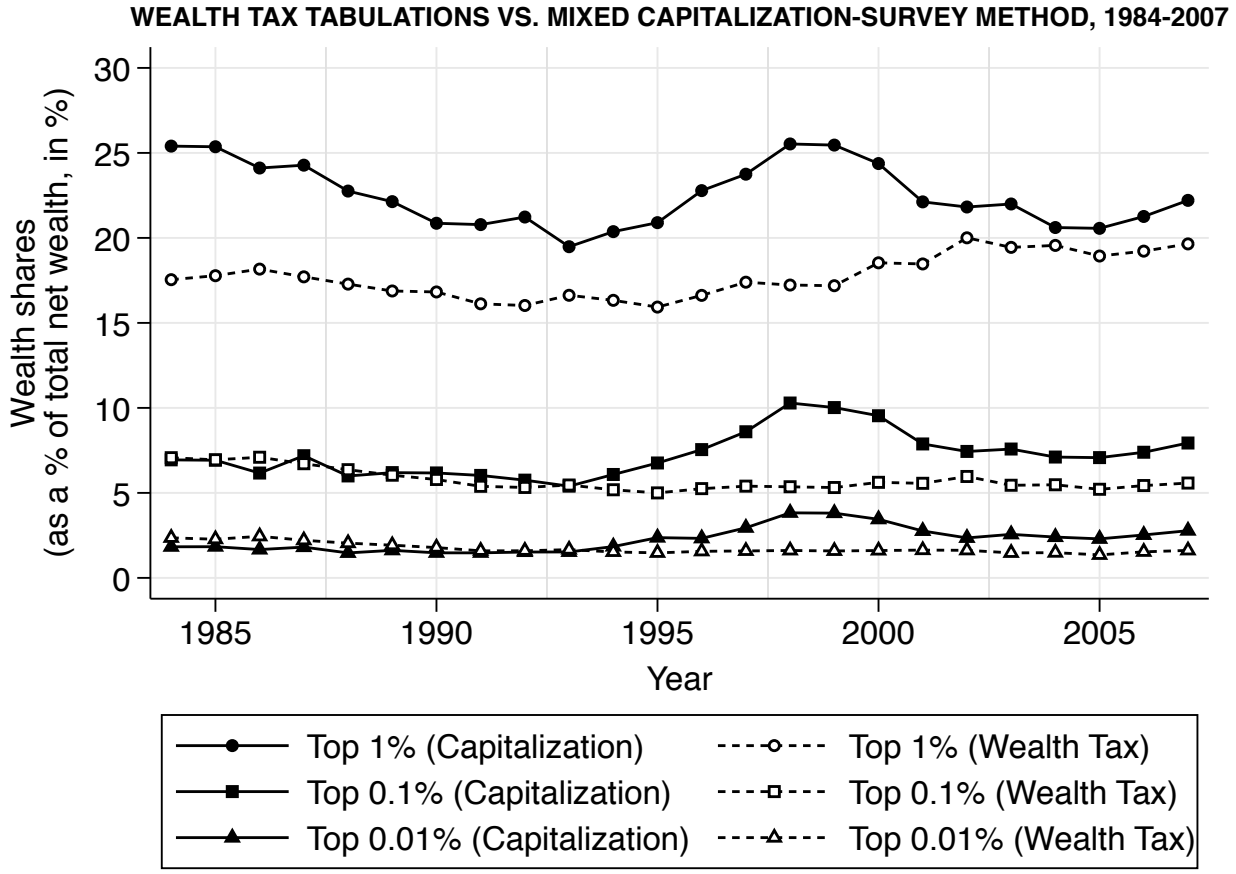
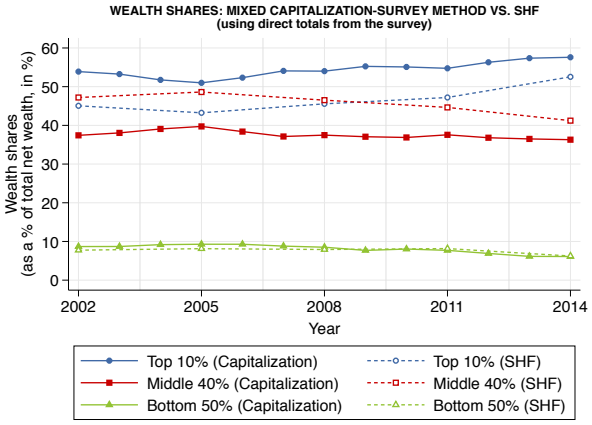
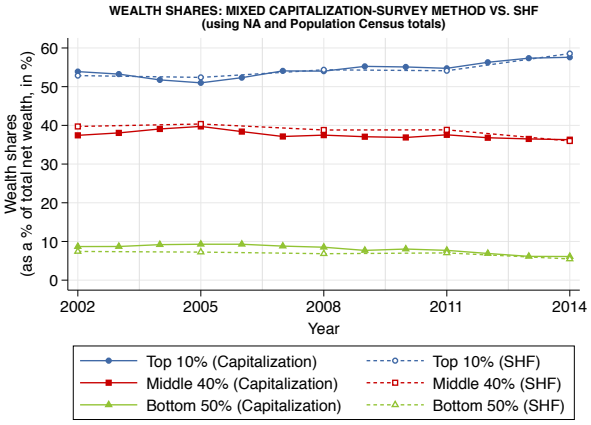



