

The Distribution of Wealth in Spain: Evidence from Capitalized Income Tax Data

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Outline

1. Introduction

- Motivation
- Literature Review

2. Wealth : Definition, Data and Trends

- Wealth Concept and Data Sources
- Aggregate Wealth Stylized Facts (1990-2013)

3. The Income Capitalization Approach

4. Trends in the distribution of wealth before and after the Housing bubble

5. Comparison of Results with Previous Studies

6. Conclusion

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Motivation (I)

- ▶ Evolution of wealth inequality : center of academic and political debate
- ▶ Piketty (2014) : importance of analyzing empirically the historical evolution of wealth distributions
- ▶ Evidence still scarce
- ▶ Main methods to analyze wealth inequality
 - ▶ Estate multiplier method
 - ▶ Survey-based method
 - ▶ Wealth tax returns
 - ▶ Lists of high-wealth individuals (annual Forbes 400)
 - ▶ Investment income approach
 - ▶ Hybrid methods

→ **Conflicting results depending on the method**

Motivation (II)

- ▶ **Aim of this research** : analyze wealth inequality in Spain using tax micro-data and the investment income method (2002-2011)
- ▶ **Contribution**
 - 1 Careful estimation of the evolution of Spanish wealth shares for the top half of the distribution
 - 2 Analysis of the distributional effects of the huge increase in aggregate wealth due to the boom in housing prices
 - 3 Comparison of our wealth shares with the shares using wealth tax returns

Literature Review

- ▶ Wealth tax returns
 - ▶ Alvaredo and Saez (2009)
 - ▶ Durán-Cabré and Esteller-Moré (2010)
- ▶ Survey of Household Finances
 - ▶ Azpitarte (2010)
 - ▶ Bover (2010)
 - ▶ OECD (2015)
- ▶ Inheritance tax statistics
 - ▶ Alvaredo and Artola (2015)

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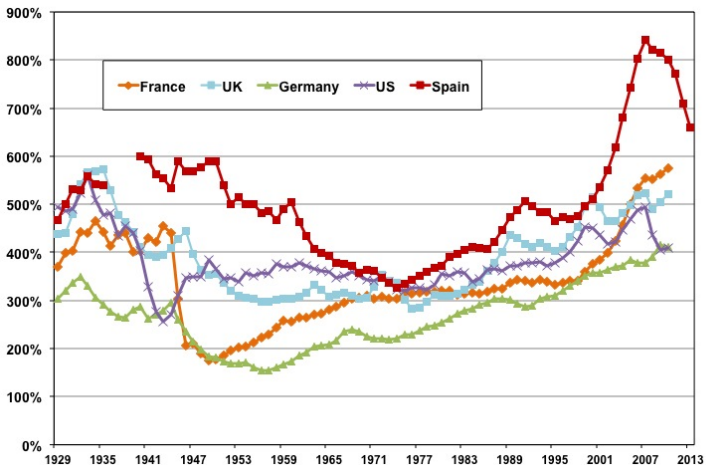
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Wealth Concept and Data Sources

- ▶ Wealth : current market value of all the financial and non-financial assets owned by households net of all their debts (SNA, 2009)
- ▶ Financial wealth
 - ▶ Latest Financial Accounts (SEC 2010, Bank of Spain) for 1996-2014
 - ▶ Previous Financial Accounts (SEC95, Bank of Spain) for 1990-1995
- ▶ Non-financial wealth
 - ▶ Housing wealth : Housing Market Indicators statistics (Bank of Spain, 2015) for 1987-2014
 - ▶ Business assets from self-employment : Survey of Household Finances (Bank of Spain, 2002, 2005, 2008 and 2011)
 - ▶ Exclusion of collectibles and consumer durables

