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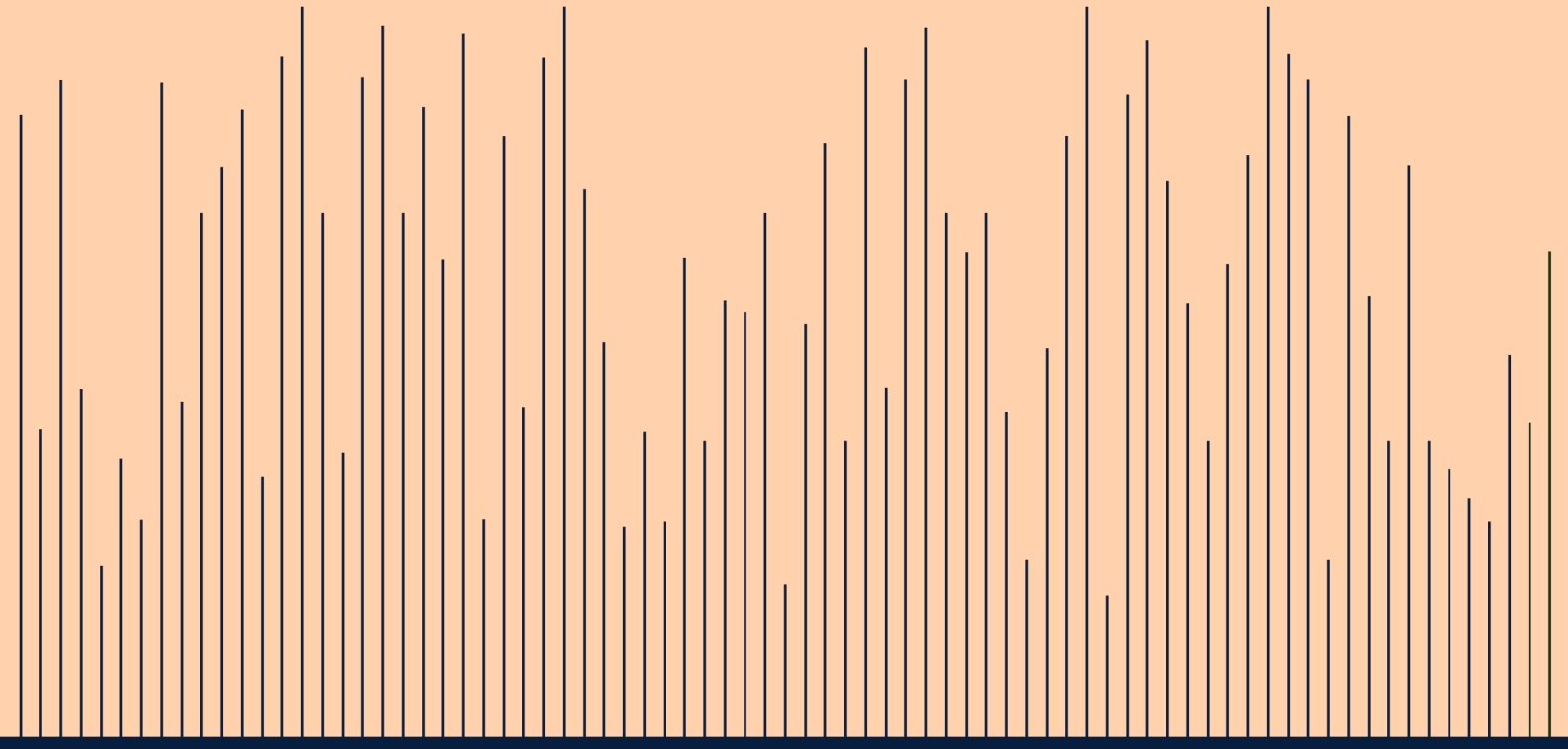

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Carmen Durrer de la Sota†

November 2026

Work in progress. Estimates are preliminary and subject to revision.

Abstract

Combining publicly available data with personal tax micro-data for 2023, we document the wealth, income and taxes of Spain's billionaires. We find that Spain's billionaires pay about 0.12% of their wealth in individual wealth and income tax in 2023. The total effective tax rate, adding all taxes paid and dividing by economic income, equals 24%, compared with 45% for the overall population. We highlight two mechanisms that drive relatively low effective tax rates of Spain's billionaires. First, the taxable individual income of Spain's billionaires amounts to about 4.3% of their economic income in 2023 as billionaire-owned holding companies shield about 92% of dividend distributions from individual income taxation. Second, the effective wealth tax rate amounts to about only 0.04% of *Forbes* wealth in 2023, mainly due to undervaluation and tax-exemption of billionaire-owned assets. Simulating a minimum tax of 2% on wealth of high net worth individuals we estimate that such a tax could raise between 2.5€ bn and 7.9€ bn in revenue depending on the choice of the base and compliance. Finally, we stress that our estimates are provisional based on combining publicly available data with personal tax micro-data and that they could be further improved using administrative data.

* Jasper Boll provided invaluable support in the measurement of income and taxes paid by billionaires.
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List of Abbreviations

AEAT	Spanish Tax Administration (Agencia Estatal de Administración Tributaria)
CNMV	National Securities Market Commission
DINA	Distributional National Accounts
EFF	Encuesta Financiera de las Familias
ESA	European System of Accounts
IBI	Property tax (Impuesto sobre Bienes Inmuebles)
IEF	Spanish Fiscal Studies Institute (Instituto de Estudios Fiscales)
INE	National Statistics Institute
IP	Wealth tax (Impuesto sobre el Patrimonio)
IRPF	Personal income tax
ITSGF	Impuesto Temporal sobre las Grandes Fortunas
MCVL	Muestra Continua de Vidas Laborales
PdH	Panel de Hogares
RTB	Forbes Real-Time Billionaires
SSC	Social Security contributions

1 Introduction

The taxation of the ultra-wealthy has become central to the policy debate across the globe, as a result of their rapidly rising wealth, stagnating incomes among average citizens, and new evidence shedding light on the low taxes rates they appear to face in most countries. In Spain, the topic has also reached the political debate in recent months, yet little is known about how much tax Spain's billionaires pay.

We attempt to shed light on this question and on the overall progressivity of the Spanish tax system by combining publicly available data on billionaires' company ownership and wealth from Forbes, with tax micro data for the year 2023. We find that Spain's billionaires pay about 0.12% of their *Forbes* wealth in personal income and wealth taxes. Adding all taxes paid, including the corporate taxes of the firms they own, their total effective tax rate equals 24% of their economic income, compared with 45% for the overall population. Two mechanisms drive this gap: Billionaire-owned holding companies shield about 92% of dividend distributions from the personal income tax, so that billionaires' taxable income amounts to only 4.3% of their economic income. They also face very low wealth tax rates, amounting to only 0.04% of their *Forbes* wealth, mainly because most of their assets are exempted and undervalued in the wealth tax' valuation rules.

Our paper inscribes itself in the growing literature on effective tax rates along the income distribution (Bruil et al., 2022; López Laborda et al., 2026; Piketty et al., 2018; Saez and Zucman, 2026), and in particular on the taxes paid by billionaires (Bach et al., 2025; Balkir et al., 2025; Ring et al., 2026). Most of these studies rely on links between firms and their owners, which are unfortunately not available to us outside of the listed holdings of the billionaire group. The standard alternative using personal income tax data, the Distributional National Accounts (DINA, Piketty et al., 2018) approach, allocates firms' undistributed profits on the basis of dividends declared in tax returns. However, this approach has been shown to significantly underestimate the true economic income of the wealthiest households (Alstadsæter et al., 2025; Bach et al., 2025; Bruil et al., 2022), and is thus not suited for this type of exercise. This is because the wealthiest households receive a much smaller share of their firms' profits as taxable dividends than less wealthy shareholders and firm owners. In part, this reflects the widespread use of holding companies by high net worth individuals, through which a significant share of the dividends paid out by operating firms never reaches personal income tax returns (Ring et al., 2026). We attempt to overcome this key limitation of the standard DINA approach in two main ways. First, we link the Forbes Real-Time Billionaires to their listed and private firms and to those firms' accounts. Since the data agreement does not allow us to identify individuals, we match the 24 billionaires to the 24 filers with the highest declared net wealth in the Panel de Hogares. Second, we distribute the remaining retained earnings and corporate taxes according to our reconstructed measure of equity ownership along the income distribution, rather than according to declared dividends. As a result, we observe in Spain the same regressivity of the tax system at the very top that studies using comprehensive firm ownership links have documented for France, the Netherlands, Norway, and Sweden (Bach et al., 2025; Bruil et al., 2022; Ring et al., 2026).

Our estimates should nonetheless be taken as a preliminary approximation, especially for the wealthiest households outside the billionaire group. Because we do not have full firm ownership data or corporate tax returns, our allocation of retained earnings and corporate taxes is noisier

than in the studies mentioned above. A study based on such links therefore remains necessary to obtain the most accurate picture of the distribution of income and taxes in Spain. Furthermore, our estimates presented here rely on a representative sample of tax filings rather than those of the entire population, which forces us to be cautious about exact amounts given for billionaires' tax returns information. Where this is of particular importance, we bound our estimates based on the information available from full population AEAT statistics and the sample's design. None of our main conclusions change significantly within those bounds. In our central scenario, we estimate that Spain's billionaires pay 0.12% of their Forbes wealth in individual income and wealth taxes in 2023, with an upper bound estimate of 0.24%.

The paper is organized as follows: Section 2 describes our data, Section 3 details our methodology to retrieve billionaire profits and estimate income and taxes for the rest of the distribution. Section 4 reports our estimates of effective tax rates along the income distribution and documents the core mechanisms behind the observed regressivity. Section 5 provides our estimates of revenue for a minimum tax on wealth.

2 Data

2.1 Rich Lists

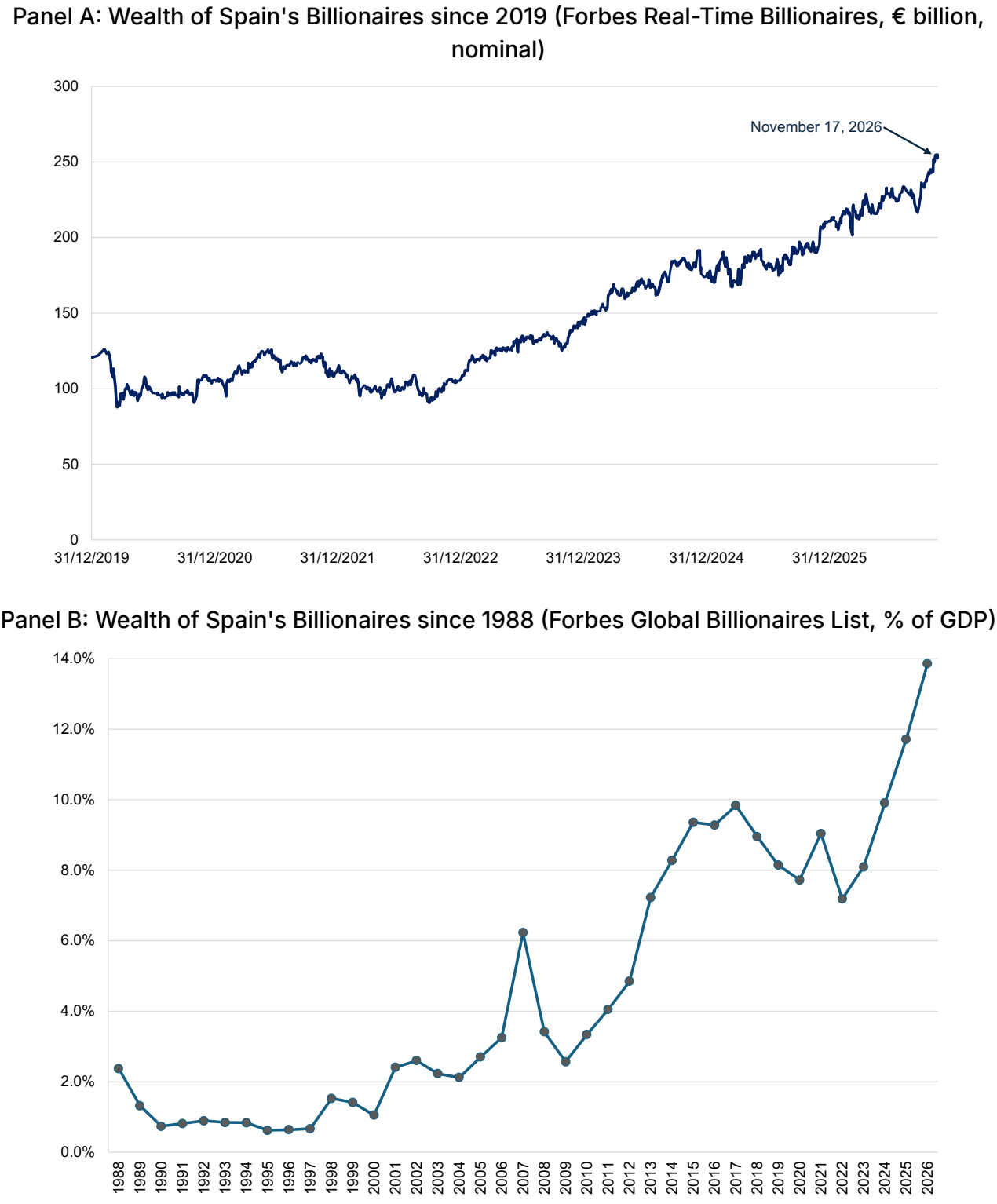
Our main data source for billionaire wealth is *Forbes* Real-Times Billionaires (RTB) list which provides daily estimates on the wealth of Spain's billionaires since 2019. For longer-run estimates, we use *Forbes* "The World's Billionaires" list which is an annual ranking of global billionaires published since 1987. Forbes uses various sources to estimate billionaire wealth, including official documents (regulatory and court filings) as well as journalistic sources. To estimate ownership of publicly traded corporations, Forbes mainly relies on beneficial ownership statements that major shareholders and executives of firms listed on Spanish stock exchanges must disclose with the National Securities Market Commission (CNMV). In 2023, Forbes estimates that 66.4% of Spain's billionaire wealth is in the form of shares in publicly traded corporations. The Forbes RTB data indicates the country of citizenship of each billionaire. Our billionaire group of interest is Spanish-citizen billionaires who are residents of Spain.[1]

Panel A in Figure 1 shows the short-run wealth growth of Spain's billionaire wealth since 2019. In nominal terms, Spain's billionaire wealth has grown from € 121 billion at the end of 2019 to € 210 billion at the end of 2025, which implies an annual nominal wealth growth rate of 9.7%. The top wealthiest billionaire in Spain, Amancio Ortega (Inditex), accounts for 59% of total Spain billionaire wealth in December 2025. In November 2026, our most recent observation, there are 41 billionaires who reside in Spain with combined wealth of € 252 billion.