FIGURE A18: WEALTH TAX TABULATIONS VS. MIXED CAPITALIZATION-SURVEY METHOD IN SPAIN, 1984-2007

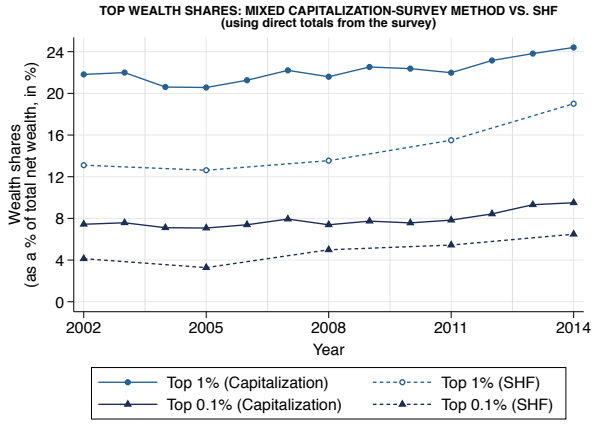
Notes: The figure compares the top 1%, 0.1% and 0.01% wealth shares in Spain using wealth tax tabulations and the capitalization method. The wealth shares using wealth tax tabulations are extracted from Alvaredo and Saez [2009]. They use wealth tax returns and the Pareto interpolation method. There are important differences in the concepts and methodology used in Alvaredo and Saez [2009] and in this paper. First, they consider the wealth of both households and non-profit institutions serving households rather than only household wealth. Second, they exclude pensions from the wealth denominator and they do not include business assets. Third, they use real state declared, being for some individuals the cadastral value. By contrast, I impute wealth from owner-occupied housing using the Survey of Household Finances and the Housing Market Indicators using series at market prices. Finally, one last difference is that they use tax units instead of individual units as units of analysis.



