WEALTH INEQUALITY IN THE NETHERLANDS

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Wealth inequality in the Netherlands, 1894 – 2019: Updated series with and without pension wealth[*]

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1   Introduction

The purpose of this note is twofold. First, we want to clarify the conceptual and methodological differences between the Dutch wealth inequality series in Toussaint, de Vicq, Moatsos, and van der Valk (2022) and the Dutch wealth inequality series available on wid.world. Second, we want to compare the Dutch wealth distribution series with and without pension wealth.

2   Overview of the Series

In this section, we describe the data sources and methodological steps underlying the two series.

2.1   Series in Toussaint, de Vicq, Moatsos, and van der Valk (2022)

Toussaint, de Vicq, Moatsos, and van der Valk (2022) build wealth inequality shares using two different data sources: wealth tax tabulations (1894 – 1993) and administrative wealth tabulations (1993 – 2019) published by Statistics Netherlands. The wealth tax tabulations only cover at most the top 7% of the wealth distribution, as the wealth tax only applied to the richest individuals in the country. In contrast, the administrative wealth tabulations cover the full distribution since they are constructed using a variety of sources, including wealth and income tax data and a comprehensive household survey. The latter are thus of better quality than the historical wealth tax tabulations.

There is a slight difference in the observational unit between the two series: the wealth tax series are based on tax units, whereas the tabulations refer to households. Tax units correspond to adult individuals, with married couples treated as one unit (Wilterdink 1984). This does not affect the calculations, since Toussaint, de Vicq, Moatsos, and van der Valk (2022) adjust the population of interest for both series: for the wealth tax series, they compare the thresholds to the adult population (with the number of female married adults subtracted to get to the total number of tax units, following Wilterdink 1984), whereas they compare the tabulations to the number of households.

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Toussaint, de Vicq, Moatsos, and van der Valk (2022) apply the generalized Pareto interpolation developed by Blanchet, Fournier, and Piketty (2021) to the wealth tabulations using *gpinter* to obtain wealth distribution series percentile by percentile for the Netherlands from 1894 to 2019. Given the differences in quality between the historical wealth tax tabulations and the more recent administrative tabulations, there is a sharp jump in the overlapping year 1993. This jump is mainly driven by the decline in the quality of the wealth tax tabulations over time. The reason is that the exemption threshold was increased and numerous exemptions were also introduced in the wealth tax over time.

Toussaint, de Vicq, Moatsos, and van der Valk (2022) adjust the *gpinter* series in order to fix the jump in 1993 coming from a decline in wealth shares between 1963 and 1993, due to the worsening of the quality of the wealth tax tabulations in the most recent years. They adjust the series between 1963 and 1993 exploiting the fact that both data sources overlap in 1993. They pick 1963, since this is the year in which a major tax reform was enacted, and also coincides with the start of the period identified by Wilterdink (1984) as the one of decreasing tax morale. As explained in Toussaint, de Vicq, Moatsos, and van der Valk (2022), they construct weighted averages of the raw wealth shares and a "synthetic" wealth share, as follows:

$$S_t(p)^* = \omega_t S_{1993}^{\text{CBS}}(p) + (1 - \omega_t) S_t^{\text{WT}}(p), \quad \omega_t := \frac{t - 1963}{1993 - 1963}, \quad t \in \{1963, ...1993\}. \tag{1}$$

Here, $S(p)$ is the wealth share of percentile (or fractile) p, superscript CBS refers to the Statistics Netherlands series, and superscript WT refers to the wealth tax series. This linearly interpolated adjustment puts increasing weight on the 1993 data point as t approaches 1993, making it possible to retain any genuine trend in wealth shares between 1963 and 1993 whilst removing the jump in 1993 by construction. Note that since all percentiles are adjusted, the wealth shares output of `gpinter` is still consistent in that all wealth shares sum to one.

Apart from this adjustment, the series of Toussaint, de Vicq, Moatsos, and van der Valk (2022) are identical to the *gpinter* series. Nonetheless, the authors have refrained from reporting any statistics on the lower 95% of the distribution, as all years prior to 1993 only have information about the top 7% at most.