Panel B in Figure 1 depicts the long-run wealth growth of Spain's billionaire wealth since 1988. To account for price inflation and economic growth over that period, we compare Spain's billionaire wealth relative to GDP. Relative to GDP, Spain's billionaire wealth has increased over recent decades from 2.5% in 1988 to 14% in 2026.

1. We manually verify the residence of Spain's billionaires in year 2023. Of the 27 Spanish-citizen billionaires in Forbes RTB in 2023, we drop three billionaires from our sample, who we identify as foreign residents (Daniel Mate, Jose Maria Aristrain and Carmen Thyssen).

Figure 1: Wealth of Spain's Billionaires in Forbes

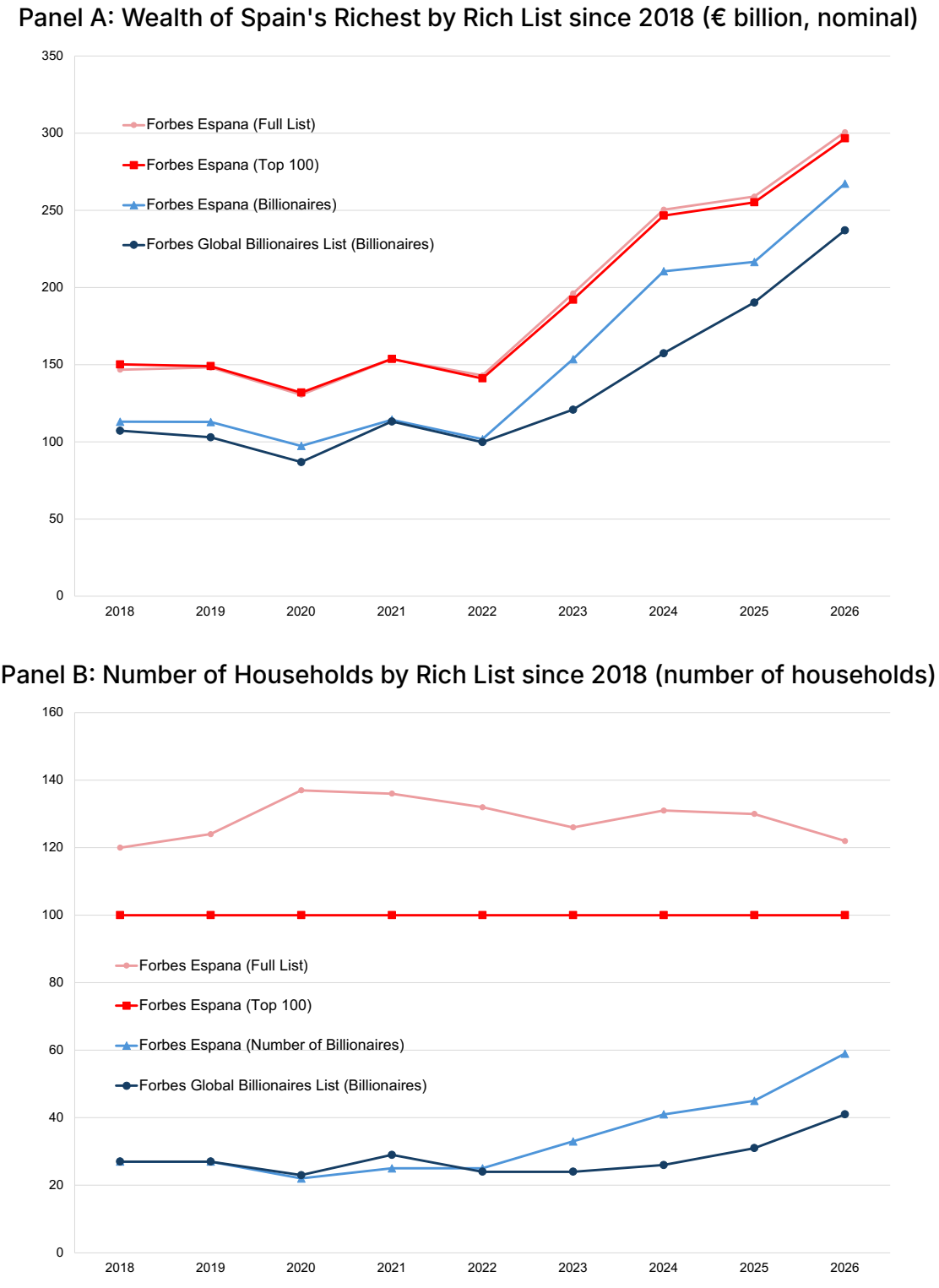


Notes: This figure shows the evolution of billionaire wealth using Forbes data. Panel A depicts the nominal evolution of billionaire wealth in Spain between December 2019 and November 2026. Spain billionaire wealth has grown from €120 billion at the end of 2019 to €211 billion at the end of 2025, which implies an annual nominal wealth growth rate of 9.7%. In November 2026, there are 41 billionaires in Spain with combined wealth of €252 billion. Panel B depicts the longer-run evolution of billionaire wealth in Spain since 1988 relative to Spain's GDP. Relative to GDP, Spain's billionaire wealth has increased over recent decades from 2.5% in 1988 to 14% in 2026.

We also compare wealth levels and growth according to the *Forbes* billionaire lists described above to the *Forbes España* list of the 100 richest Spaniards which covers a larger group of the top wealthiest Spaniards.

Figure 2 compares the evolution of wealth and the number of households of Spain's Richest in different rich lists provided by Forbes. In both panels, the dark blue series shows values from Forbes Global Billionaires List, the light blue series shows values from Forbes España rich list (restricted to billionaires), the dark red series shows values from Forbes España rich list (restricted to the top 100 richest), and the light red series shows values from Forbes España rich list (full list). Panel A in Figure 2 depicts the nominal evolution of wealth in Spain between 2018 and 2026. Panel B in Figure 2 depicts the evolution of the number of households by rich list in Spain between 2018 and 2026. In recent years, the number of billionaires and billionaire wealth in Forbes España (light blue series) is higher than that in the Forbes Global Billionaire List (dark blue series) which suggests that the Forbes Global Billionaire list is a conservative measure of billionaire wealth in Spain relative to the Forbes España list.

Figure 2: Wealth of Spain's Richest By Rich List



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2.2 Company Financials

We retrieve annual income statements and balance sheets data of publicly traded corporations owned by Spain's billionaires from Compustat North America and Compustat Global Fundamentals Database. Information on the daily stock prices ($prccd$) and shares outstanding ($cshoc$) of publicly traded corporations is obtained through Compustat's Daily Database. We use the Compustat Daily data to compute the market capitalization of firms as well as firm-level ownership shares of Spain's billionaires, as detailed in Section 3.1.1. Our variables of interest in the Compustat Fundamentals data are the consolidated pre-tax income (pi), consolidated current corporate income tax expense (txc), and dividends distributed (dv), which we pro-rate to firm-level ownership shares. For a given calendar year, we use the Compustat Fundamentals data of the corresponding fiscal year.

The Compustat data does not provide a break-down of corporate income taxes into domestic corporate income tax expense, and corporate income tax expense in foreign jurisdictions. To provide such a break-down, we manually retrieve information from the firms' published annual income statements for fiscal year 2023. For firms that we cannot identify in our manual search, we conservatively assume that the share of domestic corporate income tax expense equals 100%.

Separately from the data on publicly traded corporations, we obtain financial statements data of private firms from BvD Orbis Database. We use the Orbis ownership data to identify ownership shares of Spains' billionaires in private firms, and we use the financial statements data to estimate pro-rated consolidated pre-tax income and corporate taxes owed.

2.3 Administrative Tax and Social Security Records: Panel de Hogares (PdH) and Muestra Continua de Vidas Laborales (MCVL)

Our information on taxable income, wealth and personal taxes comes from the Panel de Hogares (2016–2023), published by the Spanish Fiscal Studies Institute (IEF) in collaboration with the Spanish Tax Administration (AEAT) and the National Statistics Institute (INE), and from the corresponding sample of Social Security records, the Muestra Continua de Vidas Laborales (MCVL).[2] The panel is drawn from the whole population, personal income tax filers and non-filers, but excludes residents in the Basque Country and Navarre, which have their own tax administrations. It covers a representative sample of 3.6 million individuals in 2023 (2.7 million in 2019), around 7% of the Spanish population, with strong oversampling of high-income households: 90% of households with gross income above €300,000 are in the sample.

For the sample, the dataset contains the full personal income tax returns, the wealth tax returns of wealth tax filers (about 229,000 in 2023, less than 1% of income tax filers) and detailed Social Security records. It also contains information on income and wealth from additional records collected by the AEAT, such as bank and employer reports and cadastral records, including for those who do not file wealth or income tax returns. These third party reports do not cover unlisted shares, which are only observed for wealth tax filers.

2. See Instituto de Estudios Fiscales (2025) for details on the sampling and on how the sample compares with official tax statistics.

2.4 Wealth survey: Encuesta Financiera de las Familias (EFF)

We complete the tax data with the EFF survey produced by the Banco de España (Spanish National Bank), as in previous studies of the wealth distribution in Spain (Marrero et al., 2025; Martínez-Toledano, 2023). The survey was run every three years until 2017 and has been run every two years since 2020. We take the wave closest to our year of study, 2022 as reference for 2023, as the 2024 micro-data are not yet available to researchers. The wave covers about 6,385 households, with oversampling of wealthy households, which are selected using wealth tax data from the AEAT (Banco de España, 2022, 2024). It contains detailed information on self-reported wealth by component, including unlisted shares.[3]

2.5 National Accounts and Tax Revenue Aggregates

We complement the micro data with national accounts and official tax revenue statistics for 2023. National Accounts totals are taken from the annual sector accounts of the National Statistics Institute (INE), compiled under the European System of Accounts (ESA 2010), which report the income of households by component and the undistributed profits of corporations. Tax revenue totals come from the administration that collects each tax: the AEAT for the personal income tax, the corporate income tax, the wealth tax and VAT, the Ministry of Finance for the taxes collected by the autonomous regions, and the Cadastre for the property tax. Social security contributions and the remaining indirect taxes are from the government accounts and Eurostat's National Tax List. Since the tax microdata in the Panel de Hogares excludes the Basque Country and Navarre, we restrict all totals to the rest of Spain, which accounts for 92.5% of Spanish GDP in 2023. Appendix Table 9 reports them next to the corresponding totals in the microdata. How we use them differs across income components and taxes and is described in Section 3.2. The full set of aggregates, with their sources, is available in an appendix file on request.

3 Methodology

3.1 Billionaires Wealth, Income and Taxes

Our analysis of Spain's billionaires wealth, income and taxes proceeds in three main steps which we outline below. First, we identify the wealth and number of Spain's billionaires using the Forbes RTB list. We estimate pro-rated corporate income and corporate taxes of Spain's billionaires by linking the Forbes RTB data to Compustat data for income derived from publicly traded corporations. We combine Orbis data on ownership of private companies with a simple scaling assumption using the rate of return form publicly traded corporations, to estimate corporate income and taxes from private companies. Second, we estimate individual fiscal income and fiscal income taxes of Spain's billionaires by matching the Forbes RTB data to Panel de Hogares data ranked by declared net wealth. Third, by combining this data, we can estimate economic income and taxes.

3. See Banco de España (2024) for details on the survey design, weights and imputation.

3.1.1 Billionaires' Firm Ownership Shares

The Forbes RTB data provides information on shares owned in publicly traded corporations at the share-class level. In 2023, Forbes RTB finds that Spain's 24 billionaires hold shares in 91 publicly traded corporations. We merge the Forbes RTB data, at year-end, to Compustat Daily data at the share-class level and compute share class equity stakes as the product of the number of shares owned and the daily closing price per share. Then, firm-level equity stakes are computed by summing equity stakes across share classes for a given firm-individual pair. On the firm-level, we compute share-class market capitalization as the product of the number of shares outstanding and daily closing price per share and we sum across share classes to obtain the firm-level market capitalization. Then, firm-level ownership shares in publicly traded corporations are computed by dividing firm-level equity stakes by firm-level market capitalization. We verify our estimates for firm-level ownership shares against beneficial ownership statements filed with CNMV, and we correct 11 ownership shares manually.[4] In 2023, we are able to match 100% of wealth in publicly traded corporations according to Forbes RTB to Compustat data.
While the Forbes RTB data has detailed information on ownership of publicly traded corporations which can be readily verified, it does not contain information on ownership of private, unlisted, corporations. We therefore resort to Orbis ownership data to identify ownership of private corporations by Spain's billionaires. We measure the market capitalization of these private corporations as the corporations' book equity, and we restrict our analysis to large private wealth holders for which private wealth (the product of firm-level ownership share and book equity) is larger than private wealth according to Forbes. We identify ownership of two Spanish billionaires in private corporation Mercadona SA with a combined private firm ownership worth €6.5 billion in 2023 (i.e. 13.3% of the combined private wealth of all Spanish billionaires in Forbes in 2023).

3.1.2 Corporate Income and Corporate Taxes of Billionaire-Owned Firms

Pro-rated pre-tax corporate income pi, current corporate income taxes due txc, and dividends distributed dv are computed as the product of firm-level ownership share and the respective variable in Compustat (in italics). In 2023, we estimate that the rate of return on public stock wealth held by Spain's billionaires equals 6%. The effective corporate income tax rate on the corporate income derived publicly traded stock equals 22.1% in 2023. Excluding Ortega's stake in Inditex, which accounts for 76% of all public stock wealth held by Spain's billionaires in 2023, yields a rate of return on public stock wealth of 7% and an average effective corporate income tax rate of 25.4% in 2023. For the private firm ownership in Mercadona SA, we estimate a rate of return of 15.8% and an effective corporate income tax rate of 23.3% in 2023.[5]
While we obtain rates of return and effective corporate income tax rates for 71% of Forbes wealth in 2023 using Compustat and Orbis data, we lack information on firm ownership and rates of

4. For example, our estimate for Amancio Ortega's ownership share in Inditex is equal to 59.29% in 2023, which reconciles with his beneficial ownership of 59.294% reported to CNMV in that year. See https://www.cnmv.es/webservices/verdocumento/ver?e=JEqg3cW9eVtE1zGi8Wng1M751IYDIddB5BMiSaR0C0DAeVNxCRAwLPil3Xzyzk3.