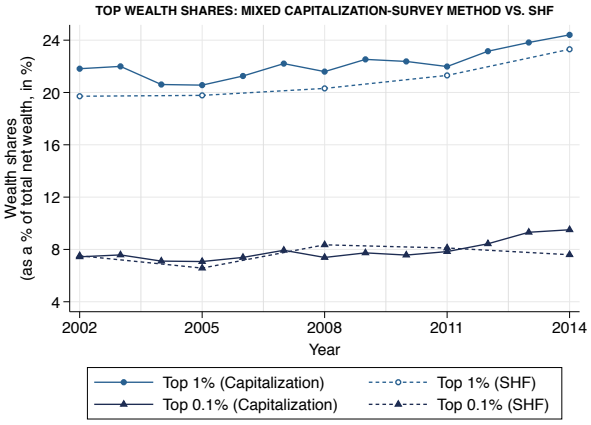

(a) SHF wealth shares using direct totals from the survey




(b) SHF wealth shares using the Census of Population and NA totals



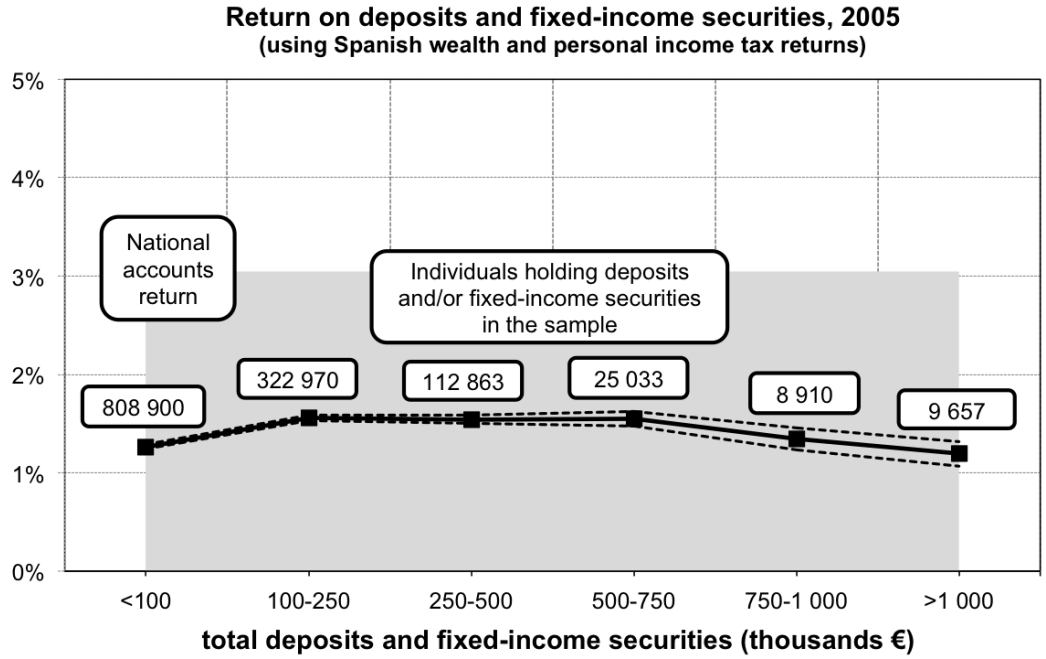

(c) SHF top wealth shares using direct totals from the survey



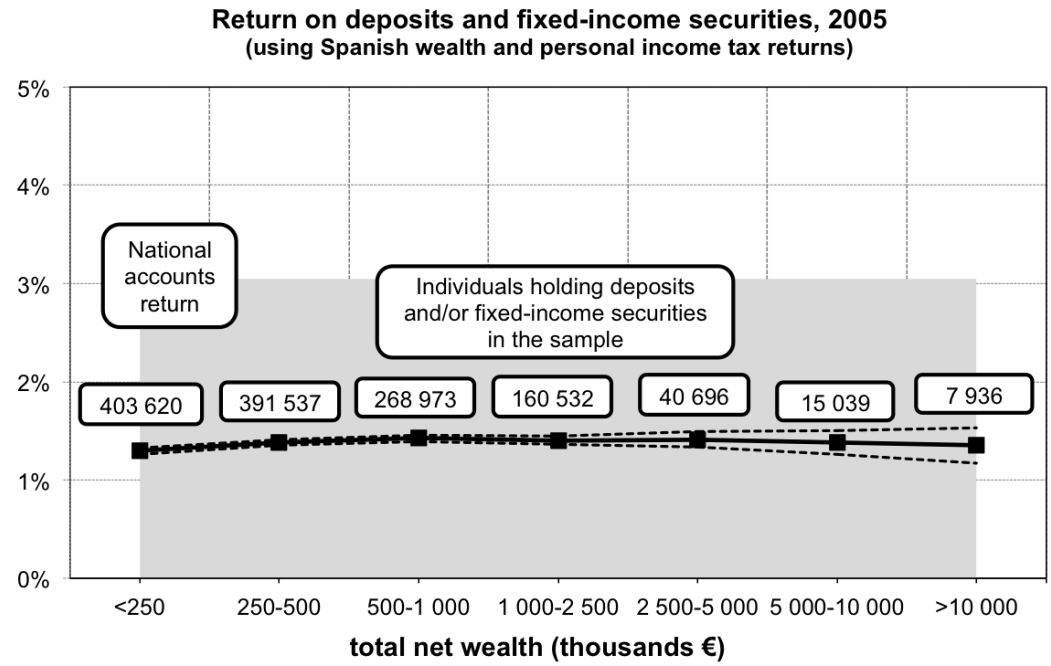

(d) SHF top wealth shares using the Census of Population and NA totals

FIGURE A19: WEALTH SHARES: MIXED CAPITALIZATION-SURVEY METHOD VS. SHF IN SPAIN, 2002-2014

Notes: The figure compares the top 10%, middle 40%, bottom 50%, top 1% and top 0.1% wealth shares in Spain using the capitalization method and the Survey of Household Finances. In panels a and c the SHF wealth shares are calculated using the direct totals of the SHF, whereas in panel b and d the SHF wealth shares are calculated using the Census of Population and NA totals, that is, the same totals as the ones used in the mixed capitalization-survey technique. This is done by proportionally rescaling the wealth shares to arrive to the Census of Population and NA totals. Note that contrary to the capitalized wealth shares, the SHF includes the regions of País Vasco and Navarra. In all panels, the wealth shares with the survey data have been constructed using the five waves of the Survey of Household Finances from the Bank of Spain (2002, 2005, 2008, 2011 and 2014). In order to ensure consistency across methods, households in the survey are split into individuals and wealth is assigned proportionally to all members of the household, except from children, who are only given proportionally wealth held in bank accounts. Moreover, the population considered excludes individuals aged less than 20.




(a) Ranking individuals according to total deposits and fixed-income securities




(b) Ranking individuals according to total net wealth

FIGURE A20: DISTRIBUTION OF RETURNS ON DEPOSITS AND FIXED INCOME SECURITIES IN SPAIN, 2005

Notes: The figure depicts the distribution of the rates of return on deposits and fixed-income securities including 95% confidence intervals. Individuals are ranked according to total deposits and fixed-income securities (panel a) and to total net wealth (panel b). The series have been constructed using Spanish micro-files from personal income tax records linked to wealth tax records for the period 2002-2007. Results presented here are only for 2005, but they are very similar for the rest of years. The individual rate of return on deposits and fixed-income securities has been calculated as the ratio of the interest each individual earns in these assets and the total value held in these assets. Individuals with rates of return larger than 10% have been excluded since these high values are most likely due to measurement error. They only account for 3% of the total sample.

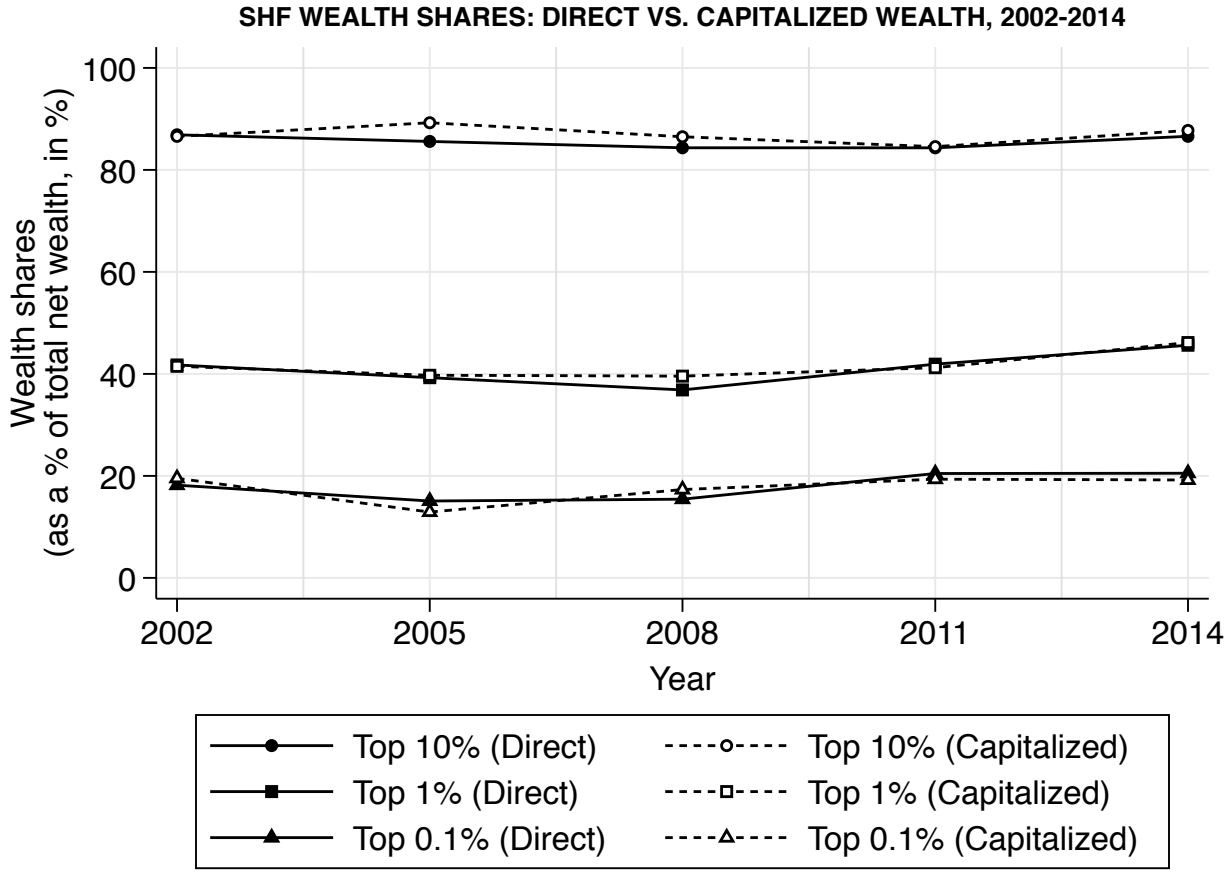



FIGURE A21: SHF WEALTH SHARES: DIRECT VS. CAPITALIZED WEALTH IN SPAIN, 2002-2014

Notes: The figure compares the top 10%, 10 to 1% and 0.1% wealth shares in Spain using direct and capitalized wealth shares from the SHF. These wealth shares include the same assets as the benchmark capitalized shares in this paper, except for owner-occupied housing, life insurance, pension and investment funds. The reason is that the SHF does not include the income generated by these assets in any of the five waves.