For the 1993-2019 period, Toussaint, de Vicq, Moatsos, and van der Valk (2022) use tabulated data from Statistics Netherlands. These series contain, for granular brackets, information on bracket wealth shares and asset composition. The authors rescale these series so as to match the asset-specific wealth totals to those of National Accounts. Specifically, for a given bracket b and total value of an asset k as recorded in the CBS tabulations by A_{bt}^k in year t, they calculate that bracket's total share of a given asset as follows:

$$\theta_{bt}^k := \frac{A_{bt}^k}{\sum_b A_{bt}^k}. \tag{2}$$

These asset-specific shares are then rescaled to National Accounts as follows:

$$S_t(b) = \frac{\sum_k \theta_{bt}^k \mathbf{A}_t^k}{\mathbf{A}_t}, \tag{3}$$

where $\mathbf{A}_t^k$ and $\mathbf{A}_t$ are the NA totals per asset and total wealth, respectively. The rescaled wealth and portfolio shares are different to the ones obtained using directly the raw tabulations published by Statistics Netherlands. These differences are particularly more striking before the 2000s, as the financial assets totals published by Statistics Netherlands are much lower than the ones from National Accounts during that period. The post-1993 series in Toussaint, de Vicq, Moatsos, and van der Valk (2022) do not yet apply this rescaling, but they will likely incorporate the rescaling in future revisions of the paper.

2.2 WID Series

The WID series also rely on the same *gpinter* series as Toussaint, de Vicq, Moatsos, and van der Valk (2022). However, there are two main differences between the two. First, the WID series cover the full wealth distribution percentile by percentile from 1894 until 2019. Second, the WID series also account for private pension wealth to fully conform with the DINA guidelines (Alvaredo et al. 2021). Nonetheless, we provide in this note for comparison the two series with and without private pension wealth.

To cover the full wealth distribution percentile by percentile since 1894, the WID series rely on the constraining procedure proposed in section 7.2.3.2 of the DINA guidelines (Alvaredo et al. 2021). This procedure involves constraining the Lorenz curve of the bottom 99% from 1894-1992 to be consistent with the bottom 99% from 1993-2019. This approach as the advantage of perfectly preserving the historical fiscal data at the top, and it ensures that the resulting quantile function is continuous covering the full wealth distribution from bottom to top for the whole period 1894-2019.

In addition, the WID series fully conform with the DINA guidelines (Alvaredo et al. 2021) by also distributing pension wealth. Since this is a major wealth asset in the Netherlands (in particular since the 1980s, see Figure 1), the issue of distributing pension wealth is subject to frequent debate. For the international reader, we provide a brief overview of the Dutch institutional features and the highlights of this debate. The Dutch pension system consists of three 'pillars': (1) a universal pay-as-you-go Social Security scheme; (2) employer-mandated capital-funded pension claims (typically defined benefit, although defined contribution and defined capital schemes also exist); and (3) private voluntary savings. The debate centers on the second pillar, which is by far the largest in size, also from and international standpoint. Conventional statistics produced by Statistics Netherlands exclude the latter pension claims, both for conceptual and pragmatic reasons. Pragmatically, these pension claims have never been subject to the wealth tax, and are thus never included in any data source based on tax statistics. However, the national accounts do include these pension claims as part of total private pension wealth. Conceptually, one can debate whether these pensions should be included as part of private wealth or not. Conventional definitions of wealth focus on assets over which ownership rights can be enforced. These pension claims do not qualify for this feature, since they are not tradeable, inheritable nor consumable prior to retirement age. In this regard, they are more akin to Social Security systems (like the first pillar), a right to future income streams. These systems are typically not included in household balance sheets, and hence should also not be distributed.

Counterarguments can also be made, on the basis that employer-mandated savings are substitutes for voluntary private savings, and that the expected present value of pension claims does play a significant role in consumption-savings decisions by households, such that this expected present value should be counted as household wealth. Toussaint, de Vicq, Moatsos, and van der Valk (2022) provide aggregate wealth series including and excluding pension wealth. Nonetheless, the pragmatic considerations mentioned in the previous paragraph preclude them from doing this for the wealth shares as well.

The WID series, by contrast, follow the System of National Accounts and do account for private pension wealth. The adjustment for private pension wealth has been done by using a procedure proposed in Toussaint (2020). This procedure builds upon the distribution of pension payouts over wealth deciles, which is available for 2011–2019 in the administrative tabulations of Statistics Netherlands. Two assumptions are then made: (1) the distribution of total pension claims is proportional to the distribution of pension *payouts*, (2) this distribution is assumed to remain constant with respect to the 2011–2019 average in the years before 2011. Both assumptions are quite strong, but allow to roughly distribute pension wealth for the pre-2011 period. This procedure thus forms the basis for the Dutch wealth distribution series in Blanchet and Martínez-

Toledano ([2023](#)) and the WID series available on wid.world.