5. This high rate of return of 15.8% likely suggests that using book equity underestimates the true market capitalization of a firm and that Forbes likely applies a large liquidity discount to the wealth held in private corporations.

return for the residual 29% of Forbes wealth. We therefore make a simple scaling assumption, by assuming that the rate of return on the residual private Forbes wealth is equivalent to the rate of return of 6% that we observe for the publicly traded Forbes wealth. In our view, this is a conservative assumption as we obtain a much higher rate of return of 15.8% for the observed private wealth.

3.1.3 Individual Fiscal Income and Fiscal Taxes of Billionaires

We match the 24 Billionaires in Forbes RTB in 2023 to the 24 wealthiest households in Panel de Hogares (ranking by total net declared wealth). The Panel de Hogares data includes information on declared wealth, individual fiscal income (labor and capital income), fiscal income taxes and wealth taxes paid. The match of Forbes data to Panel de Hogares has strengths and limitations. On the one hand, the information on declared wealth in Panel de Hogares allows us to match by wealth which is more precise than matching by income as the top income earners are not necessarily the top wealth holders. Moreover, Panel de Hogares highly over-samples high-income households (see Section 2.3) which increases the probability that we observe the incomes of billionaires. On the other hand, as we do not match at the individual level, which is not permitted by the data agreement, it is unlikely that we have a perfect match of all individual in Forbes RTB to Panel de Hogares. We hence produce estimates with alternative matchings, such as taking the top 24 highest tax payers among the wealthiest 200 individuals which we present in Table 1.

3.1.4 Economic Income and Taxes of Billionaires

By combining our data on wealth, corporate and fiscal income, as well as corporate and fiscal taxes, we can estimate economic income (also called comprehensive income) and total taxes paid. Our definition of economic income closely follows that in Balkir et al. (2025). Economic income is computed as the sum of fiscal income, net of dividend income, and pre-tax corporate income. Total taxes paid are computed as the sum of wealth taxes, income taxes, and corporate taxes paid. As our estimates of billionaire's economic income and total taxes paid are incorporated into the entire distribution of income and taxes, our billionaire group is also allocated investment fund income and imputed rent income, as well as consumption taxes, property taxes and other residual taxes. We call these incomes "other income" and "other taxes" in our headline results for billionaire income and taxes shown in Table 1.

Table 1 shows the headline results for wealth, income and taxes of Spain's 24 billionaires in 2023. All amounts are in nominal €, billions. The baseline method 1 merges the 24 Spain billionaires in Forbes RTB in 2023 to the top 24 households ranked by declared wealth in Panel de Hogares in 2023. Method 2 merges the Spain billionaires to the top 24 households ranked by individual income among the top 200 wealthiest households in Panel de Hogares.

The Forbes wealth of Spain's 24 billionaires amounts to € 146.1 billion in 2023 (at year-end). In method 1, declared net wealth reported in Panel de Hogares equals € 67.4 billion which is 46.2% of Forbes wealth. In method 2, declared net wealth equals € 43.5 billion which is 29.8% of Forbes wealth. The lower value of declared net wealth in method 2 compared to method 1 shows that the top 24 households by declared net wealth in Panel de Hogares are not equivalent to the top 24

households by fiscal individual income among the top 200 households by declared net wealth in Panel de Hogares.

In method 1, the fiscal individual income of Spain's billionaires equals € 0.41 billion while economic income (adding corporate pre-tax income and other income and subtracting dividend income from fiscal income) equals € 9.5 billion in 2023. The ratio of fiscal income to economic income is 4.3%. Spain's billionaires paid € 0.18 billion in individual income and wealth taxes which is 0.12% of their wealth in 2023. Adding corporate income taxes and other taxes (mainly consumption taxes), Spain's billionaires paid € 2.3 billion in total taxes in 2023, of which 56% were paid domestically while 44% were paid abroad. In 2023, total taxes paid by Spain's billionaires amount to 1.6% of their wealth and 24.0% of their economic income.

In method 2, Spain's billionaires paid € 0.35 billion in income and wealth taxes which is 0.24% of their wealth in 2023. Adding corporate income taxes, Spain's billionaires paid 1.7% of their wealth in total taxes and 25.3% relative to economic income. While the effective tax rate of individual taxes relative to wealth is twice as high in method 2 compared to method 1, the total effective tax rates relative to economic income and wealth increase only by 5% and 8% respectively, which is mainly because the bulk of economic income and total taxes paid is corporate income and corporate taxes which are unaffected by the choice of method.

Table 1: Wealth, Income and Taxes of Spain's Billionaires, 2023

	Method 1 Rank by Declared Wealth	**Method 2** Rank by Income among Top 200 by Declared Wealth
Forbes Wealth	**146.1**	**146.1**
Of which: Public Stock Wealth	66.4%	66.4%
Declared Wealth in Panel de Hogares	67.4	43.5
Declared Wealth/ Forbes Wealth	46.2%	29.8%
Fiscal individual income	**0.41**	**0.89**
Of which: Labor Income	0.05	0.21
Of which: Capital Income	0.35	0.68
Individual income tax	0.12	0.27
Individual wealth tax	0.06	0.08
Individual income tax/ individual income	29.3%	30.5%
Individual taxes/ wealth	**0.12%**	**0.24%**
Corporate pre-tax income	9.3	9.3
Corporate taxes (domestic, foreign)	2.1	2.1
Of which: domestic	52.6%	52.6%
Corporate tax rate (effective)	22.2%	22.2%
Other income (imputed rents, fund distributions)	0.05	0.05
Other taxes (property taxes, consumption taxes)	0.02	0.02
Total taxes paid	**2.3**	**2.4**
Total economic income	**9.5**	**9.7**
Total taxes/economic income	**24.0%**	**25.3%**
Of which: domestic	**56.0%**	**59.1%**
Total taxes/wealth	**1.6%**	**1.7%**

Notes: This table shows the wealth, income and taxes of Spain's 24 billionaires in 2023. All amounts are in nominal €, billions. Wealth is based on Forbes Real-Time Billionaires List. Declared wealth, fiscal income and individual income taxes are from Panel de Hogares. Corporate income and corporate taxes are estimated using Compustat and Orbis data. The baseline method 1 merges the 24 Spain billionaires in Forbes RTB in 2023 to the top 24 households ranked by declared wealth in Panel de Hogares in 2023. Method 2 merges the 24 Spain billionaires to the top 24 households ranked by income among the top 200 wealthiest households in Panel de Hogares. In method 1, Spain's billionaires paid € 0.18 billion in income and wealth taxes which is 0.12% of their wealth in 2023. Adding corporate income taxes and other taxes (mainly consumption taxes), Spain's billionaires paid €2.3 billion in total taxes in 2023, of which 56% were paid domestically while 44% were paid abroad. In 2023, total taxes paid by Spain's billionaires amount to 1.6% of their wealth and 24.0% of their economic income. In method 2, Spain's billionaires paid 0.24% of their wealth in income and wealth taxes in 2023, while they paid 1.7% of their wealth in total taxes and 25.3% relative to economic income.

3.2 Distribution of Income and Taxes along the Income Distribution

We next measure the distribution of the whole tax system along the income distribution, to compare the tax rates of the rest of the population with those of billionaires, as in earlier work on billionaires' effective tax rates (Bach et al., 2025; Balkir et al., 2025). We reconstruct economic income before taxes and transfers for all adults aged 20 or over, consistent with our definition of billionaires' income, by combining income tax returns, Social Security records, wealth tax returns, cadastral records and the asset holdings reported by third parties. In joint returns, income is assigned to each spouse according to their own sources.

For our preferred estimates, we follow Balkir et al. (2025) and define income as labor plus capital income before all taxes and social contributions; Social Security pensions and unemployment benefits are treated as transfers. The treatment of social security contributions (SSCs) and pensions has, however, been the subject of a methodological debate, so we also present estimates that follow the two main alternatives in the literature: (i) the SSCs that finance the contributory benefits paid out in the year are netted out of workers' income and these benefits are added to it (Piketty et al., 2018; Saez and Zucman, 2026); and (ii) SSCs are kept in workers' compensation and contributory pensions are added as well, so that this income is counted twice (López Laborda et al., 2026). In all three versions SSCs are counted as taxes. We describe below the treatment of each type of income and tax in our baseline and in the alternatives.

Since our main administrative source, the Panel de Hogares, is a sample, all our estimates use the panel's calibrated weights (Instituto de Estudios Fiscales, 2025). Appendix Table 8 shows the distribution of the weights by taxable income bracket. At each step we compare our weighted totals with the national accounts, which we bring to the territory covered by the panel (excluding the Basque Country and Navarre) with the régimen común share of each item in the regional household accounts. Since the weights are calibrated to reproduce the AEAT's income totals closely, most of the gaps we document come from differences in coverage or definitions between the tax data and the national accounts. We therefore match all our income and tax totals to their aggregates, except for mixed income and interest. Mixed income stays at 77% of the national accounts, as the remaining gap reflects under-reporting that is unlikely to be uniform, and so do the self-employed contributions that follow it. Appendix Table 9 reports our main aggregates and the corresponding national accounts measures.

3.2.1 Wages

Gross wages are allocated to each individual according to the wage income in the tax return and the payer returns, which also cover non-income tax filers. In joint returns, wage income goes to the earner. Wages include pay in kind and exempt pay such as severance pay; private pensions and pensions from abroad are also kept in labor income. With the payer returns, we are able to separate wages from contributory and non-contributory replacement income (pensions, unemployment benefits, sick pay and social transfers), which we complete with the benefit spells in the Social Security records. Our baseline only keeps wages as pre-tax income, but alternatives i) and ii) add back contributory pensions, contributory unemployment benefits and sick pay. Non-contributory pensions and benefits are never included in pre-tax income and always treated as a government transfer.

The income declared in the payer returns can be slightly higher or lower than the total declared in the tax return. When the payer returns add up to more, because some income is exempt, we follow the categories of the payer returns. When the tax return declares more, because some income has no traceable payer, we split the excess like the person's payer returns. When a person has no payer return at all (€4.6 billion in 2023, mostly pensions from abroad and pay from payers that file no return), there is no split to follow, and we count the whole amount as wages.

Employee Social Security contributions declared in the return are kept separately: they stay in the wage aggregate in our preferred estimate; in alternative i) only the part that corresponds to the contributory benefits paid out is taken out (Section 3.2.12). Contributions withheld from unemployment benefits follow the benefits, and the self-employed fees that some wage earners deduct from their wages count as self-employed contributions (Section 3.2.12). Employee contributions on wages amount to €26.5 billion in 2023, which we rescale to the €27.0 billion of the national accounts.

Our total wages in the (weighted) panel are €487 billion in 2023, against €515 billion in the national accounts. The panel is, however, within 2% of the AEAT's published total (Agencia Estatal de Administración Tributaria, 2024b), suggesting the gap comes from wages that are not reported to the tax administration. We therefore scale each person's gross pay (€482 billion) by a common factor of 1.067, so that total wages match the national accounts' wages and salaries (€514.7 billion). Private pensions and employer contributions to pension plans stay as observed; since gross pay is already at the national accounts' total, the rescaled employee contributions lower net pay. We do not scale self-employment income in the same way (Section 3.2.2).

3.2.2 Mixed Income (Self-employment Income)

Self-employment income is under-reported in the tax data, but not uniformly across the self-employed, so we correct it differently depending on how their income is reported. We start from the business income declared in the income tax return, before the reductions the law allows, and identify the self-employed and their tax regime with the tax return and the Social Security records. Their own Social Security fees are counted as taxes and kept in income, like employees' contributions, in our baseline estimates.

Company partners and administrators. Partners who control a company and its administrators have to register with Social Security as self-employed, even though they work for the company. Their pay from the company is a wage, reported by the company like any other, and the company's profits reach them as dividends and retained earnings (Section 3.2.5). We therefore keep the business income they declare as it is, and do not impute any to those who declare none.

Sole traders under direct estimation. Part of their sales is reported by their clients through withholdings, and we keep the corresponding income as declared. We multiply the rest by 1.90, the under-reporting factor estimated with Spanish tax data by Domínguez Barrero et al. (2015).

Sole traders under the presumptive regime. Small shops, bars, taxis, builders and farmers can declare an income that follows from indicators set by the tax administration, which nobody else reports. We hence multiply it by the factor the same study estimates for this regime (1.83).[6]

6. Their estimate refers to income after the legal reductions; we convert it to income before them with

Registered self-employed whose income stays below their contribution base, or who declare nothing. We give them the median corrected income of the self-employed of the same sector and contribution bracket, for their months as self-employed.

Declared self-employment income amounts to € 56.9 billion in 2023 and reaches € 85.9 billion after these corrections, which is 77% of the mixed income in the national accounts, excluding the rents of dwellings let by households (€ 111.8 billion).[7] Unlike wages, we do not scale the remaining gap to the national accounts, as further under-reporting after these corrections is likely not uniform along the distribution and types of self employment income.[8]

3.2.3 Pensions and Unemployment Benefits

In our baseline estimates, we treat Social Security pensions as transfers rather than as factor income, to avoid double counting when reintegrating workers Social Security contributions into wages. We do the same for unemployment benefits and sick pay. Only private pensions are kept as income. However, as a consequence, pensioners have little income in our baseline estimates, and the bottom deciles have close to zero income, which forces us to exclude the bottom deciles from our main results. We hence also produce two alternative definitions of factor income in which contributory pensions, unemployment benefits and sick pay are added back to labor income. Non-contributory benefits are always treated as transfers, and so is parental leave pay, following Ring et al. (2026).

Public pensions in the weighted panel (Social Security contributory pensions with their minimum top-ups, Clases Pasivas and non-contributory pensions) amount to € 170.6 billion in 2023, 96% of their national accounts counterpart (€ 177.0 billion), while unemployment benefits match the national accounts (€ 14.4 billion). We rescale all public pensions by a common factor (1.038), so that they match the national accounts.

3.2.4 Investment Funds' Income and other Financial Income

Most of the income of investment funds is not observed in the tax data, since most Spanish funds accumulate their income rather than distribute it.[9] We hence take households' income from investment funds from the national accounts (€ 9.4 billion in 2023), which covers both the income funds distribute and the income they retain, and add the funds' share of the retained earnings of the firms they hold (€ 4.4 billion, Section 3.2.5). We then allocate this total in proportion to each individual's fund holdings, as reported by financial institutions or declared in the wealth tax return (the higher of the two). We proceed in the same way for the investment income of life insurance and pension plans (€ 5.5 and € 1.1 billion), together with their share of retained earnings (€ 3.5

the AEAT's ratio of the two.

7. The Social Security records have no contribution bases for 37% of the self-employed in the sample, who therefore cannot be raised or imputed any income.

8. Family helpers and cooperative members registered as self-employed get no imputed income, since their work is often paid as a wage or is already in the owner's income.