Historical Evolution of Aggregate Wealth

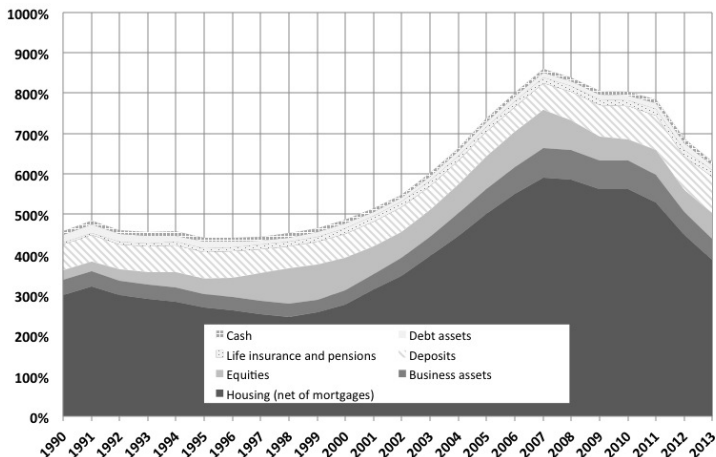
Wealth-Income ratios in advanced economies



Source : Artola et al. (2015) and Piketty and Zucman (2014)

First and Second Stylized Facts (1990-2013)

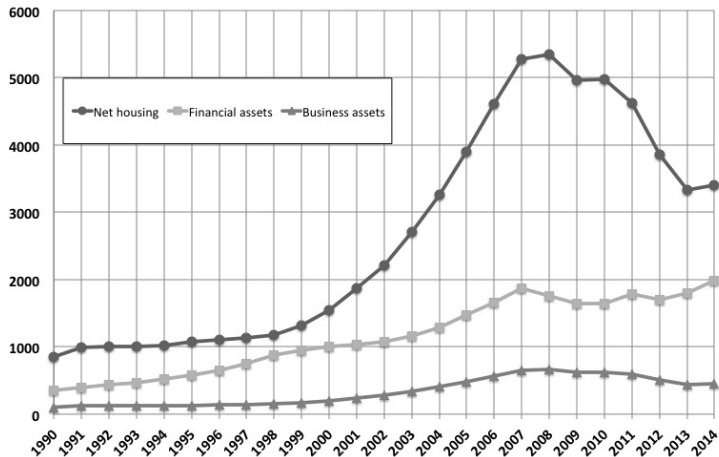
The composition of household wealth to national income in Spain



Source : Own elaboration with Data from Bank of Spain

Third Stylized Fact (1990-2013)

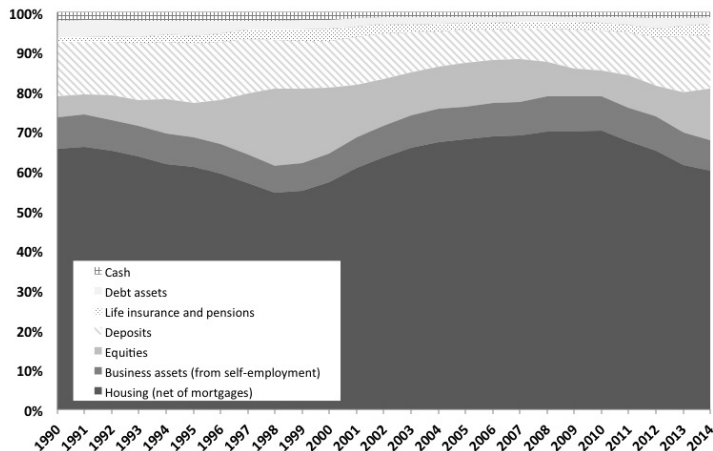
The composition of household wealth in Spain



Source : Own elaboration with Data from Bank of Spain

Fourth Stylized Fact (1990-2013)