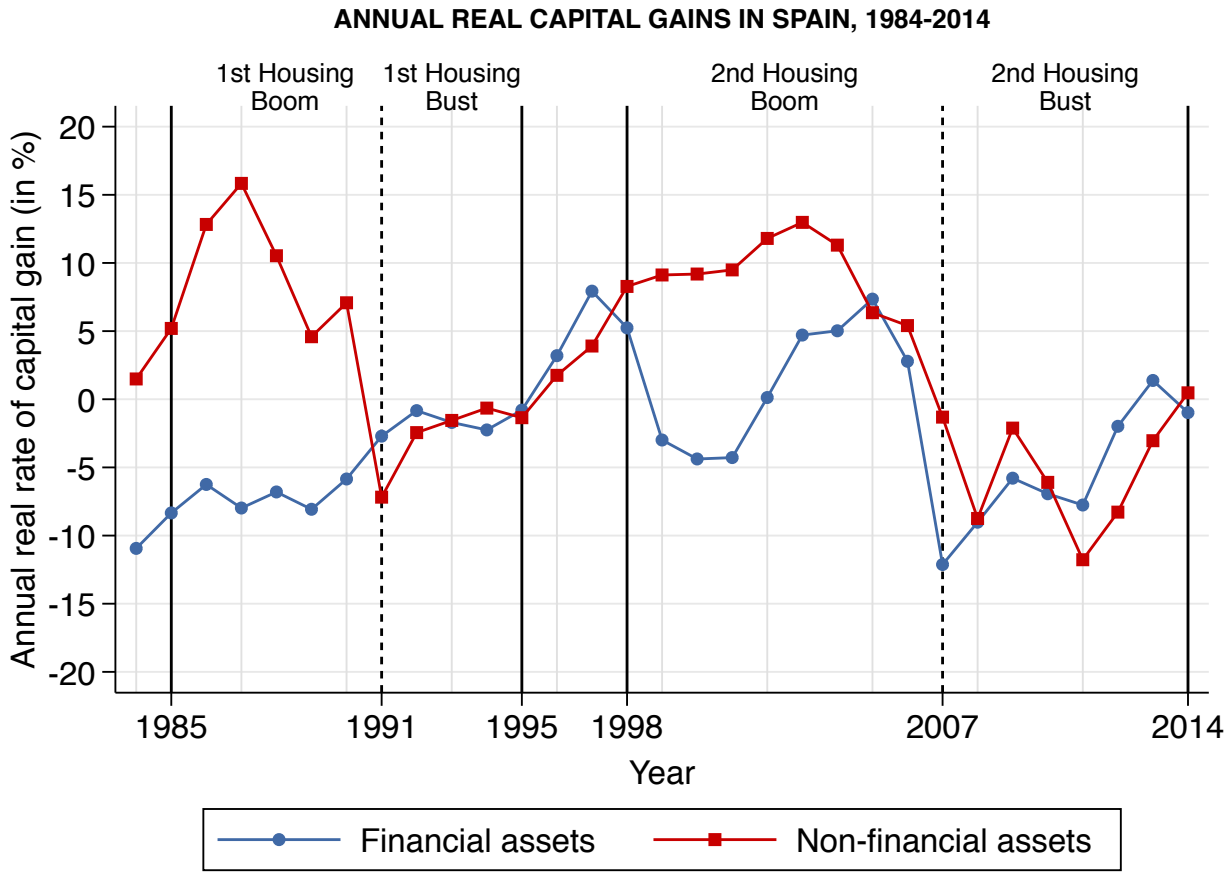



FIGURE A22: ANNUAL REAL CAPITAL GAINS IN SPAIN, 1984-2014

Notes: This figure shows the evolution of real capital gains on financial and non-financial assets in Spain over the period 1984-2015. These series are constructed using the Financial Accounts of the Bank of Spain and the information on non-financial assets from Artola Blanco et al. [2019]. The vertical solid black lines denote the beginning and end of the two housing boom-bust cycles (1985-1995, 1998-2014) and the vertical dashed black lines at 1991 and 2007 denote the turning points in each episode.