9. According to the CNMV's guide on the taxation of investment funds (2026), most investment funds sold in Spain are accumulation funds.

and € 3.8 billion), which we allocate according to life-insurance and pension plan holdings. The fund distributions that are declared as dividends in the tax return are thus counted twice, yet they are small.[10]

Total holdings observed in the weighted panel are € 332 billion of fund shares, € 117 billion of life insurance and € 99 billion of pension plans, that is 83%, 76% and 58% of the financial accounts. We do not adjust for unobserved stakes, which amounts to assuming that they are distributed like the observed ones.

3.2.5 Dividends and Retained Earnings

Profits retained by corporations, i.e. not distributed as dividends, are by definition not observed in individual tax data. They are nonetheless an important part of economic income, especially at the top of the distribution, where holding companies and closely held businesses are common and owners can decide how much income to take out of their firms, which blurs the line between personal and corporate income (Alstadsæter et al., 2025; Ring et al., 2026). Prior distributional studies based on income tax data distribute retained earnings according to taxable dividends (Garbinti et al., 2018; Piketty et al., 2018). However, recent research linking firms to their owners shows that this approximation, while it works well for most of the distribution, severely underestimates the corporate profits that belong to the very top (Alstadsæter et al., 2025; Bach et al., 2025; Bruil et al., 2022).

Unlike these recent studies, we do not have firm ownership links or company financials, outside of the billionaires in Forbes RTB. However, the PdH gives us rich information on individuals' wealth, both through the wealth tax returns of those who file and through the estimates the tax administration builds for everyone from third-party reports. Crucially, the wealth tax returns also report the equity holdings that are exempt from the tax, which are the vast majority among the wealthiest. We combine these filings with the third-party reported data and complete them with the EFF and with Social Security records on partners working in a firm they own, to reconstruct a proxy for each individual's equity holdings. We use this proxy to distribute all retained earnings not already allocated to billionaires (Section 3.1.2).

Aggregate retained earnings. We take our measure of retained earnings from national accounts, and adjust the total as detailed below. In national accounts, retained earnings are defined as the net saving of non-financial and financial corporations before net other current transfers, and amounts to € 113.4bn in 2023. The national accounts aggregate contains retained earnings that do not belong to Spanish households, which we adjust for in the following way: we exclude the share of equity owned by foreign portfolio investors (ω^f, 9.3%) and by the government (ω^g, 12.8%), we add the retained earnings of foreign firms that Spanish portfolio investors hold directly (RE^*, € 1.4bn), and we exclude the equity share of non-profit institutions, keeping therefore the households' share of the remainder (θ^h, 96.0%). Households' retained earnings are then calculated as :

$$RE^h = \theta^h \left[(1-\omega^g)(1-\omega^f)\, RE + RE^* \right] = €87.5\text{bn}. \tag{1}$$

Where RE are retained earnings in national accounts. We split RE^h according to how households

10. Fund holders without any shares we observe declare € 1.2 billion of dividends, an upper bound for fund distributions.

hold their equity: directly, through investment funds, or through insurance and pension funds. Direct equity is the shares households hold in their own name. Through investment funds, we only count the shares that Spanish funds hold directly:

$$E^{if} = F^h (1 - \phi) \frac{E^d}{A^d}, \tag{2}$$

where F^h are households' investment fund shares, ϕ the share of them held in foreign funds (30.8%, from the international investment position) and E^d/A^d the shares held directly by Spanish investment funds over their total financial assets (18.7%). Foreign funds are foreign portfolio investors: the retained earnings of the Spanish firms they own are already excluded with ω^f, and those of the foreign firms they own are not in RE^*, which only covers the foreign shares that Spanish residents hold directly. We also leave out the shares that funds hold through other funds, since E^d only counts the shares funds hold directly. Equity held through insurance and pension funds is households' claims on them times the share of equity in the assets of insurers and pension funds (25.2%). Households thus hold 85.4% of their equity directly, 5.4% through investment funds and 9.1% through insurance and pension funds, and RE^h is split in these proportions. Only the retained earnings of directly held equity are distributed with our equity key; those held through funds, life insurance and pension plans are distributed with each individual's holdings of these products, together with their investment income (Section 3.2.4). The part that goes to the País Vasco and Navarra, which our data do not cover, is removed in the next step with their share of households' investment income (8.7%).

Corporate income tax. To move to pre-tax corporate income, we need to re-integrate corporate taxes into corporate profits. We take the corporate income tax that the tax administration records for the régimen común, including the temporary levies on banks and energy companies (€ 35.4bn), and give households their share of corporate profits (59.7%), € 21.1bn. Households' profits after tax are then € 103.3bn. After removing their dividends (€ 23.4bn), € 68.2bn are retained earnings on directly held equity and € 11.7bn retained earnings held through funds and insurance, which follow fund and insurance income. Our equity key thus distributes € 86.9bn, the retained earnings and corporate tax of directly held equity, less what we have already allocated to billionaires (Section 3.1.2): € 7.26bn of profits after tax and € 1.09bn of corporate tax paid in Spain.[11]

Dividends and profits. Dividends declared in our data are rescaled to the national accounts aggregate (€ 23.4bn), which is 1.52 times the dividends declared in the income tax returns and the information returns (€ 15.4bn); we have not yet identified the reason for this gap. Retained earnings and the corporate income tax are then distributed according to our reconstructed equity distribution, which we describe next.[12]

Reconstructing equity along the wealth distribution. We treat wealth tax filers and non-filers separately because we have different information on each group. Any taxpayer who is liable given their region of residence and their wealth has to file the wealth tax, and most regions tax wealth above € 1M including a € 300,000 main residence allowance.[13] Those with at least € 2M

11. The € 0.98bn their firms pay abroad is not part of the Spanish corporate tax, so we do not remove it.

12. This may overestimate the dividends and profits allocated to individuals who receive a lot of dividends relative to their equity. An alternative is to distribute the reconstructed after-tax profits (corporate saving plus aggregate dividends) along equity and to give each person the maximum of their observed dividends and their allocated profits, calibrating the profits distributed with the equity key until all profits are allocated.

13. In 2023 the exempt minimum was € 500,000 in Cataluña, the Comunitat Valenciana and Extremadura;

in gross wealth have to file as well, even if they owe no tax.[14] In 2023, Madrid and Andalucía effectively taxed only wealth above € 4M, Murcia exempted the first € 3.7M and Extremadura rebated its wealth tax in full, so filers in these four regions are mostly those bound by the € 2M obligation. We build each individual's equity holdings in four steps:

1. Equity of wealth tax filers. The wealth tax form asks individuals to report their listed equity at market value and their unlisted equity at book value. Beyond this difference in definitions, the declared values of these assets appear to be too low, especially for unlisted firms. In addition, wealthy households often hold stakes in listed firms through unlisted holding companies, so the split in the raw return is not reliable enough to bring all equity to the same valuation. To mitigate this, we proceed in two steps. First, we take the maximum between the listed equity reported by third parties and the total equity declared on the wealth tax return, listed and unlisted, exempt and not. If the return's total is larger than third-party listed equity, we consider the remainder to be book equity.[15] Second, to put both parts on the same footing, we convert listed equity to book value with the market-to-book ratio of listed non-financial corporations from the Banco de España's Central Balance Sheet Data Office (2.264 in 2023).

2. Regional filing thresholds. To correct for the differences in filing requirements across regions, we impute the unlisted equity of non-filers in Madrid, Andalucía, Murcia and Extremadura from comparable adults in the other regions, by nearest-neighbor matching on whether they are company partners, their third-party wealth, income and dividends.

3. Listed equity of non-filers. For non-filers, listed equity is observed in third-party reports, and we convert it to book value with the same ratio.

4. Private equity of non-filers. Finally, part of private equity is held by people below the wealth tax filing thresholds and is therefore invisible in our data, so we estimate it from the EFF. We bring EFF wealth to the valuation rules of the wealth tax, simulate who would have to file, and calibrate the EFF weights to the number of adults by band of third-party wealth in the tax data.[16] In the calibrated survey, non-filers hold 13% of unlisted equity, with a standard error of 5 percentage points. We therefore set the unlisted equity of non-filers to

$$E_{nf} = \frac{E_f}{s_f}\,(1 - s_f), \qquad s_f = 0.87, \tag{3}$$

where E_f is the unlisted equity of wealth tax filers and of the imputed non-filers of the four regions (€ 447.7bn at book value), which gives € 67bn.

all other regions apply € 700,000.

14. This filing obligation for individuals who are not liable appears to be followed only partially, as shown by a large filing reaction in Madrid after the introduction of the solidarity tax on large fortunes (ITSGF) in 2022.

15. The tax administration builds third-party listed equity as the maximum of the third-party reports and the wealth tax return, so it is rarely below the listed equity declared on the return. In fewer than 20 cases it leaves out exempt listed stakes declared on the return; there we take the return's value.

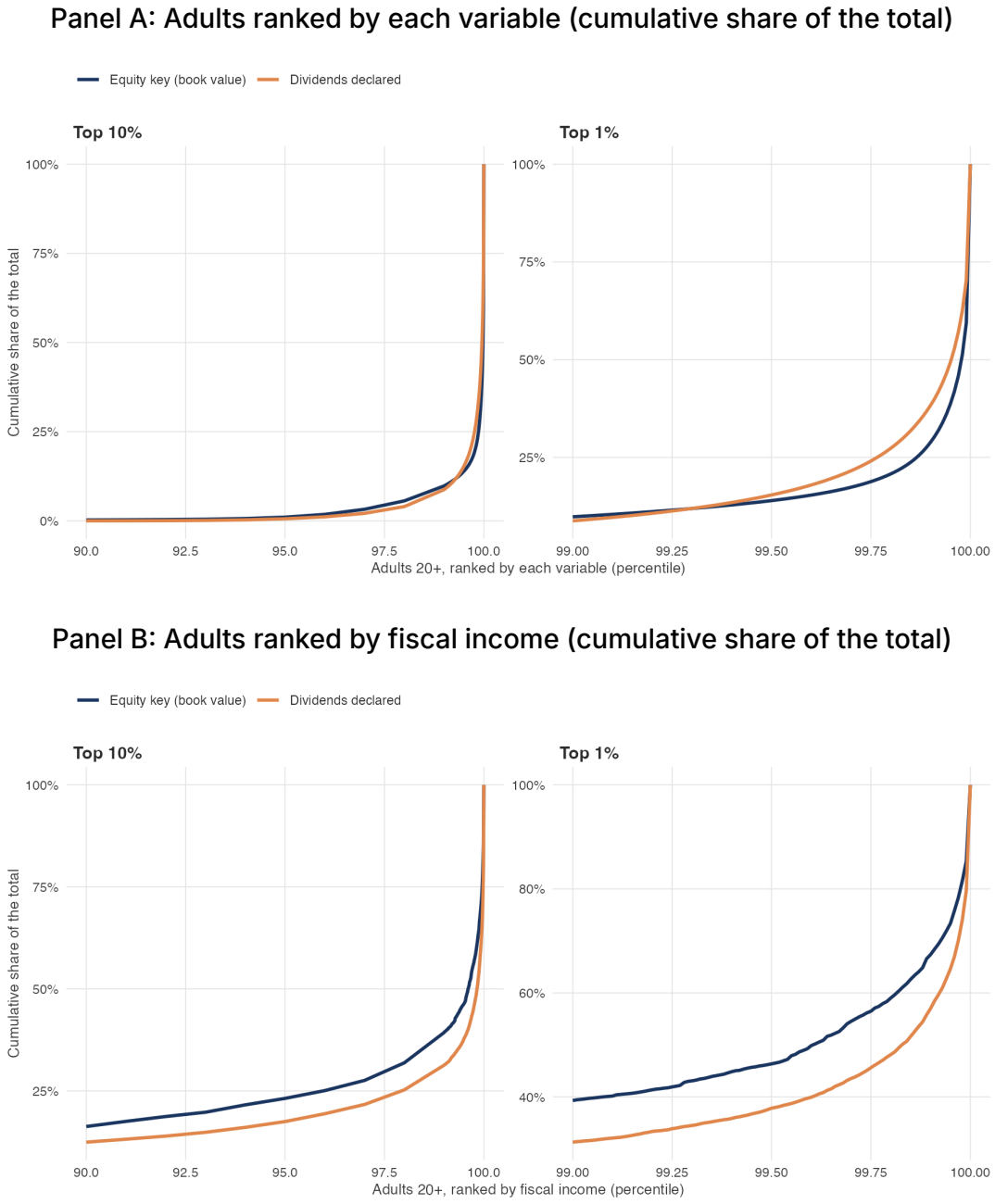
16. Private equity is converted to book value with the market-to-book ratio of unlisted firms (1.141) and real estate to cadastral value with the ratio of our data (3.0). Household wealth is split equally between the reference person and their partner, and each business goes to the members who run it. Without being targeted, the calibrated survey attributes 42.1% of listed shares to non-filers, against 42.4% in the tax data.

We then distribute this amount separately among firm partners, whom we identify in the Social Security records, and non-partners: partners hold 87.7% of non-filers' unlisted equity in the EFF. Within each group, we distribute it across quantiles of third-party wealth, and within each quantile in proportion to income for partners and to dividends for non-partners, which is what best reproduces the EFF.

Comparison with the national accounts. The financial accounts value households' unlisted equity at € 620.2bn at book value in 2023. Our reconstruction captures € 514.7bn, or 83%: € 447.7bn held by wealth tax filers and the imputed non-filers of the four regions, and € 67bn imputed to other non-filers. The rest of the gap may come from equity and real estate held abroad, which the accounts include, and from under-reporting of exempt equity in the wealth tax returns, so attributing all of it to people below the filing thresholds would likely overstate their equity.

Figure 3 shows how the concentration of our equity holdings differs from that of the standard dividend key, and Table 2 summarizes it. Panel A ranks individuals by each variable, while Panel B ranks them by fiscal income, the gross income they declare in the income tax return before any deduction. As anticipated by the literature, equity holdings are more concentrated than dividends at the very top, with the top 0.1% holding 71.1% of equity against 61.7% of dividends, but slightly less concentrated somewhat lower in the distribution (90.2% against 91.2% for the top 1%). Interestingly, equity holdings are more spread along the fiscal income distribution than dividends: the top 1% by fiscal income hold 60.7% of equity and 68.7% of dividends. This is consistent with large equity holders often having a relatively low fiscal income for their level of wealth. Once we rank individuals by factor income, which includes corporate profits, the equity key concentrates dividends and retained earnings more at the very top: the top 0.1% receive 61.8% of corporate profits, against 58.0% with the dividend key, while the top 1% receive about the same share with both (82.5% and 82.4%). For completeness, we also report our baseline estimates using dividends as the key for retained earnings.