The composition of household wealth in total household wealth



Source : Own elaboration with Data from Bank of Spain

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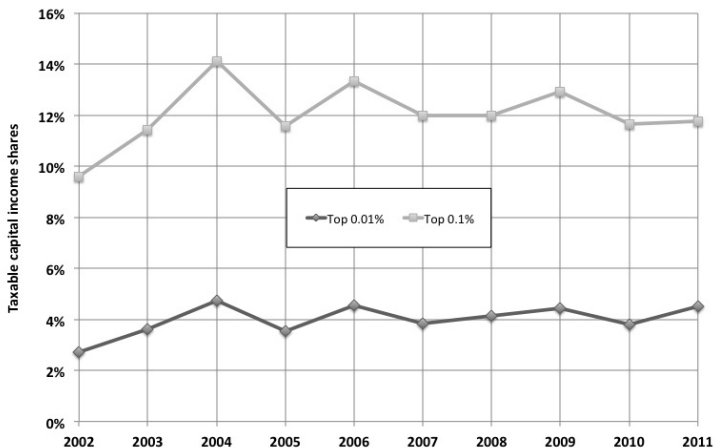
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First step : Distribution of Taxable capital income (I)

- ▶ Use of personal income tax samples (Spanish Institute of Fiscal Studies, 2002-2011)
 - ▶ Large sample of taxpayers
 - ▶ Detailed income categories
 - ★ Interests
 - ★ Dividends
 - ★ Real rents
 - ★ Life insurance income
 - ★ Business income
 - ▶ Exclusion of País Vasco and Navarra
- ▶ Units of analysis : Individuals
- ▶ Population of interest : aged 20 or above

First step : Distribution of Taxable capital income (II)

The Top 0.1% and Top 0.01% Taxable Capital Income Shares



Source : Own elaboration with Data from Bank of Spain

Second step : Capitalizing taxable income

- ▶ **Investment Income method** : application of a capitalization factor to the distribution of taxable capital income to arrive to an estimate of the wealth distribution
 - ▶ Map each income category to a wealth category in the Financial and Non-financial Accounts from the Bank of Spain
 - ▶ Compute for each category a capitalization factor as the ratio of aggregate wealth to tax return income
 - ▶ Within a given asset class everybody has the same capitalization factor

Third step : Accounting for wealth that does not generate taxable capital income

- ▶ Assets whose generated income is not subject to the personal income tax : Main owner-occupied housing, investment funds and pensions
- ▶ Survey of Household Finances (SHF, Bank of Spain)
 - ▶ Representative picture of the structure of household incomes, assets and debts at the household level
 - ▶ Oversampling of wealthy households
- ▶ Imputation method : Allocate assets in such a way as to match the distribution of wealth for each of these assets in the 2002 SHF
 - ▶ Construct same groups of individuals by labor and capital income with the SHF and tax data
 - ▶ Calculate share of the total value of the asset that corresponds to each group with the SHF
 - ▶ Use shares to obtain the amount of each asset type from Financial Accounts and Non-financial Accounts that corresponds to each group

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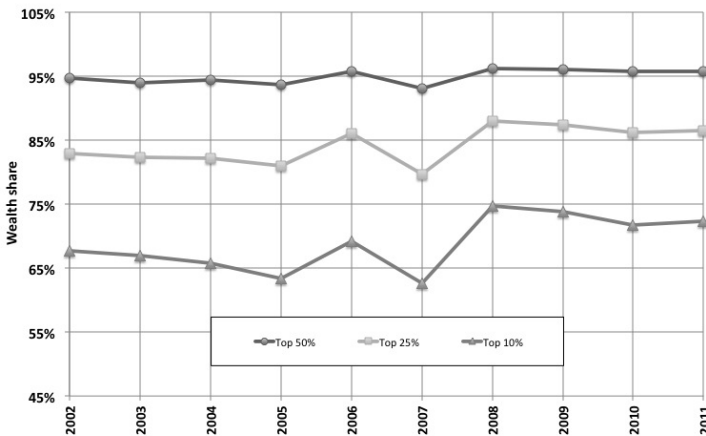
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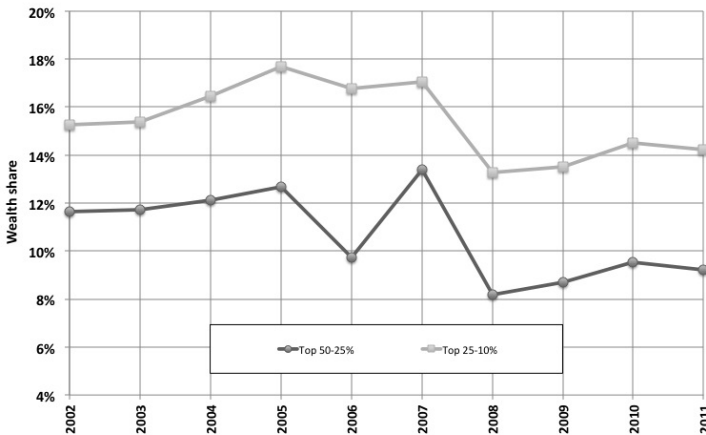
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Top 50%, 25% and 10% Wealth Shares (2002-2011)