**HOUSEHOLDS (HH) AND NON-PROFIT INSTITUTIONS SERVING HOUSEHOLDS (NPISH) NET WEALTH, 1995-2017**

| Year | HH | NPISH | HH + NPISH | NPISH/ (HH + NPISH) |
|---|---|---|---|---|
| 1995 | 440,246€ | 7,264€ | 447,509€ | 1.6% |
| 1996 | 482,216€ | 7,018€ | 489,233€ | 1.4% |
| 1997 | 553,869€ | 7,613€ | 561,482€ | 1.4% |
| 1998 | 654,137€ | 8,493€ | 662,630€ | 1.3% |
| 1999 | 698,695€ | 10,371€ | 709,067€ | 1.5% |
| 2000 | 667,385€ | 10,644€ | 678,029€ | 1.6% |
| 2001 | 681,287€ | 11,710€ | 692,998€ | 1.7% |
| 2002 | 641,063€ | 12,663€ | 653,726€ | 1.9% |
| 2003 | 725,743€ | 13,705€ | 739,449€ | 1.9% |
| 2004 | 776,002€ | 13,568€ | 789,570€ | 1.7% |
| 2005 | 851,742€ | 15,346€ | 867,089€ | 1.8% |
| 2006 | 975,711€ | 17,824€ | 993,535€ | 1.8% |
| 2007 | 927,851€ | 19,231€ | 947,081€ | 2.0% |
| 2008 | 703,406€ | 18,544€ | 721,950€ | 2.6% |
| 2009 | 767,973€ | 17,136€ | 785,108€ | 2.2% |
| 2010 | 771,583€ | 15,474€ | 787,057€ | 2.0% |
| 2011 | 842,345€ | 14,917€ | 857,262€ | 1.7% |
| 2012 | 873,475€ | 14,098€ | 887,573€ | 1.6% |
| 2013 | 1,073,297€ | 17,099€ | 1,090,396€ | 1.6% |
| 2014 | 1,153,927€ | 36,624€ | 1,190,551€ | 3.1% |
| 2015 | 1,243,615€ | 37,232€ | 1,280,846€ | 2.9% |
| 2016 | 1,289,526€ | 36,483€ | 1,326,010€ | 2.8% |
| 2017 | 1,338,376€ | 39,954€ | 1,378,330€ | 2.9% |

TABLE A1: HOUSEHOLDS (HH) AND NON-PROFIT INSTITUTIONS SERVING HOUSEHOLDS (NPISH) NET WEALTH, 1995-2017

Notes: This table reports total household (HH) and non-profit institutions serving households (NPISH) net wealth over the period 1995-2017. These series are part of the Financial Accounts (ESA 2010) constructed by the Bank of Spain. Values are reported in millions of current euros and correspond to the wealth as of December of each year. The last column shows the NPISH net wealth as a share of total HH and NPISH net wealth.

**COMPOSITION OF HOUSEHOLD DEBT, 2002-2014**

| Year | Primary residence | Other real estate properties | Other |
|---|---|---|---|
| 2002 | 56% | 24% | 20% |
| 2005 | 57% | 24% | 19% |
| 2008 | 59% | 25% | 16% |
| 2011 | 63% | 24% | 13% |
| 2014 | 69% | 19% | 12% |

TABLE A2: COMPOSITION OF HOUSEHOLD DEBT, 2002-2014

Notes: This table reports the composition of household debt among total Spanish households over the period 2002-2014. These figures are part of the set of tables published by the Bank of Spain for each wave of the Survey of Household Finances (*Encuesta Financiera de las Familias*). All figures are presented in percentages.

**COLLECTIBLES AND CONSUMER DURABLES, 2002-2014**

| Year | Collectibles | Consumer durables | Collectibles (as a % of net household wealth) | Consumer durables (as a % of net household wealth) |
|---|---|---|---|---|
| 2002 | 12.5€ | 277.9€ | 0.5% | 11.5% |
| 2005 | 22.1€ | 381.1€ | 0.5% | 9.0% |
| 2008 | 24.9€ | 468.1€ | 0.5% | 9.1% |
| 2011 | 46.1€ | 501.1€ | 0.9% | 9.6% |
| 2014 | 40.7€ | 450.0€ | 0.8% | 9.2% |

TABLE A3: COLLECTIBLES AND CONSUMER DURABLES, 2002-2014

Notes: This table reports the value of collectibles and consumer durables (both in current billion euros and a as a share of net household wealth) for Spanish households using the five waves of the Survey of Household Finances (*Encuesta Financiera de las Familias*). Net household wealth includes collectibles and consumer durables.

**POPULATION IN BASQUE COUNTRY AND NAVARRE, 1984-2017**

| Year | Basque C. | Navarre | Spain | Share of Basque C. and Navarre |
|---|---|---|---|---|
| 1984 | 1,469,524 | 359,267 | 25,870,425 | 7.1% |
| 1985 | 1,487,232 | 363,769 | 26,218,074 | 7.1% |
| 1986 | 1,503,271 | 368,043 | 26,544,445 | 7.0% |
| 1987 | 1,519,163 | 372,389 | 26,882,512 | 7.0% |
| 1988 | 1,533,784 | 376,706 | 27,202,969 | 7.0% |
| 1989 | 1,547,408 | 380,890 | 27,504,179 | 7.0% |
| 1990 | 1,560,837 | 385,100 | 27,807,783 | 7.0% |
| 1991 | 1,575,548 | 389,597 | 28,146,601 | 7.0% |
| 1992 | 1,594,355 | 395,383 | 28,572,172 | 7.0% |
| 1993 | 1,612,639 | 401,358 | 29,006,070 | 6.9% |
| 1994 | 1,630,726 | 407,413 | 29,445,282 | 6.9% |
| 1995 | 1,648,294 | 413,780 | 29,892,316 | 6.9% |
| 1996 | 1,665,345 | 420,225 | 30,338,367 | 6.9% |
| 1997 | 1,681,104 | 426,477 | 30,773,981 | 6.8% |
| 1998 | 1,695,367 | 432,563 | 31,198,456 | 6.8% |
| 1999 | 1,706,891 | 437,976 | 31,588,436 | 6.8% |
| 2000 | 1,716,100 | 443,010 | 31,961,787 | 6.8% |
| 2001 | 1,724,472 | 448,252 | 32,324,508 | 6.7% |
| 2002 | 1,734,582 | 455,529 | 32,996,147 | 6.6% |
| 2003 | 1,745,690 | 463,057 | 33,701,837 | 6.6% |
| 2004 | 1,756,053 | 468,854 | 34,311,863 | 6.5% |
| 2005 | 1,767,124 | 475,169 | 35,029,779 | 6.4% |
| 2006 | 1,777,139 | 481,599 | 35,611,758 | 6.3% |
| 2007 | 1,789,102 | 491,297 | 36,326,756 | 6.3% |
| 2008 | 1,798,919 | 500,006 | 36,911,054 | 6.2% |
| 2009 | 1,803,560 | 505,345 | 37,198,908 | 6.2% |
| 2010 | 1,802,573 | 508,307 | 37,352,340 | 6.2% |
| 2011 | 1,799,876 | 510,305 | 37,483,204 | 6.2% |
| 2012 | 1,791,677 | 509,824 | 37,501,510 | 6.1% |
| 2013 | 1,780,653 | 507,282 | 37,370,637 | 6.1% |
| 2014 | 1,771,742 | 505,633 | 37,259,529 | 6.1% |
| 2015 | 1,765,572 | 505,253 | 37,213,754 | 6.1% |
| 2016 | 1,764,085 | 506,298 | 37,242,125 | 6.1% |
| 2017 | 1,764,019 | 508,302 | 37,313,732 | 6.1% |