Figure 3: Concentration of Equity Holdings and Dividends, 2023



Notes: This figure shows the cumulative share of our equity key (book value) and of declared dividends held above each percentile, within the top 10% (left) and the top 1% (right). In Panel A each variable ranks adults by itself; in Panel B adults are ranked by fiscal income (gross income declared in the income tax return, before deductions). Adults aged 20 or over, weighted with the panel's calibrated weights. Curves are read at percentiles (0.01 steps above P99). Source: Panel de Hogares (IEF), 2023.

Table 2: Concentration of Equity Holdings and Dividends, 2023

	Equity key	Dividends
Top 0.1%, each ranked by itself	71.1%	61.7%
Top 1%, each ranked by itself	90.2%	91.2%
Top 1% by fiscal income	60.7%	68.7%
Corporate profits, top 0.1%, ranked by factor income	61.8%	58.0%
Corporate profits, top 1%, same ranking	82.5%	82.4%

Notes: This table shows the share of equity holdings (our equity key) and of dividends held by the top groups of adults aged 20 or over, weighted with the panel's calibrated weights. The first two rows rank individuals by each variable, the third by fiscal income (gross income declared in the income tax return, before deductions). The last two rows show the share of corporate profits (dividends, retained earnings and corporate taxes) allocated to the top groups when individuals are ranked by factor income: labor income with employee and employer contributions, mixed income before own contributions, rents, interest, fund, insurance and pension income, and corporate profits, with retained earnings and corporate taxes allocated by the equity key or by dividends. Factor income does not yet include the billionaires.

Table 3: Corporate Income of the Records Matched to the Billionaires: Equity Key and Dividends, 2023

	Taxable dividends	Rescaled dividends	Retained earnings	Total	% of firm data
Firm data	0.33	–	6.93	7.26	100%
Equity key	0.33	0.49	6.37	6.86	95%
Dividends	0.33	0.49	1.44	1.93	27%

Notes: This table shows the corporate income after corporate tax, in € billion, of the 24 panel records with the highest declared net wealth, matched to the 24 billionaires of the Forbes Real-Time Billionaires List (their weights add up to 26.3). Firm data: their profits after tax from the firms they own (Section 3.1.2), split into the taxable dividends they declare in the panel and retained earnings. Equity key and dividends: the same taxable dividends, rescaled, plus retained earnings, allocated with everyone in the panel. Declared dividends are rescaled to the national accounts, and the retained earnings of directly held equity are distributed with our equity key or with declared dividends.

3.2.6 Capital Gains

To be consistent with our treatment of retained earnings, and with the traditional approach of distributional tax analysis and Distributional National Accounts (Piketty et al., 2018), we exclude capital gains from our pre-tax income measure. Capital gains on financial wealth such as equity and investment funds that are driven by earnings are already captured by our inclusion of retained earnings and undistributed fund income, so including them would double count these profits. Capital gains are also lumpy, and can distort a year's income and tax distributions when realizations are unusually high or low. Asset price increases that are not driven by retained earnings (price effects) are therefore absent from our income measures. Future versions could include, in full or in part, realized gains on real estate, which we observe separately in our data.

3.2.7 Rental Income

We take rental income as declared in the income tax return, net of costs and depreciation, but before mortgage interest, which we treat as a cash outflow as in Ring et al. (2026) (and before the legal reduction on rented housing). Our panel totals closely match the aggregate AEAT numbers, with gross rents of € 28.8 billion in 2023, 97.5% of the AEAT total. Net rental income before interest amounts to € 20.1 billion, which we rescale to the AEAT total (€ 18.9 billion).

Following national income accounting and Piketty et al. (2018), pre-tax income also includes the imputed rents of the dwellings that owners live in or keep for their own use. To impute these rents, we rely on the Ministry of Housing's rent reference system (Ministerio de Vivienda y Agenda Urbana, 2024), which gives the median rent per square meter of let dwellings by census section. We then multiply this rent by the floor area in the cadastral records, for each dwelling an individual holds and does not let.[17] Only dwellings are imputed a rent. Our aggregate of imputed rents is € 143.3 billion in 2023, compared to € 99.6 billion in the national accounts. As for actual rents, we measure imputed rents net of costs and before mortgage interest, by rescaling them to the national accounts' net operating surplus of owner-occupied dwellings (€ 60.8 billion) and adding back the property tax paid on these dwellings (€ 6.3 billion), which we count as a tax.

3.2.8 Personal Income Tax (IRPF)

Personal income taxes are allocated as reported on the tax returns: we use the central and regional tax liability on the general and savings bases, after all deductions and before withholdings. In joint returns, each spouse is given the share of the tax that corresponds to their share of the return's income, and non-filers pay the tax withheld from their income. Our aggregate tax liability of filers is € 116.1 billion in 2023, which we rescale to the AEAT total of € 117.7 billion; non-filers' withholdings add € 2.6 billion. For consistency, we remove the part of the personal income tax that corresponds to income we exclude from our factor income measures in each version, by splitting each individual's tax across income sources in proportion to their gross income. The tax paid on transfers (€ 0.4 billion) is removed in all versions, and the tax paid on contributory pensions, unemployment benefits and sick pay (€ 18.2 billion) in our baseline only. Note, as in previous studies, that we include tax paid on realized capital gains, which we exclude from the income base. This is consistent with our claim that unrealized capital gains are implicitly captured, at least in part, by including firms' retained earnings in income. Removing the tax on capital gains would further reduce the effective tax rates at the top of the distribution.

3.2.9 Wealth Taxes (IP and ITSGF)

Wealth taxes in Spain include the *Impuesto sobre el Patrimonio* (IP) as well as the *Impuesto Temporal de Solidaridad de las Grandes Fortunas* (ITSGF). We take the IP due as declared in

17. Where the census section has too few rentals, we use the district, municipality or province. The rent goes to the usufructuary rather than the bare owner. Empty dwellings are imputed a rent too, as secondary homes, and so are the dwellings let by owners who file no income tax return, whose rents we do not observe.

the wealth tax return (box 55), after the joint ceiling on income and wealth taxes and the regional rebates. Since the panel does not include the ITSGF returns, we simulate the ITSGF of each wealth tax filer from their wealth tax return information.[18] Our aggregates are € 1.72 billion of IP and € 0.03 billion of ITSGF in 2023, which correspond to 89% of the AEAT totals (€ 1.93 billion and € 0.04 billion). We hence rescale our wealth tax estimates to match the AEAT aggregates.

3.2.10 Property Taxes (IBI)

The Panel de Hogares administrative data provides detailed ownership records of households' real estate assets, including location and cadastral value, which allow us to precisely estimate the properties' tax liability. We hence micro-simulate property taxes for each individual based on their real estate holdings: the share held at the end of the year times the cadastral value times the municipality's effective tax rate. We compute effective tax rates by municipality from the Cadastre's statistics on the property tax, as the tax collected after rebates over the cadastral value of the taxed property (Dirección General del Catastro, 2024).[19] In case of split property rights, we allocate the tax to the usufructuary and not to the bare owner. In total, we impute € 8.49 billion of property taxes, which we rescale to the € 8.42 billion paid by households in the régimen común (€ 13.2 billion including firms). Since net rental income already deducts property taxes, we add the property taxes of let property for which we observe rental income (€ 1.20 billion) back to rental income and count them as a tax, as we do for owner-occupied dwellings.

3.2.11 Property Transaction Taxes (ITP-AJD)

We take property transaction tax aggregates from the regional tax revenue statistics, keeping only the part paid by households (€ 8.16 billion in 2023), and allocate it to those we can identify as new buyers with the cadastral records.[20] With this rule, we find 858,000 purchases, compared to 940,000 sales of urban property in the INE property transfer statistics, which also include purchases by firms (Instituto Nacional de Estadística, 2024b). To value these purchases, we rely on the sales declared in the capital gains annex of the income tax return, from which we compute the median ratio of sale prices to cadastral values by province and use. We then allocate the taxes in proportion to the value of each individual's purchases. VAT on the purchase of new homes (€ 3.0 billion) is allocated in the same way, as our property records hardly tell new buildings apart. Since 2018, the stamp duty on mortgage deeds is paid by banks, which pass about 80% of it on to borrowers through higher mortgage rates (Jiménez et al., 2024). We hence allocate 80%

18. National scale of 1.7% to 3.5% on a base above € 4M, the same joint ceiling, and the deduction of the wealth tax paid. In Madrid and other regions, the regional rebate is designed so that the final liability of the tax corresponds to the hypothetical the amount due under the ITSGF, which we use to check our estimates.

19. The effective rate accounts for the lower taxable base that is used while a new cadastral valuation is phased in, the higher rates that some municipalities apply to large non-residential property and any rebates.

20. We consider that a property is newly bought when a person owns it in 2023 but did not, even partially so, in 2022. We remove among those identified buyers, those who received an inheritance or gift in 2022 or 2023 and who's donor was an owner of the property in 2022 or 2021.

of the households' share of this duty (€ 0.76 billion) in proportion to each individual's increase in liabilities over the year.[21] Finally, the municipal tax on increases in the value of urban land (IIVTNU, € 1.73 billion) goes to sellers, heirs and donees, in proportion to the cadastral value they sell, inherit or receive.

3.2.12 Social Security Contributions

Our baseline income measure reintegrates employee and employer Social Security contributions to worker income. We observe employee Social Security contributions in the tax returns and, for non-filers, in the payer returns. Employer Social Security contributions are simulated with the contribution bases, type of contract and activity of each contribution account in the Social Security data, at the legal rates of 2023. Civil servants under their own pension scheme (Clases Pasivas) have no Social Security employer contributions; for consistency, we give them the employer contributions of the rest of the population on their wages.[22]

Self-employed Social Security contributions are observed in the tax return for sole traders under direct estimation and for wage earners who deduct them from their wages. For sole traders under the presumptive regime and for the self-employed whose income we impute, who do not declare them, we take the self-employed contribution rate (31.2% in 2023) times their contribution base for each month of self-employment.

Our aggregates are € 26.5 billion of employee contributions and € 145.3 billion of employer contributions, which we rescale to the national accounts (€ 27.0 and € 150.3 billion), and € 9.4 billion of self-employed contributions, against € 11.5 billion, which we do not rescale, as for mixed income.

In alternative i), we net out of workers' income only the contributions that finance the contributory benefits paid out in the year, that is 91.6% of each individual's contributions in 2023 (€ 171.2 billion of benefits against € 186.8 billion of contributions), so that total income is the same as in our baseline. All contributions are still counted as taxes.

3.2.13 Corporate Income Taxes

We take aggregate corporate income taxes from the tax administration's statistics, including the temporary levies on banks and energy companies (€ 35.4 billion in the régimen común), and estimate the share paid by households analogously to that of corporate savings (€ 21.1 billion, Section 3.2.5). We then distribute corporate taxes according to the final distribution of dividends and retained earnings, whether held directly or through investment funds, insurance and pension funds, and rescale corporate profits to pre-tax by re-adding the allocated corporate income taxes. The tax already allocated to billionaires (€ 1.09 billion paid in Spain) is removed from what is distributed to the rest of the population.

21. The households' share is the share of dwellings in the amount of new mortgages (65.6% in 2023, Instituto Nacional de Estadística, 2024a).

22. Capped at the maximum contribution base. We keep them apart, since the national accounts record them as imputed rather than actual employer contributions. Other wage earners outside the Social Security records are treated in the same way.

3.2.14 Consumption Taxes

We allocate all household consumption taxes to consumers, following the standard distributional tax accounting literature (Piketty et al., 2018; Saez and Zucman, 2026). To impute consumption along the income distribution, we rely on savings rates estimated from the EFF.[23] Appendix Figure 9 plots the consumption to gross income ratios for our selected income quantiles. Consistent with standard measures, consumption rates fall steeply along the income distribution, from over 100% of the households' income for the poorest decile, to just 11% for the top 0.1%. Next, we multiply these consumption ratios with gross (fiscal) income for each individual in the tax data, to obtain our estimates of the distribution of consumption across individuals.[24] We then allocate aggregate household consumption taxes, amounting to € 99.2 billion in 2023,[25] to each individual in proportion to their share of total consumption.

Removing excluded income's share of consumption: Following Saez and Zucman (2026), we consider the part of consumption taxes paid out of non-contributory transfers to be a reduction of the transfer rather than a tax. We hence remove for each individual the share of consumption taxes that corresponds to transfer income not included in our measure of factor income. Taxes associated with social transfers (€ 8.0 billion) are removed in all versions. Additionally, in our baseline estimates, where contributory pensions and unemployment benefits are not part of factor income, we remove the part paid out of them as well (€ 21.9 billion), yet leave it in alternative methods i) and ii). The aggregate consumption taxes included in our ETR estimations are thus € 69.3 billion in the baseline, and € 91.2 billion in versions i) and ii).