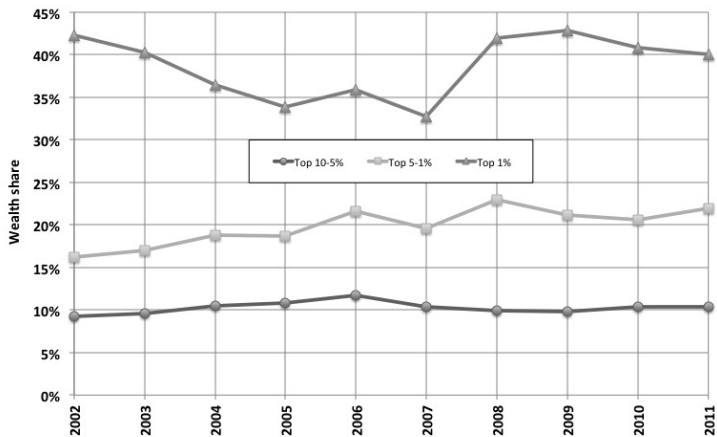
Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

Top 50-25% and 25-10% Wealth Shares (2002-2011)



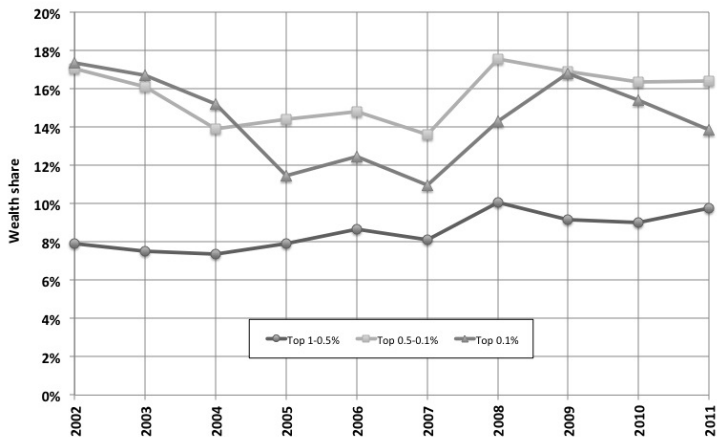
Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

Top 10-5%, 5-1% and 1% Wealth Shares (2002-2011)



Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

Top 1-0.5%, 0.5-0.1% and 0.1% Wealth Shares (2002-2011)



Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

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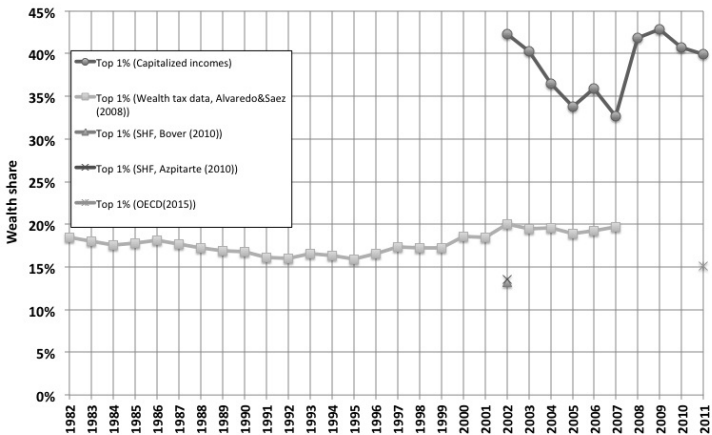
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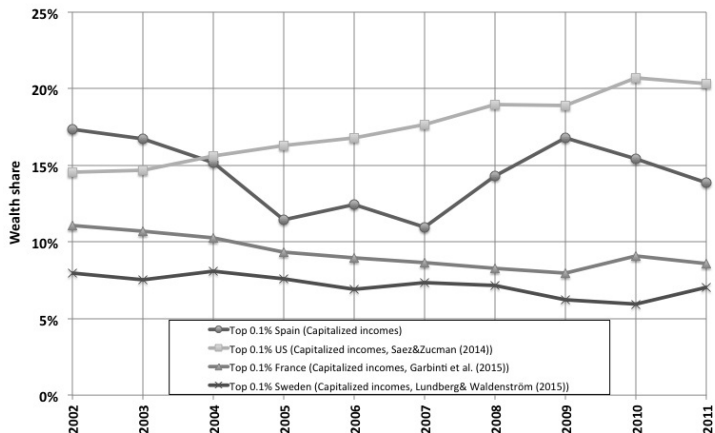
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Capitalized Data vs. Wealth Tax vs. SHF



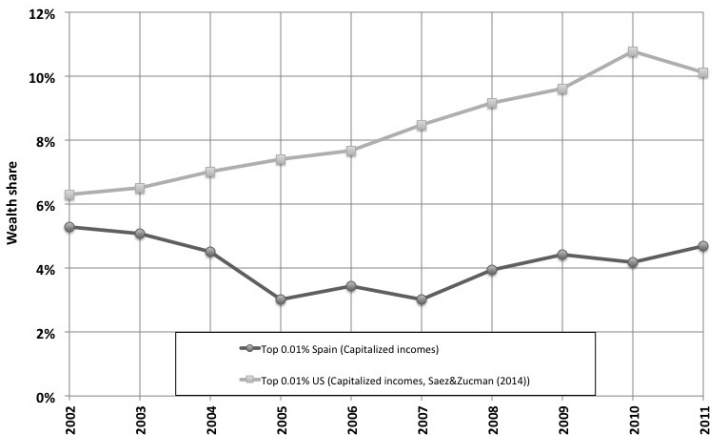
Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

Spain vs. France vs. Sweden vs. US : The Top 0.1% Wealth Share



Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

Spain vs. US : The Top 0.01% Wealth Share



Source : Own elaboration with Personal Income Tax Samples from the Spanish Institute of Fiscal Studies

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Conclusion

- ▶ Two striking results
 - ▶ Generalized drop in wealth concentration at the beginning of the boom, increase at the end of the expansion and the burst of the crisis and subsequent slight decline in concentration until 2011
 - ▶ Increase in wealth concentration was a phenomenon concentrated within the top 10 to 0.5%
 - ★ Dramatic increase in real estate prices benefited upper (but not very top) wealth holders
- ▶ Important differences between our wealth shares and the series obtained by previous studies using wealth tax and household survey data

Ongoing work..

- ▶ Cover period 1982-2011
- ▶ Robustness checks for results and methodology
 - ▶ Construction of series with the same definition of wealth using SHF and wealth tax returns
 - ▶ Calculation of individual rate of returns using wealth tax returns and SHF
 - ▶ Analysis of the correlation between the distribution of income and wealth for each category using SHF
- ▶ Decomposition of wealth shares by gender and asset type

Thank you for your attention !