TABLE A4: POPULATION IN BASQUE COUNTRY AND NAVARRE, 1984-2017

Notes: This table reports adult population (+20) in Basque Country, Navarre and Spain as a whole over the period 1984-2017. These series are part of the Population Census constructed by the Spanish National Statistics Institute (INE). Population numbers are reported as of July of the corresponding year. The last column shows the population of Basque Country and Navarre as a share of total population in Spain.

**GDP IN BASQUE COUNTRY AND NAVARRE, 1984-2016**

| Year | Basque C. | Navarre | Spain | Share of Basque C. and Navarre |
|---|---|---|---|---|
| 1984 | 10,711,713 € | 2,548,105 € | 159,107,276 € | 8.3% |
| 1985 | 11,889,708 € | 2,784,453 € | 185,562,266 € | 7.9% |
| 1986 | 13,416,706 € | 3,174,468 € | 207,859,033 € | 8.0% |
| 1987 | 14,320,808 € | 3,700,167 € | 230,913,179 € | 7.8% |
| 1988 | 15,573,600 € | 3,996,202 € | 256,013,669 € | 7.6% |
| 1989 | 17,622,997 € | 4,652,669 € | 287,944,680 € | 7.7% |
| 1990 | 19,320,165 € | 4,984,211 € | 322,168,878 € | 7.5% |
| 1991 | 21,008,180 € | 5,460,622 € | 354,233,905 € | 7.5% |
| 1992 | 22,191,176 € | 5,842,006 € | 382,953,981 € | 7.3% |
| 1993 | 22,802,495 € | 5,930,733 € | 395,249,891 € | 7.3% |
| 1994 | 24,133,280 € | 6,301,245 € | 423,161,918 € | 7.2% |
| 1995 | 28,171,465 € | 7,606,052 € | 459,337,000 € | 7.8% |
| 1996 | 29,564,913 € | 8,145,548 € | 487,992,000 € | 7.7% |
| 1997 | 31,495,610 € | 8,756,985 € | 518,049,000 € | 7.8% |
| 1998 | 34,032,038 € | 9,318,953 € | 554,042,000 € | 7.8% |
| 1999 | 36,801,733 € | 9,976,810 € | 594,316,000 € | 7.9% |
| 2000 | 40,711,377 € | 11,157,493 € | 646,250,000 € | 8.0% |
| 2001 | 43,591,343 € | 11,906,276 € | 699,528,000 € | 7.9% |
| 2002 | 46,167,184 € | 12,741,253 € | 749,288,000 € | 7.9% |
| 2003 | 48,879,847 € | 13,586,433 € | 803,472,000 € | 7.8% |
| 2004 | 52,130,831 € | 14,514,312 € | 861,420,000 € | 7.7% |
| 2005 | 56,211,666 € | 15,635,137 € | 930,566,000 € | 7.7% |
| 2006 | 60,937,706 € | 16,816,112 € | 1,007,974,000 € | 7.7% |
| 2007 | 65,091,957 € | 17,958,589 € | 1,080,807,000 € | 7.7% |
| 2008 | 67,698,141 € | 18,738,715 € | 1,116,225,000 € | 7.7% |
| 2009 | 64,935,346 € | 18,204,976 € | 1,079,052,000 € | 7.7% |
| 2010 | 65,680,491 € | 18,256,818 € | 1,080,935,000 € | 7.8% |
| 2011 | 65,176,367 € | 18,220,597 € | 1,070,449,000 € | 7.8% |
| 2012 | 63,818,464 € | 17,573,037 € | 1,039,815,000 € | 7.8% |
| 2013 | 62,647,749 € | 17,480,886 € | 1,025,693,000 € | 7.8% |
| 2014 | 63,895,891 € | 17,836,047 € | 1,037,820,000 € | 7.9% |
| 2015 | 66,482,288 € | 18,564,204 € | 1,079,998,000 € | 7.9% |
| 2016 | 68,817,210 € | 19,152,416 € | 1,118,522,000€ | 7.9% |

TABLE A5: GDP IN BASQUE COUNTRY AND NAVARRE, 1984-2016

Notes: This table reports GDP in Basque Country, Navarre and Spain as a whole over the period 1984-2016. These series are part of the National Accounts (ESA 2010, 1995 and 1986) constructed by the Spanish National Statistics Institute (INE). Values are reported in thousands of current euros. The last column shows the GDP of Basque Country and Navarre as a share of total GDP in Spain.

**PERSONAL INCOME TAX FILERS, 1999-2015**

| Year | Filers | Total adult population | Share of filers |
|---|---|---|---|
| 1999 | 18,521,709 | 29,443,569 | 62.9% |
| 2000 | 19,246,192 | 29,802,677 | 64.6% |
| 2001 | 19,757,147 | 30,151,784 | 65.5% |
| 2002 | 19,914,191 | 30,806,036 | 64.6% |
| 2003 | 20,371,413 | 31,493,090 | 64.7% |
| 2004 | 20,853,041 | 32,086,956 | 65.0% |
| 2005 | 21,364,900 | 32,787,486 | 65.2% |
| 2006 | 21,949,869 | 33,353,020 | 65.8% |
| 2007 | 22,659,298 | 34,046,357 | 66.6% |
| 2008 | 23,231,888 | 34,612,129 | 67.1% |
| 2009 | 23,099,973 | 34,890,003 | 66.2% |
| 2010 | 22,921,340 | 35,041,460 | 65.4% |
| 2011 | 23,067,189 | 35,173,023 | 65.6% |
| 2012 | 22,946,558 | 35,200,009 | 65.2% |
| 2013 | 22,735,378 | 35,082,702 | 64.8% |
| 2014 | 22,835,510 | 34,982,154 | 65.3% |
| 2015 | 22,882,152 | 34,942,929 | 65.5% |