4 Main Results

4.1 Distribution of Income

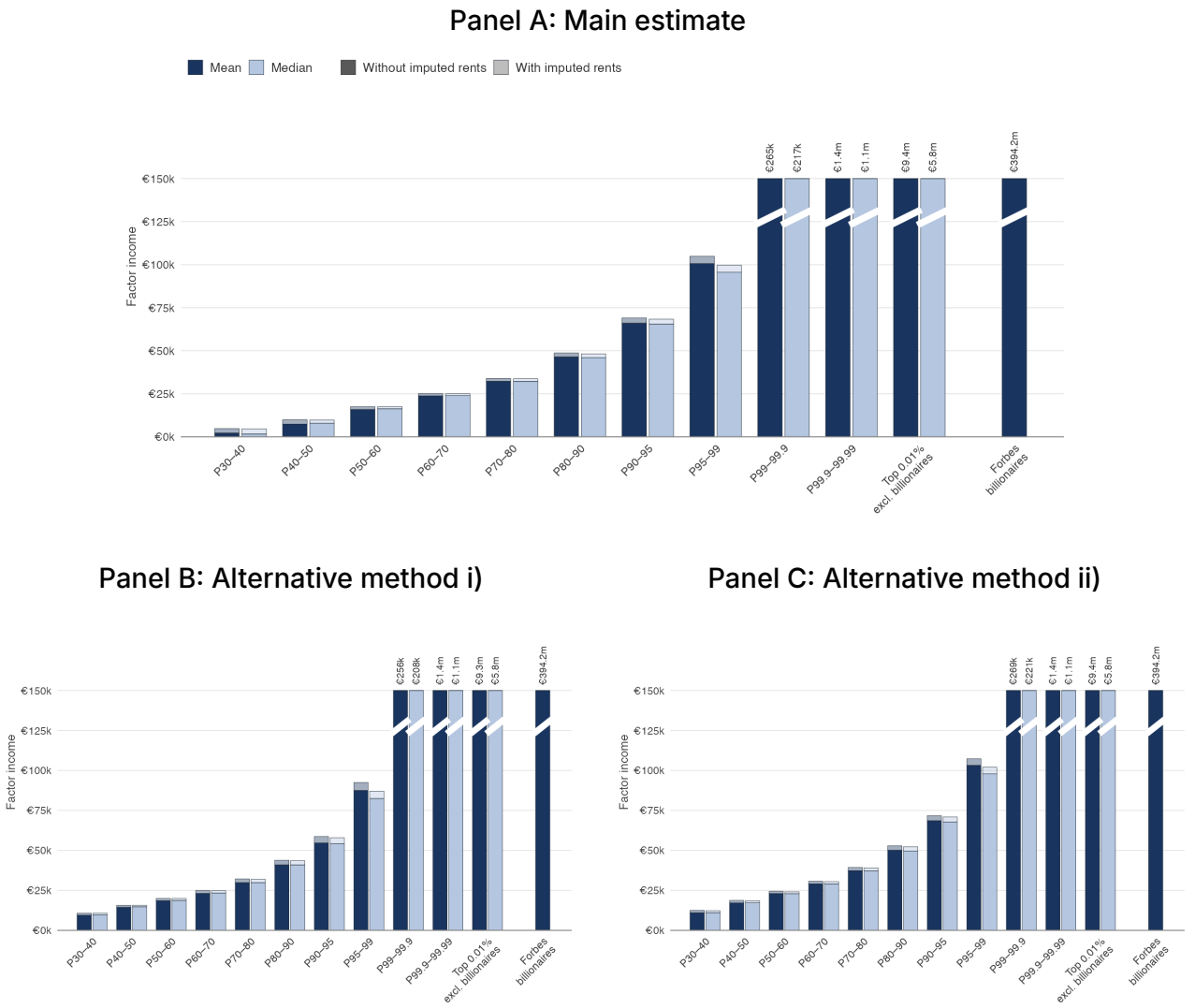
Figure 4 shows mean and median income by group in 2023 for our three income concepts. Mean income rises steeply at the very top, from about € 69,000 in P90–95 to € 1.4 million in P99.9–99.99, € 9.4 million in the top 0.01%, and € 394.2 million for each of the 24 billionaires. Figure 5 shows how the composition of income changes along the distribution. Up to P95, wages and employer contributions make up about 80% of income. Above it, retained earnings and dividends take over, reaching 83% of the income of the top 0.01% and almost all the income of billionaires. At the bottom of our ranking, imputed rents make up more than half of income.

23. Consumption in the EFF excludes rents, consistent with including only consumption subject to consumption taxes.

24. We impute to billionaires the saving rate of the top 0.1% in the EFF (89.2%), which gives us a total consumption of € 34 million over their € 0.32 billion of gross income (labor and capital income they receive in cash, including the dividends they declare).

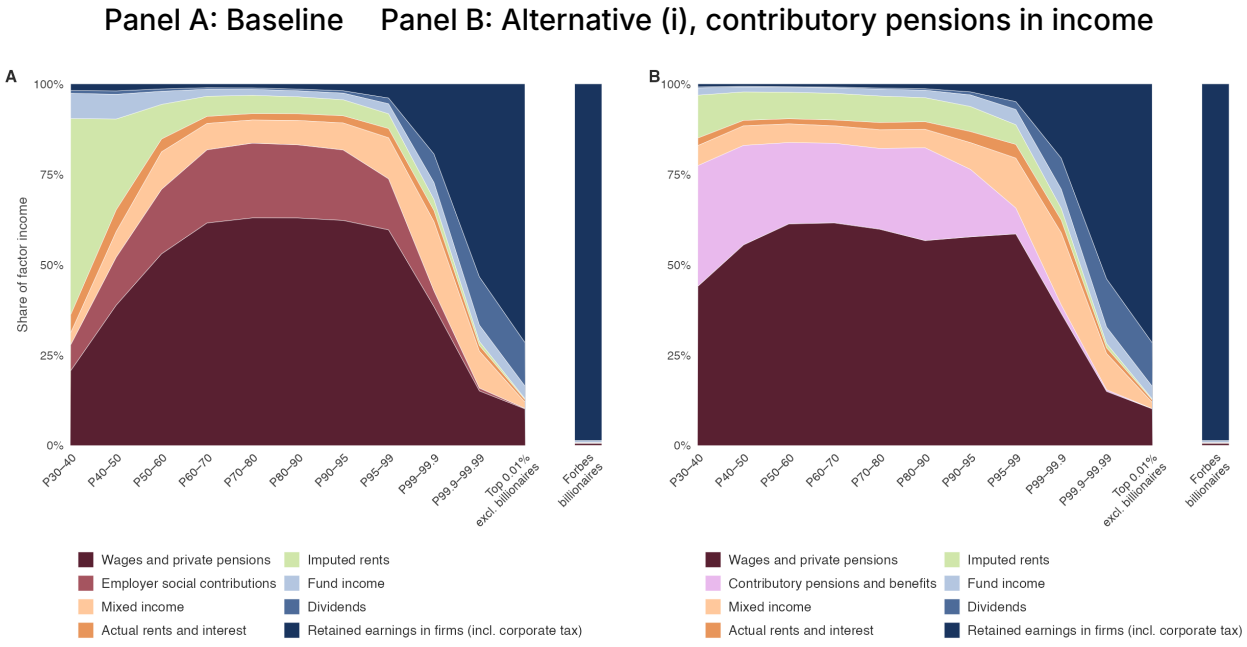
25. Our measure of consumption taxes includes VAT on households' purchases of goods and services, which is 84.0% of VAT accrued (Agencia Estatal de Administración Tributaria, 2024a), excise taxes, the insurance premium tax and the other taxes on products paid by consumers, net of the consumption of non-residents in Spain. VAT on government purchases is left out, and VAT on the purchase of new homes is allocated to buyers with the property transaction taxes. We exclude the share imputed to País Vasco and Navarra, which are out of our sample, in proportion to their share of household consumption.

Figure 4: Income by Income Group, 2023



Notes: This figure shows mean and median pre-tax income per adult by income group in 2023, in euros, for our three income concepts. Panel A: our main estimate, with social contributions in workers' income and contributory pensions, unemployment benefits and sick pay excluded. Panel B: alternative method i), with these benefits in income and the contributions that finance them netted out. Panel C: alternative method ii), with these benefits in income and contributions kept; adults are ranked without imputed rents. The lighter part on top of each bar is imputed rents. Bars above € 150,000 are cut, and their value is written above them. Adults aged 20 or over are ranked by each concept; the 24 records matched to the billionaires are ranked but left out of the top 0.01% and shown in a separate bar, with their income from the firm data. Calibrated weights. Source: Panel de Hogares (IEF), 2023, and own calculations.

Figure 5: Composition of Income by Income Group, 2023

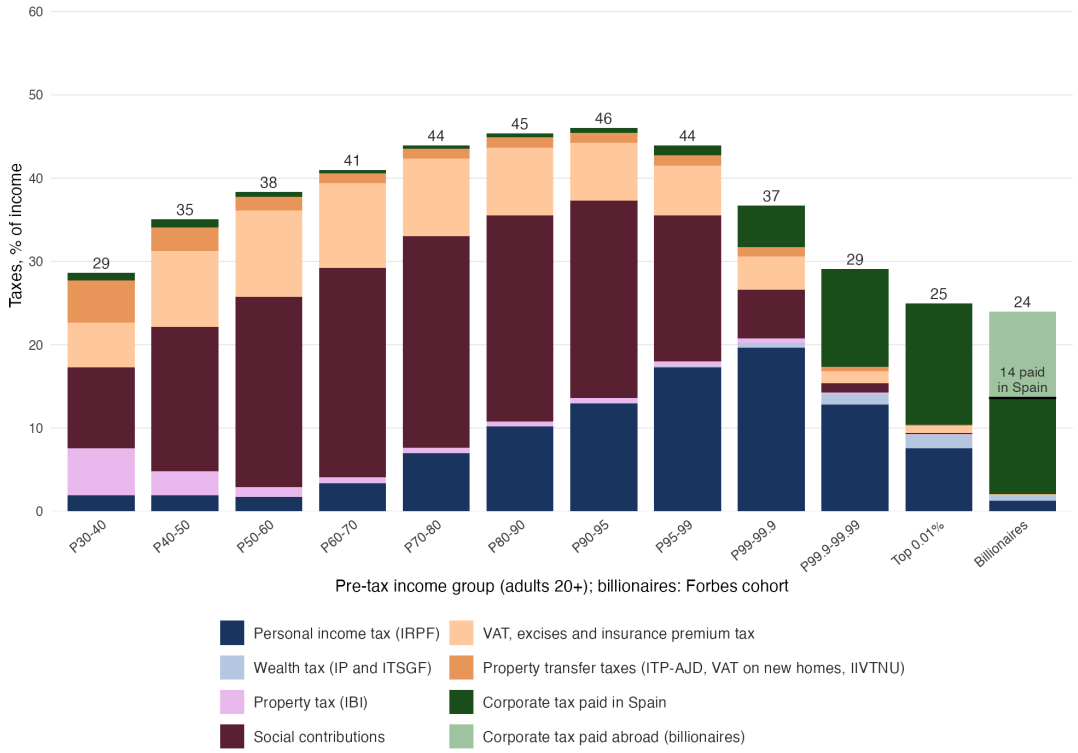


Notes: This figure shows the share of each type of income in pre-tax income by income group in 2023, in our baseline (Panel A) and in alternative (i), with contributory pensions, unemployment benefits and sick pay in income and the contributions that finance them netted out (Panel B). Imputed rents are those of the dwellings that owners live in or keep for their own use; actual rents are the rents of let property, net of costs and before mortgage interest. Retained earnings include the corporate income tax allocated with them; fund income includes the investment income of funds, life insurance and pension plans and the retained earnings of the firms they hold. Billionaires: their profits and corporate tax from the firm data. Adults aged 20 or over, calibrated weights. Source: Panel de Hogares (IEF), 2023, and own calculations.

4.2 Effective Tax Rates along the Income Distribution

Figure 6 shows effective tax rates along the income distribution in our baseline. Tax rates first rise, from 28.7% in P30–40 to 46.0% in P90–95, and then fall steeply at the top, to 25.0% for the top 0.01%. Billionaires pay 24.0% of their income, including the corporate tax their firms pay abroad, as in Table 1; the taxes they pay in Spain amount to only 13.6% of their income. Our two alternative income definitions change the rates in the middle of the distribution, where contributory pensions are a large share of income, but leave the top unchanged (Appendix Figure 8).

Figure 6: Effective Tax Rates along the Income Distribution, 2023



Notes: This figure shows total taxes paid as a share of pre-tax income by income group in 2023, in our baseline: social contributions in workers' income, contributory pensions, unemployment benefits and sick pay excluded. Taxes are the personal income tax, the wealth tax and ITSGF, the corporate income tax, social contributions, property and transaction taxes and consumption taxes. Adults aged 20 or over, calibrated weights; the 24 records matched to the billionaires are ranked but left out of the top 0.01% and shown in a separate bar, with their corporate income and taxes from the firm data. Their bar includes the corporate tax their firms pay abroad (lighter green), and the black line marks the taxes they pay in Spain. Source: Panel de Hogares (IEF), 2023, and own calculations.

4.3 Mechanisms Behind the Low Effective Tax Rates for Billionaires

We highlight two mechanisms that explain the relatively low effective income tax rates of Spain's billionaires.

First, the individual fiscal income of Spain's billionaires amounts to about only 4.3% of their economic income in 2023. The bulk of billionaires' economic income is corporate income which is not passed through to the billionaires' individual income tax returns and is taxed at a lower rate than labor income. The effective corporate income tax rate of Spain's billionaire-owned corporations is 22.2% in 2023 which drives most of our all-in tax rate of 24% relative to economic income.

This is not because they do not earn income, but because they structure their wealth so that very little of it reaches their personal tax returns, mainly by retaining earnings in their firms and through holding companies, practices which are completely legal. In 2023, their taxable income

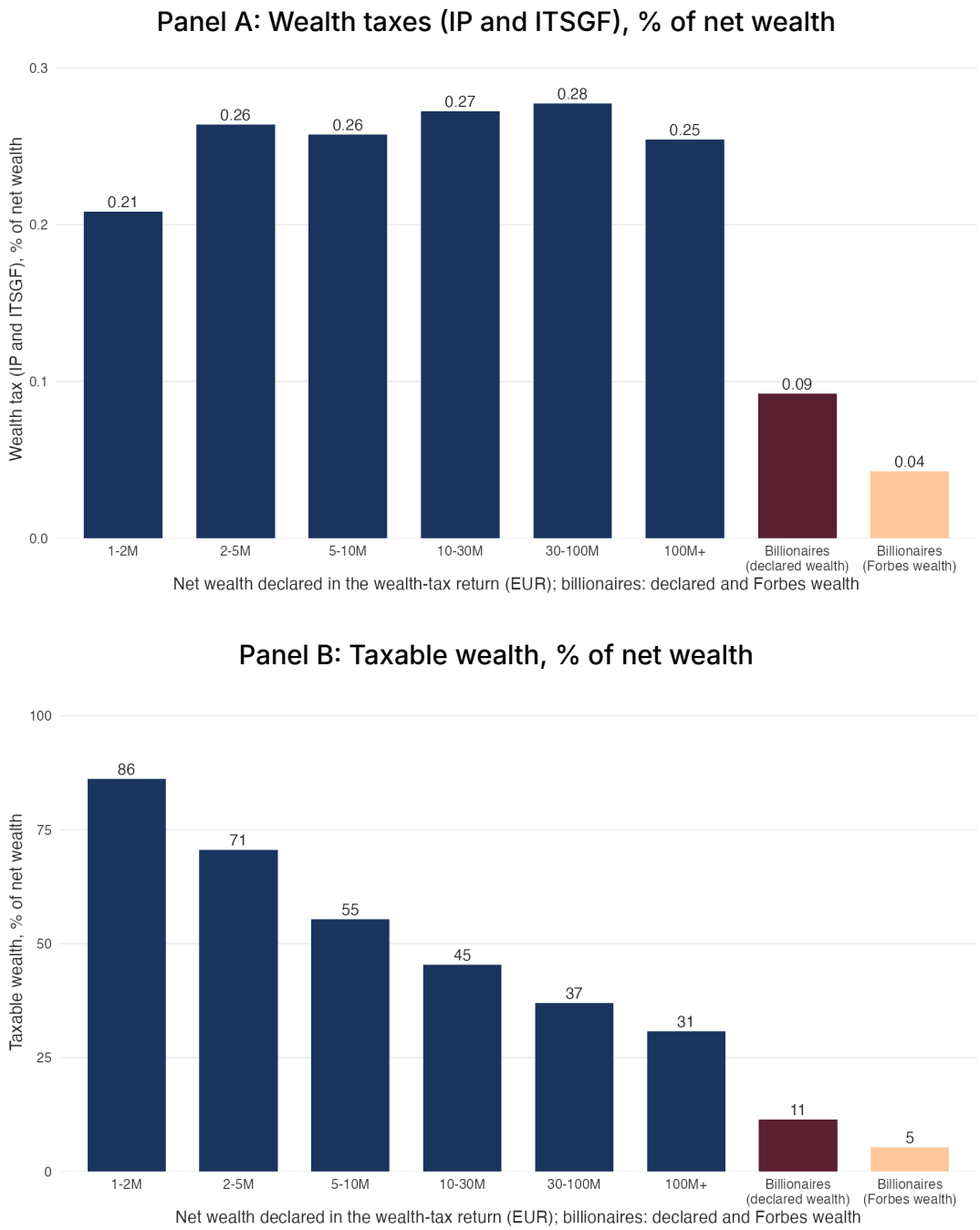
was only 0.28% of their wealth, even though their firms made profits of 6% on average.