TABLE A6: PERSONAL INCOME TAX FILERS, 1999-2015

Notes: This table reports the number of total personal income tax filers (adults +20) in Spain over the period 1999-2015. These series are constructed using personal income tax samples elaborated by the Spanish Institute of Fiscal Studies in collaboration with the Spanish Tax Agency. They exclude the regions of Basque Country and Navarre since they do not belong to the Common Fiscal Regime. Married couples filing jointly are split into two. The last column corresponds to the share of adult filers out of the total adult population (excluding Basque Country and Navarre). The series of total adult population excluding Basque Country and Navarre has been elaborated using the Population Census from the Spanish National Statistics Institute (INE).

**HOUSING WEALTH IN BASQUE COUNTRY AND NAVARRE, 1991-2003**

| Year | Basque C. | Navarre | Spain | Share of Basque C. and Navarre |
|---|---|---|---|---|
| 1991 | 80,254 € | 15,326 € | 1,434,772 € | 6.7% |
| 1992 | 89,112 € | 17,891 € | 1,494,667 € | 7.2% |
| 1993 | 91,363 € | 19,387 € | 1,495,370 € | 7.4% |
| 1994 | 86,893 € | 17,954 € | 1,485,696 € | 7.1% |
| 1995 | 96,844 € | 19,560 € | 1,552,800 € | 7.5% |
| 1996 | 99,357 € | 20,096 € | 1,590,087 € | 7.5% |
| 1997 | 103,350 € | 21,925 € | 1,624,967 € | 7.7% |
| 1998 | 108,096 € | 25,188 € | 1,704,580 € | 7.8% |
| 1999 | 120,912 € | 28,795 € | 1,936,482 € | 7.7% |
| 2000 | 146,528 € | 33,025 € | 2,254,074 € | 8.0% |
| 2001 | 183,971 € | 39,081 € | 2,637,006 € | 8.5% |
| 2002 | 206,595 € | 47,051 € | 3,130,569 € | 8.1% |
| 2003 | 233,529 € | 53,448 € | 3,715,702 € | 7.7% |

TABLE A7: HOUSING WEALTH IN BASQUE COUNTRY AND NAVARRE, 1991-2003

Notes: This table reports housing wealth in Basque Country, Navarre and Spain as a whole over the period 1991-2003. These series are included in Caixa Catalunya [2004] and were elaborated with data from the Ministry of Public Works. Values are reported in million of current euros. The last column shows the housing wealth of Basque Country and Navarre as a share of total housing wealth in Spain.

**HOME-OWNERSHIP RATIOS (PRIMARY RESIDENCES) IN SPAIN, 1970-2011**

| Year | Owner-occupied housing | Tenant-occupied housing | Other |
|---|---|---|---|
| 1970 | 63.4% | 30.1% | 6.5% |
| 1981 | 73.1% | 20.8% | 6.1% |
| 1991 | 78.3% | 15.2% | 6.5% |
| 2001 | 82.2% | 11.4% | 6.5% |
| 2011 | 78.9% | 13.5% | 7.6% |

TABLE A8: HOME-OWNERSHIP RATIOS (PRIMARY RESIDENCES) IN SPAIN, 1970-2011

Notes: This table reports the home-ownership ratios for primary residences in Spain over the period 1970-2011. These data come from the housing statistics collected by the Bank of Spain (*Indicadores del Mercado de la Vivienda*). They build the home-ownership ratio using the Census of dwellings of the Spanish Statistics Institute (INE), which is elaborated on a decennial basis. The category "other" mainly refers to dwellings whose owner has transferred the use to another person.

**IMPUTED NET HOUSEHOLD WEALTH, 1984-2015**

| Year | Primary residence | Investment funds | Pension funds | Life insurance | Total imputed wealth |
|---|---|---|---|---|---|
| 1984 | | 0.1% | 0.2% | 0.3% | 0.6% |
| 1985 | | 0.1% | 0.3% | 0.4% | 0.7% |
| 1986 | | 0.2% | 0.4% | 0.4% | 1.0% |
| 1987 | | 0.3% | 0.5% | 0.5% | 1.3% |
| 1988 | | 0.3% | 0.7% | 0.7% | 1.7% |
| 1989 | | 0.4% | 0.9% | 0.8% | 2.1% |
| 1990 | | 0.4% | 1.1% | 0.9% | 2.4% |
| 1991 | | 0.9% | 1.2% | 0.9% | 3.1% |
| 1992 | | 1.8% | 1.4% | 1.1% | 4.4% |
| 1993 | | 2.9% | 1.5% | 1.3% | 5.7% |
| 1994 | | 3.5% | 1.5% | 1.6% | 6.6% |
| 1995 | | 3.5% | 1.4% | 2.0% | 6.9% |
| 1996 | | 4.4% | 1.6% | 2.2% | 8.1% |
| 1997 | | 6.0% | 1.7% | 2.5% | 10.2% |
| 1998 | | 7.3% | 1.8% | 2.6% | 11.7% |
| 1999 | 35.7% | 7.0% | 1.9% | 2.8% | 47.4% |
| 2000 | 38.4% | 5.7% | 2.1% | 2.8% | 49.1% |
| 2001 | 40.6% | 4.6% | 2.3% | 2.7% | 50.3% |
| 2002 | 41.1% | 4.0% | 2.4% | 2.5% | 50.0% |
| 2003 | 41.9% | 3.7% | 2.5% | 2.2% | 50.3% |
| 2004 | 42.6% | 3.6% | 2.3% | 2.1% | 50.6% |
| 2005 | 42.7% | 3.6% | 2.2% | 2.0% | 50.5% |
| 2006 | 41.1% | 3.5% | 2.2% | 1.9% | 48.7% |
| 2007 | 38.5% | 3.2% | 2.1% | 1.8% | 45.7% |
| 2008 | 39.5% | 2.7% | 2.1% | 1.9% | 46.1% |
| 2009 | 36.3% | 2.5% | 2.3% | 2.1% | 43.2% |
| 2010 | 36.6% | 2.3% | 2.3% | 2.2% | 43.4% |
| 2011 | 36.3% | 2.1% | 2.3% | 2.2% | 43.0% |
| 2012 | 33.8% | 2.1% | 2.5% | 2.5% | 40.9% |
| 2013 | 31.9% | 2.7% | 2.7% | 2.7% | 40.0% |
| 2014 | 30.8% | 3.6% | 2.9% | 2.9% | 40.2% |
| 2015 | 30.7% | 4.3% | 2.9% | 3.0% | 40.9% |