The low ratio of fiscal income to economic income arises primarily because most of the dividends distributed by billionaire-owned corporations do not reach the individual income tax returns of the billionaires. In 2023, we estimate that about 8% of distributed dividends, as observed in the firm's financial statements and pro-rated to billionaires' ownership shares, flow through to the individual income tax returns of billionaires. It follows that the remaining 92% of distributed dividends must be shielded from individual income taxation by billionaire-owned holding companies. This mirrors the findings of Ring et al. (2026) in the context of Norway and Sweden.

Second, even though Spain levied a wealth tax in 2023, we estimate that Spain's billionaires paid only 0.04% of their Forbes wealth in wealth tax in 2023. Relative to declared wealth, the effective wealth tax rate amounts to 0.09%. The low effective wealth tax rate is mainly explained by undervaluation and tax-exemption of billionaire-owned assets, and by the joint ceiling on income and wealth taxes (*límite conjunto*). Family-owned businesses are generally exempt from Spain's wealth tax and assets are generally measured at book value, not at market value. This undervaluation holds even when unlisted firms owns listed shares: large stakes enter its book value at cost, not at market value.[26] Hence, any effective measure to correct the top end regressivity which would use wealth as a base would need to see the current valuation rules reviewed if it sought to capture a meaningful measure of the wealth's market value. Figure 7 shows the effective tax rates on wealth along the wealth distribution and the share of taxable wealth in net wealth.

26. Unlisted shares are valued at the firm's book value (Ley 19/1991, art. 16). In the firm's accounts, stakes in companies it controls or significantly influences (presumed from 20% of votes) are carried at cost less impairment (Plan General de Contabilidad, norma 9ª, 2.4).

Figure 7: Wealth Taxes and Taxable Wealth as a Share of Net Wealth, 2023



Notes: This figure shows the wealth tax and ITSGF (Panel A) and the taxable base of the wealth tax (Panel B) as a share of net wealth in 2023, for wealth tax filers by declared net wealth and for the billionaires. Billionaires: the 24 filers with the highest declared net wealth, over their declared net wealth and over their Forbes wealth; they are left out of the wealth groups. The difference between the billionaires' rates at declared and at Forbes wealth comes from the substantial undervaluation of wealth in the wealth tax returns, which is due in part, but not fully, to private firms being valued at book value instead of market value. Wealth tax filers with € 1 million or more, design weights. Source: Panel de Hogares (IEF), 2023, Forbes, and own calculations.

5 Revenue Estimates from Proposed Minimum Taxes

5.1 The Mechanism of a Minimum Tax on Wealth

The regressivity of most modern tax systems at the top of the income distribution has prompted the proposal of several measures. The most widespread proposal consists of applying a *minimum* tax rate on all wealth for taxpayers above a certain cutoff. This type of tax acts as a *top up* on personal taxes (here the IRPF and the wealth taxes), implying that only those taxpayers that pay *less* than the headline rate are subject to the tax. Most of the proposals of this type of tax take wealth at market value as the base, with no exemption, and a cutoff of 50€ M or 100€ M to select the pool of tax payers (Zucman, 2024).

Our combination of data is hence well suited to simulate the revenue that such a tax could raise in Spain, under different design choices. For our simulations, we take tax rates for each individual tax filer matched to one of our 24 RTB billionaires, and provide estimates with i) their wealth tax return net wealth, ii) their Forbes net wealth. As seen above, the two differ by a factor of two, due to the wealth tax valuation rules on private businesses. Our revenue estimates reflect these differences and show the importance of the method chosen for the valuation of assets for its revenue potential.

For non billionaires, we only have wealth tax valuations at our disposal, and hence the revenue estimates below the 24 billionaires' group should be seen as conservative. To illustrate this we add to the simulation the Forbes wealth estimates for the 100 richest Spaniards for 2023: our 24 billionaires, and the next 76 in the *Forbes España* list, matched by wealth rank with our weighted distribution.

Our main estimates are for the year 2023, yet billionaires' wealth has rapidly increased since: the 24 richest residents in the *Forbes* list held € 230.6 billion in November 2026, 58% more than at the end of 2023. We hence repeat the simulation with 2026 billionaire and top 100 Forbes data assuming their tax rate as a share of wealth remains constant, and assuming other taxpayers' wealth only grew at the annual macroeconomic private wealth growth rate (12.3% per year[27]).[28]

5.2 Revenue Estimates

Tables 4 to 7 show our revenue estimates for different designs of a minimum tax on wealth. Each individual above the cutoff pays the difference between the minimum rate on their net wealth and the income and wealth taxes they already pay, when positive. We take net wealth from the 2023 wealth tax returns, including exempt assets, and use the design weights of the sample, which gives us 468 individuals above € 100 million, against 497 in official statistics.

Taking declared wealth as the base, a 2% minimum tax above € 100 million would raise € 2.8 billion in 2023 (Table 4). Valuing our 24 billionaires at their *Forbes* wealth increases revenue to € 4.4 billion, of which € 2.7 billion would be paid by the billionaires alone, as they currently pay only

27. European Central Bank, 2024

28. These assumptions are conservative, as personal taxes are based on fiscal income, which does not follow wealth growth, so that personal taxes have likely grown less than wealth. We also do not add the taxpayers who cross the cutoffs after 2023.

0.12% of their *Forbes* wealth in income and wealth taxes (Table 5).[29] Adding the *Forbes* wealth of the next 76 richest Spaniards raises revenue to € 4.6 billion (Table 6). These 76 declare € 35.4 billion, against € 49.3 billion in *Forbes*, so the gap between declared and market wealth narrows below the billionaires, yet does not close. A rate of 3% would raise € 4.5 billion on declared wealth and up to € 7.3 billion with *Forbes* values. Lowering the cutoff to € 50 million adds about € 0.7 billion at 2% (€ 1.2 billion at 3%), while a 10% evasion rate lowers revenue by 11 to 12%.

With 2026 wealth levels, revenue above € 100 million rises to € 6.5 billion with our billionaires at their *Forbes* wealth, and to € 6.9 billion when we add the next 76 richest Spaniards (Table 7). Above € 50 million, it reaches € 7.5 and € 7.9 billion respectively, and a 3% rate would raise between € 10.2 and € 10.9 billion above € 100 million.

Table 4: Revenue from a Minimum Tax on Wealth, 2023 (€ billion)

	2% minimum tax		3% minimum tax	
	Revenue	With 10% evasion	Revenue	With 10% evasion
Net wealth above € 100 million				
Declared net wealth	2.82	2.49	4.52	4.01
Billionaires at *Forbes* wealth	4.39	3.89	6.88	6.13
Top 100 at *Forbes* wealth	4.65	4.13	7.28	6.49
Net wealth above € 50 million				
Declared net wealth	3.54	3.11	5.77	5.10
Billionaires at *Forbes* wealth	5.11	4.52	8.12	7.22
Top 100 at *Forbes* wealth	5.38	4.75	8.52	7.58

Notes: This table shows the estimated revenue of a minimum tax on net wealth in 2023, in € billion. Each individual with net wealth above the threshold pays the difference between 2% (3%) of their net wealth and the personal income tax, wealth tax and ITSGF, when positive. Net wealth is as declared on the wealth tax return, including exempt assets and net of debts. Billionaires at Forbes wealth: the 24 individuals with the highest declared net wealth in the Panel de Hogares are given, by rank, the wealth of the 24 billionaires resident in Spain in the Forbes Real-Time Billionaires List at the end of 2023 (€ 146.1 billion), and keep the taxes they pay. Top 100 list: the billionaires as above, and the next 76 richest residents in the 2023 Forbes España list (its ranks 25 to 100, with joint family fortunes split among the members, € 49.3 billion), given by rank to the individuals with the highest declared net wealth after the billionaires, up to a weighted count of 76. With 10% evasion, 10% of each individual's net wealth escapes the tax. Individuals are weighted with the design weights of the sample: 468 individuals have more than € 100 million and 1,287 more than € 50 million. Official estimates for 2023 report 497 individuals with more than € 100 million, holding € 176.8 billion.

29. If we instead match the billionaires to the 24 individuals who pay the most income and wealth taxes among the 200 with the highest declared net wealth, revenue above € 100 million is € 4.73 billion.

Table 5: Minimum Tax of 2% with the Billionaires, 2023

	Individuals	Net wealth (€ bn)	Income and wealth taxes (€ bn)	Taxes paid, % of wealth	Minimum tax (€ bn)	With 10% evasion (€ bn)
A. Declared net wealth						
Billionaires	24	67.4	0.18	0.27	1.18	1.05
Other individuals above € 100 million	444	106.9	0.62	0.58	1.64	1.44
Individuals with € 50–100 million	819	55.5	0.54	0.98	0.72	0.62
Total above € 100 million	468	174.3	0.80	0.46	2.82	2.49
Total above € 50 million	1,287	229.8	1.35	0.59	3.54	3.11
B. Billionaires at Forbes wealth						
Billionaires	24	146.1	0.18	0.12	2.74	2.46
Other individuals above € 100 million	444	106.9	0.62	0.58	1.64	1.44
Individuals with € 50–100 million	819	55.5	0.54	0.98	0.72	0.62
Total above € 100 million	468	252.9	0.80	0.32	4.39	3.89
Total above € 50 million	1,287	308.4	1.35	0.44	5.11	4.52

Notes: This table shows the revenue of a 2% minimum tax on net wealth in 2023 by group of individuals. Billionaires are the 24 individuals with the highest declared net wealth in the Panel de Hogares, counted as one individual each; the rest of their sample weight (5.9 individuals) is counted among the other individuals above € 100 million, at their declared wealth. In panel A all individuals are taxed on declared net wealth. In panel B the billionaires are given, by rank, the wealth of the 24 billionaires resident in Spain in the Forbes Real-Time Billionaires List at the end of 2023 and keep the taxes they pay. Income and wealth taxes are the personal income tax, wealth tax and ITSGF paid in 2023. Taxes paid are in % of the net wealth in the second column. The minimum tax of each individual is 2% of their net wealth less their income and wealth taxes, when positive; with 10% evasion, 10% of net wealth escapes the tax. Individuals are weighted with the design weights of the sample.

Table 6: Minimum Tax of 2% with the Top 100, 2023

	Individuals	Net wealth (€ bn)	Income and wealth taxes (€ bn)	Taxes paid, % of wealth	Minimum tax (€ bn)	With 10% evasion (€ bn)
Top 100	100	195.3	0.43	0.22	3.56	3.17
Other individuals above € 100 million	368	71.5	0.37	0.52	1.10	0.96
Individuals with € 50–100 million	819	55.5	0.54	0.98	0.72	0.62
Total above € 100 million	468	266.8	0.80	0.30	4.65	4.13
Total above € 50 million	1,287	322.3	1.35	0.42	5.38	4.75

Notes: This table shows the revenue of a 2% minimum tax on net wealth in 2023 when the 100 richest individuals are valued at their Forbes wealth. The top 100 are our 24 billionaires, at their wealth in the Forbes Real-Time Billionaires List (Table 5), and the next 76 richest residents in the 2023 Forbes España list (its ranks 25 to 100, with joint family fortunes split among the members, € 49.3 billion). The next 76 are matched by rank to the individuals with the highest declared net wealth after the billionaires in the Panel de Hogares, up to a weighted count of 76; they declare € 35.4 billion. All of them keep the taxes they pay. All other individuals are taxed on declared net wealth. Income and wealth taxes, the minimum tax, evasion and weights as in Table 5.

Table 7: Minimum Tax of 2% at 2026 Wealth

	Individuals	Net wealth (€ bn)	Income and wealth taxes (€ bn)	Taxes paid, % of wealth	Minimum tax (€ bn)	With 10% evasion (€ bn)
A. Billionaires						
Billionaires	24	230.6	0.29	0.12	4.33	3.87
Other individuals above € 100 million	444	142.9	0.83	0.58	2.20	1.92
Individuals with € 50–100 million	819	74.2	0.72	0.98	0.97	0.83
Total above € 100 million	468	373.5	1.12	0.30	6.52	5.79
Total above € 50 million	1,287	447.6	1.84	0.41	7.49	6.62
B. Top 100						
Top 100	100	306.0	0.67	0.22	5.45	4.83
Other individuals above € 100 million	368	95.5	0.49	0.52	1.47	1.28
Individuals with € 50–100 million	819	74.2	0.72	0.98	0.97	0.83
Total above € 100 million	468	401.5	1.17	0.29	6.91	6.12
Total above € 50 million	1,287	475.7	1.89	0.40	7.88	6.95

Notes: This table shows the revenue of a 2% minimum tax on net wealth with wealth levels of 2026. Panel A: the 24 richest residents of Spain in the Forbes Real-Time Billionaires List on 17 November 2026 (€ 230.6 billion, converted from US dollars at the ECB reference rate of that day). Panel B: the same billionaires and the next 76 richest residents in the 2026 Forbes España list (its ranks 25 to 100, € 75.4 billion). The billionaires and the next 76 each keep, as a group, the ratio of income and wealth taxes to Forbes wealth of the individuals matched to them in 2023 (0.12% and 0.52%). Other individuals: their declared net wealth and their income and wealth taxes of 2023 are raised by 33.7%, the growth of households' net wealth between the end of 2023 and the second quarter of 2026 in the ECB Distributional Wealth Accounts, so that they keep their 2023 ratio of taxes to wealth; the number of individuals is that of 2023. The minimum tax, evasion and weights as in Table 5.

A Appendix

Table 8: Sample Weights of the Panel de Hogares, 2023

Panel A: By taxable income

Taxable income (EUR thousand)	Mean weight	Median weight
No return	10.3	2.2
0 or less	10.9	2.5
0–1.5	14.9	3.4
1.5–6	15.1	3.3
6–12	15.6	3.5
12–21	16.9	4.7
21–30	18.8	8.1
30–60	16.8	8.8
60–150	10.6	3.5
150–601	4.5	1.1
Above 601	2.0	1.1
All adults	13.3	3.1

Panel B: By declared net wealth

Declared net wealth (EUR million)	Mean weight	Median weight
No wealth-tax return	13.4	3.2
Up to 1.5	9.0	2.1
1.5–6	4.2	1.1
6–30	2.6	1.1
30–100	1.6	1.1
Above 100	1.4	1.1
All adults	13.3	3.1

Notes: This table shows the mean and median calibrated weight of the adults aged 20 or over in the Panel de Hogares in 2023, by taxable income bracket (general plus savings tax base, in € thousand; Panel A) and by net wealth declared on the wealth tax return (in € million; Panel B). Source: Panel de Hogares (IEF), 2023.

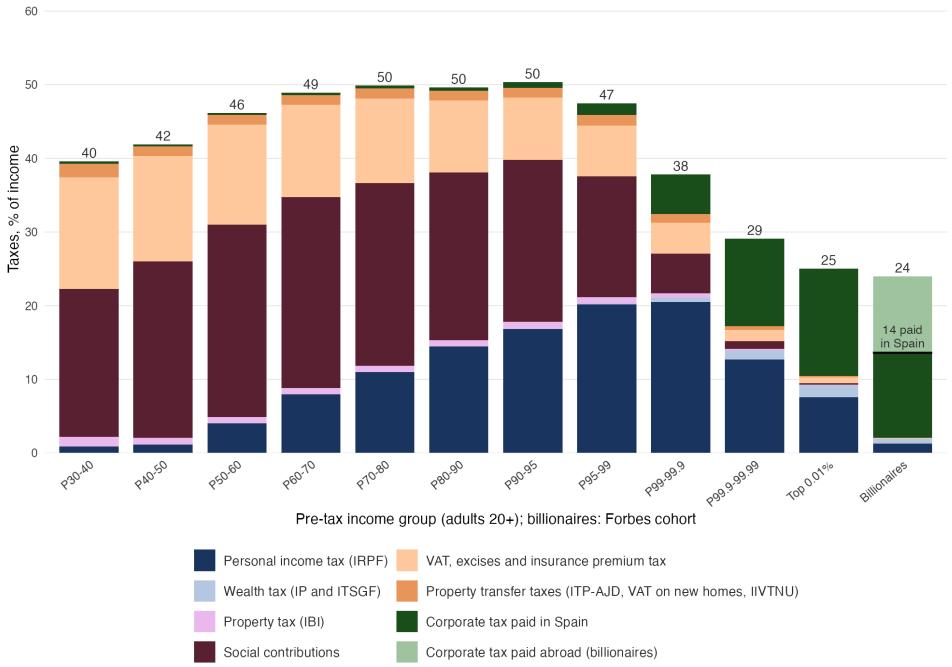
Table 9: Our Totals and the National Aggregates, 2023 (€ billion)

	Source	Declared	Estimate	Aggregate	Estimate / aggregate
Pre-tax income					
Compensation of employees	National accounts (D1)	–	669.4	665.1	101%
Wages and salaries	National accounts (D11)	–	519.1	514.7	101%
Mixed income	National accounts (B3 less letting)	56.9	85.9	111.8	77%
Net rental income	AEAT	20.1	18.9	18.9	100%
Imputed rents of owner-occupiers	National accounts (B2, L68A)	–	60.8	60.8	100%
Dividends	National accounts (D42)	15.4	23.3	23.4	100%
Retained earnings, directly held	National accounts (B8)	–	68.1	68.2	100%
Investment funds	National accounts (D443)	–	13.8	13.8	100%
Life insurance	National accounts (D441)	–	9.0	9.0	100%
Pension funds	National accounts (D442)	–	4.9	4.9	100%
Total		–	954.0	975.9	98%
Social benefits (transfers in the baseline)					
Public pensions	National accounts (D62)	–	177.0	177.0	100%
Unemployment benefits	National accounts (D62 less D613)	–	14.4	14.4	100%
Birth and childcare leave pay	National accounts (D62)	–	3.4	3.9	88%
Sick pay	–	–	14.2	–	–
Other transfers	–	–	18.6	–	–
Taxes					
Personal income tax, filers	AEAT	116.1	117.7	117.7	100%
Personal income tax, non-filers' withholdings	–	2.6	2.6	–	–
Wealth tax and ITSGF	AEAT	1.72	1.96	1.96	100%
Design weights	AEAT	1.75	–	–	–
Corporate income tax	National accounts (D51)	–	21.1	21.1	100%
Employee contributions	National accounts (D613CE)	–	27.0	27.0	100%
Employer contributions	National accounts (D611 + D612)	–	150.3	150.3	100%
Self-employed contributions	National accounts (D613CS)	–	9.4	11.5	81%
Property tax (IBI)	Cadastre	–	8.4	8.4	100%
Transfer taxes and stamp duty (ITP-AJD)	Regions	–	8.9	8.9	100%
VAT on new homes	National accounts (D211)	–	3.0	3.0	100%
Municipal land-value tax (IIVTNU)	Tax list	–	1.73	1.73	100%

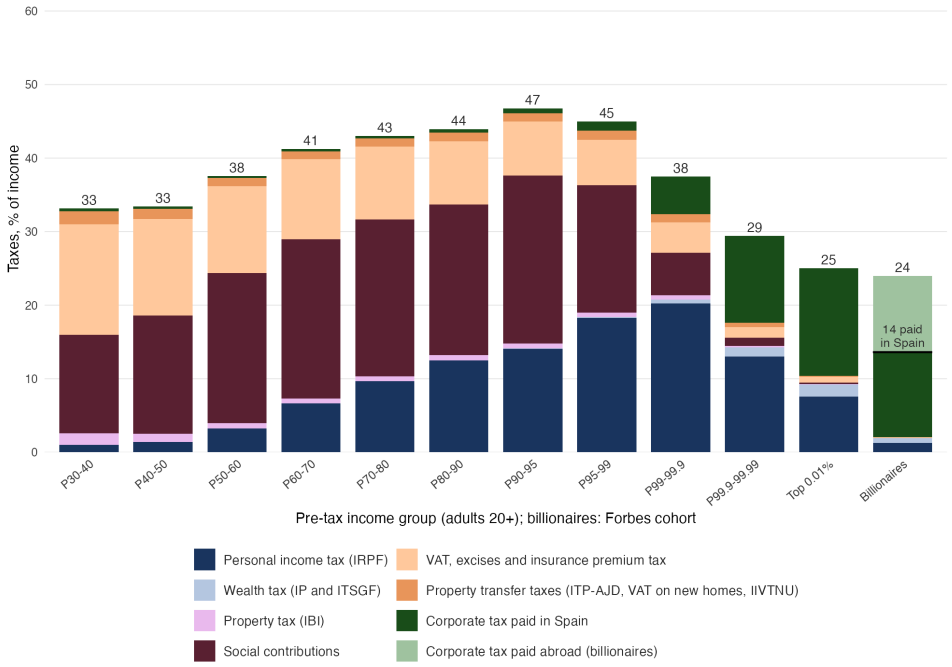
Notes: This table compares our weighted totals for 2023 with the national accounts and the tax administration's statistics, brought to the régimen común (Spain without the Basque Country and Navarre). Declared: amounts as declared in the tax data; Estimate: our totals after the corrections, allocations and rescaling described in Section 3. Calibrated weights, except where stated.

Figure 8: Effective Tax Rates under the Alternative Income Concepts, 2023

Panel A: Alternative (i): contributory benefits in income, the contributions that finance them netted out

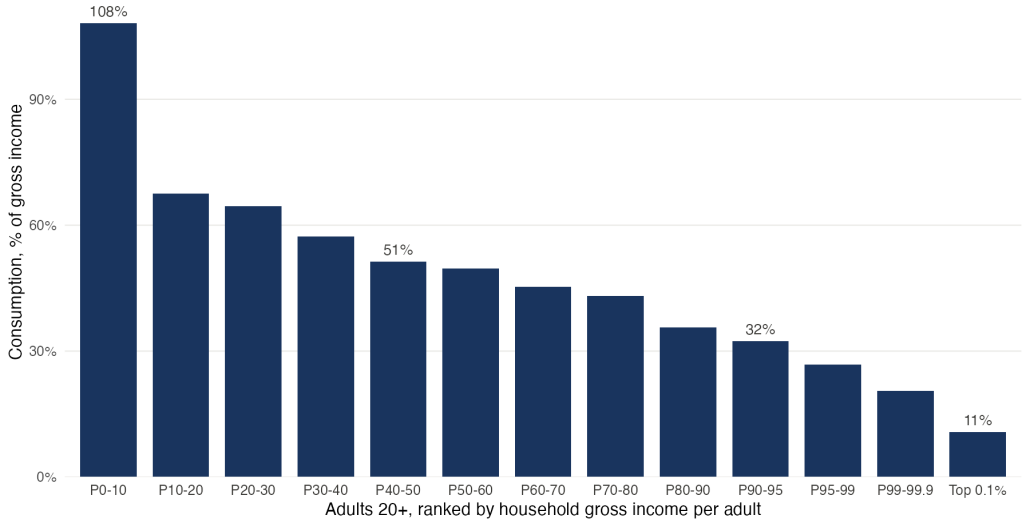


Panel B: Alternative (ii): contributory benefits in income, contributions kept in workers' income



Notes: This figure shows total taxes paid as a share of pre-tax income by income group in 2023 under the two alternative income concepts. In Panel A, contributory pensions, unemployment benefits and sick pay are in income and the contributions that finance them (91.6% of all contributions) are netted out of workers' income. In Panel B, the same benefits are in income and contributions are kept in workers' income; imputed rents are excluded. Taxes, ranking and weights as in Figure 6. Source: Panel de Hogares (IEF), 2023, and own calculations.

Figure 9: Consumption as a Share of Gross Income, 2022



Notes: This figure shows household consumption as a share of gross income by income group in the Encuesta Financiera de las Familias 2022 (Banco de España), mean of the five implicates. Adults aged 20 or over, ranked by household gross income per adult. Consumption covers food, other non-durables and durable purchases; rents and insurance are not included. Gross income is that of 2021, before income tax and contributions. We use these ratios to allocate consumption taxes (Section 3.2.14).

References

Agencia Estatal de Administración Tributaria (2024a). Informe anual de recaudación tributaria 2023. Technical report, AEAT.

Agencia Estatal de Administración Tributaria (2024b). Mercado de trabajo y pensiones en las fuentes tributarias 2023. Estadísticas, AEAT.

Alstadsæter, A., M. Jacob, W. Kopczuk, and K. Telle (2025). Accounting for business income in measuring top income shares: Integrated accrual approach using individual and firm data from Norway. NBER Working Paper 22888, National Bureau of Economic Research. Revised December 2025.

Bach, L., A. Bozio, A. Guillouzouic, and C. Malgouyres (2025, September). Do billionaires pay taxes? Working paper.

Balkir, A. S., E. Saez, D. Yagan, and G. Zucman (2025). How much tax do us billionaires pay? evidence from administrative data. NBER Working Paper 34170, National Bureau of Economic Research.

Banco de España (2022, July). Survey of household finances (EFF) 2020: Methods, results and changes since 2017. Economic Bulletin, Analytical Article 3/2022, Banco de España.

Banco de España (2024, May). Survey of household finances (EFF) 2022: Methods, results and changes since 2020. Documentos Ocasionales 2413, Banco de España, Madrid.

Bruil, A., C. van Essen, W. Leenders, A. Lejour, J. Möhlmann, and S. Rabaté (2022, March). Inequality and redistribution in the Netherlands. CPB Discussion Paper 436, CPB Netherlands Bureau for Economic Policy Analysis.

Dirección General del Catastro (2024). Estadísticas catastrales: Impuesto sobre bienes inmuebles, información tributaria 2023. Ministerio de Hacienda.

Domínguez Barrero, F., J. López Laborda, and F. Rodrigo Sauco (2015). "El hueco que deja el diablo": una estimación del fraude en el IRPF con microdatos tributarios. *Revista de Economía Aplicada 23*(68), 81–102.

European Central Bank (2024). Experimental distributional wealth accounts (DWA) for the household sector: Methodological note. Technical report, European Central Bank.

Garbinti, B., J. Goupille-Lebret, and T. Piketty (2018). Income inequality in France, 1900–2014: Evidence from distributional national accounts (DINA). *Journal of Public Economics 162*, 63–77.

Instituto de Estudios Fiscales (2025). Panel de hogares: Ejercicio 2023. Documentos de Trabajo 4/2025, Instituto de Estudios Fiscales, Madrid.

Instituto Nacional de Estadística (2024a). Estadística de hipotecas 2023. INE.

Instituto Nacional de Estadística (2024b). Estadística de transmisiones de derechos de la propiedad 2023. INE.

Jiménez, G., D. Martínez-Miera, and J.-L. Peydró (2024). Who truly bears (bank) taxes? Evidence from only shifting statutory incidence. *Journal of Public Economics 240*, 105173.

López Laborda, J., C. Marín González, and J. Onrubia (2026). Observatorio sobre el reparto de los impuestos y las prestaciones entre los hogares españoles. décimo informe – 2022 y 2023. Estudios sobre la Economía Española 2026/13, FEDEA.

Marrero, G. A., C. Martínez-Toledano, J. C. Palomino, and D. Petrov (2025, June). Regional wealth inequality in Spain: Evidence from the Spain Wealth Atlas. Working Paper 2025/13, World Inequality Lab.

Martínez-Toledano, C. (2023, March). House price cycles, wealth inequality and portfolio reshuffling. Working paper, Imperial College London and World Inequality Lab.

Ministerio de Vivienda y Agenda Urbana (2024). Sistema estatal de referencia del precio del alquiler de vivienda (SERPAVI). Ministerio de Vivienda y Agenda Urbana.

Piketty, T., E. Saez, and G. Zucman (2018). Distributional national accounts: Methods and estimates for the United States. *The Quarterly Journal of Economics 133*(2), 553–609.

Ring, M., D. Seim, and G. Zucman (2026, July). Personal holding companies, tax progressivity, and inequality. NBER Working Paper 35534, National Bureau of Economic Research.

Saez, E. and G. Zucman (2026). Distributional tax analysis in theory and practice: Harberger meets Diamond-Mirrlees. *Journal of Public Economics 259*, 105675.

Zucman, G. (2024). A blueprint for a coordinated minimum effective taxation standard for ultra-high-net-worth individuals. Technical report, Report commissioned by the Brazilian G20 Presidency.