TABLE A9: IMPUTED NET HOUSEHOLD WEALTH, 1984-2015

Notes: This table reports the share of assets out of total net household wealth that are not subject to the personal income tax and thus need to be imputed using survey data over the period 1984-2015. The most important asset is primary residence, which accounts for around 30-40% of total net household wealth. Imputed rents on primary residence were subject to the personal income tax before 1999, so that one needs to impute primary residence only after 1999. This table has been elaborated using the Financial Accounts from the Bank of Spain and the series of housing wealth of Artola Blanco et al. [2019].

**COMPARISON OF WEALTH AGGREGATES IN SPAIN, 2005**

| | Capitalization-Survey Method | Alvaredo & Saez (2009) | SHF |
|---|---|---|---|
| Net personal wealth | 4,877 € | 5,057 € | 3,853 € |
| Net non-financial assets | 3,524 € | 3,778 € | 3,396 € |
| Financial assets | 1,353 € | 1,279 € | 457 € |

TABLE A10: COMPARISON OF WEALTH AGGREGATES IN SPAIN, 2005

Notes: This table compares the wealth totals used for the capitalization technique with the ones used in Alvaredo and Saez [2009] and the SHF. The wealth totals of the capitalization technique are very similar to the ones used in Alvaredo and Saez [2009], but much larger than the ones of the SHF. This difference is mainly due to financial assets. Values are reported in current billion euros.

**WEALTH MOBILITY, 1999-2013**

| Year | Bottom 50% | Middle 40% | Top 10% |
|---|---|---|---|
| 1999 | 0.56 | 0.51 | 0.80 |
| 2000 | 0.60 | 0.53 | 0.76 |
| 2001 | 0.63 | 0.60 | 0.81 |
| 2002 | 0.64 | 0.60 | 0.80 |
| 2003 | 0.65 | 0.62 | 0.77 |
| 2004 | 0.66 | 0.62 | 0.77 |
| 2005 | 0.66 | 0.62 | 0.79 |
| 2006 | 0.67 | 0.62 | 0.78 |
| 2007 | 0.70 | 0.61 | 0.76 |
| 2008 | 0.68 | 0.63 | 0.77 |
| 2009 | 0.68 | 0.63 | 0.78 |
| 2010 | 0.68 | 0.64 | 0.80 |
| 2011 | 0.65 | 0.58 | 0.85 |
| 2012 | 0.65 | 0.68 | 0.72 |
| 2013 | 0.68 | 0.68 | 0.78 |

TABLE A11: WEALTH MOBILITY, 1999-2013

Notes: This table shows wealth mobility across years using a panel of personal income tax records over the period 1999-2014 elaborated by the Spanish Institute of Fiscal Studies. The wealth distribution series have been obtained using the same mixed capitalization-survey method as the one used to obtain the benchmark wealth distribution series. Columns show the wealth group and rows the initial year. Mobility is shown as the share of individuals who remain in the wealth group across subsequent years. For instance, 78% of individuals within the top 10% wealth group remain in this group in 2014.

**DIFFERENCES-IN-DIFFERENCES RESULTS**
**(positive interest income prior to the reform)**

| | (1) | (2) |
|---|---|---|
| Post | 0.853*** | 0.672*** |
| | (5.90) | (4.43) |
| Treat | 0.378** | |
| | (2.31) | |
| Post·Treat | 0.348** | 0.445*** |
| | (2.40) | (2.92) |
| Individual fixed effects | | X |
| N | 241,829 | 241,829 |

TABLE A12: DIFFERENCES-IN-DIFFERENCES RESULTS (positive interest income prior to the reform)

Notes: The figure shows the evolution of labor income (panels A?B) and capital income (panel C) between 1982? 1993 for groups that were affected differently by the 1987 reform. The figure is based on a balanced panel of individuals who are observed throughout the period. The vertical line at 1986 denotes the last pre-reform year (as the reform was passed in parliament during 1986 and changed tax rates starting from 1987), and income levels in 1986 are normalized to 100 in all groups. The treatment-control definition is based on the reform-induced tax variation for the different groups shown in Figure 3 (1986?1989 change for labor income and positive capital income), with treatments (controls) being an aggregation of groups who experience an increase (decrease) in the marginal net-oftax rate due to the reform. Panel B splits the treatment group for labor income into those who experience the largest net-of-tax rate increases (Treatment L excludes the ?stay middle? group in Figure 3) and those who experience smaller net-of-tax rate increases (Treatment S is the ?stay middle? group in Figure 3). All panels show that income trends are very parallel in the years prior to the reform and then start to diverge precisely in 1987, the first year of tax cuts on the treatment groups. Most of the effect of the tax reform materializes within three years. The figure reports difference-in-differences estimates of the elasticities of taxable labor and capital income, comparing treatment and control groups over the three-year interval 1986?1989. The estimates DDL and DDS in Panel B refer to treatment L and treatment S, respectively. The DD estimates in all panels are based on 2SLS regressions of log income on an after-reform time dummy, a treatment-group dummy, and the log marginal net-of-tax rate, the latter variable being instrumented by the interaction between the after-reform and treatment-group dummies.

# Appendix References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