We want to emphasize that the assumptions that are made to adjust for private pension wealth are strong and that these series should be interpreted and used with care. The pension system grew enormously in importance after World War II, and so did its coverage: the earliest pension funds in our data, from 1900 or so, were primarily catered towards high-income groups like civil servants. Therefore, the composition of pension claims over the wealth distribution has very likely not remained remotely stable over the past 125 years. Moreover, the use of pension payouts ignores the working-age part of the population, who by definition have no pension payouts yet. Hence, the assumption made is that the distribution of pension claims among working-age individuals is proportional to those of retired individuals across the income or wealth distribution. A new dataset on pension claims is now available since 2015; exploiting this source to construct a more accurate pension wealth distribution for recent years is left for future work.

3   Wealth Distribution Series in the Netherlands

Having discussed the sources, concepts and methodologies used to build the wealth distribution series for the Netherlands, we finally turn to present the final wealth distribution series. Figure 2 depicts the evolution of the wealth distribution in the Netherlands between 1894 and 2019. The wealth distribution is decomposed into three groups: top 10%, middle 40% and bottom 50%. For comparability reasons, we present the series with and without private pension wealth (pillar 2). Two features of the evolution of wealth inequality in the Netherlands are worth noting. First, private pension wealth reduces wealth concentration within the top 10% wealth group to the benefit of the middle 40% and bottom 50% wealth groups. Second, the differences in wealth shares with and without private pension wealth have been increasing since the 1970s and 1980s with the expansion of pension systems and consequently, the growing important of private pension wealth as a share of total wealth. While the top 10% wealth share without pensions steadily grew between the 1970s and 2000s, the top 10% wealth share moderately declined during this period of time. In contrast, the differences in wealth shares with and without pensions were barely inexistent prior to the 1970s—with wealth inequality steadily declining between 1894 and 1970—-due to the low importance of private pension wealth in the portfolio of Dutch households.

Figure 3 shows the evolution of the top wealth groups (top 1% and top 0.01%) in the Netherlands between 1894 and 2019. The differences in top wealth shares with and without private pension wealth have also been increasing since the 1970s and 1980s with the increasing importance of private pension wealth as a share of total wealth. Nonetheless, contrary to what we document for the top 10% wealth share, the rebound of top 1% wealth concentration between the 1970s and 2000s applies to both the top 1% wealth group with and without pension wealth.[1] This is likely due to the decreasing importance of private pension wealth as a share of total wealth the further one moves up the top of the wealth distribution.

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1. Note that the rebound of the top 1% wealth share without pensions between the 1970s and the 2000s is more spectacular in Toussaint, de Vicq, Moatsos, and van der Valk ([2022](#)). This is due to the fact that the authors do not do not apply an asset-specific rescaling of the post-1993 portfolio shares to National Accounts.

4 Comparison of Wealth Inequality in the Netherlands with that in other European countries

Figures 4 and 5 illustrate the consequences of including and excluding private pension in the wealth definition of the Netherlands for the comparison of wealth inequality levels with other European countries. If we include pension wealth—-our benchmark WID definition—then the Netherlands appears to be the most equal country in Europe in terms of wealth inequality. However, if we exclude pension wealth, then the Netherlands appears to be the most unequal country in Europe. What this implies is that including pension wealth in our benchmark definition is problematic and can lead to artificial comparisons: we know that occupational pension wealth is unusually large in the Netherlands, and to a large extent plays the role fulfilled by pay-as-you-go social security public pensions in other European countries. If we were to include public pensions in the definition of wealth in other countries, then wealth inequality would also be reduced, e.g. the bottom 50% wealth share would typically go from 5% or less to 10-20% or more, especially among the elderly (see Wroński (2023), table A3), and the Netherlands would cease to look more equal than other countries in terms of wealth.

In order to make wealth inequality estimates more comparable across countries, one option would be include public pensions in the definition of wealth. However, we feel that this would be the wrong decision: public pensions provide very valuable income flows, like other public transfers, but they are not wealth assets in the sense that they cannot be sold to purchase other assets. We feel that it would be a mistake to include all public transfers in wealth and that we would not know where to stop if we include public pensions. Another possibility would be exclude non-marketable private pension wealth from our benchmark wealth definition. The problem here is that it is often difficult to draw the line between marketable and non-marketable assets, particularly for pension wealth but also sometimes for other assets. Occupational pensions in the Netherlands appear to be particularly non-marketable and unusually large (Van Bavel and Frankema 2017), but before we make such a change to our benchmark wealth definition we would need to design a satisfactory method to estimate the corresponding share of non-marketable private wealth in other countries. At this stage, we prefer to stick to our benchmark wealth definition including 100% of private pension wealth for all countries. However, we want to make clear that this is very much an open issue in our view. The purpose of this note is to clarify the consequences of the various options and the state of our thinking on this issue, and we very much welcome all contributions to this discussion.

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Figures

THE COMPOSITION OF AGGREGATE WEALTH IN THE NETHERLANDS, 1894-2021
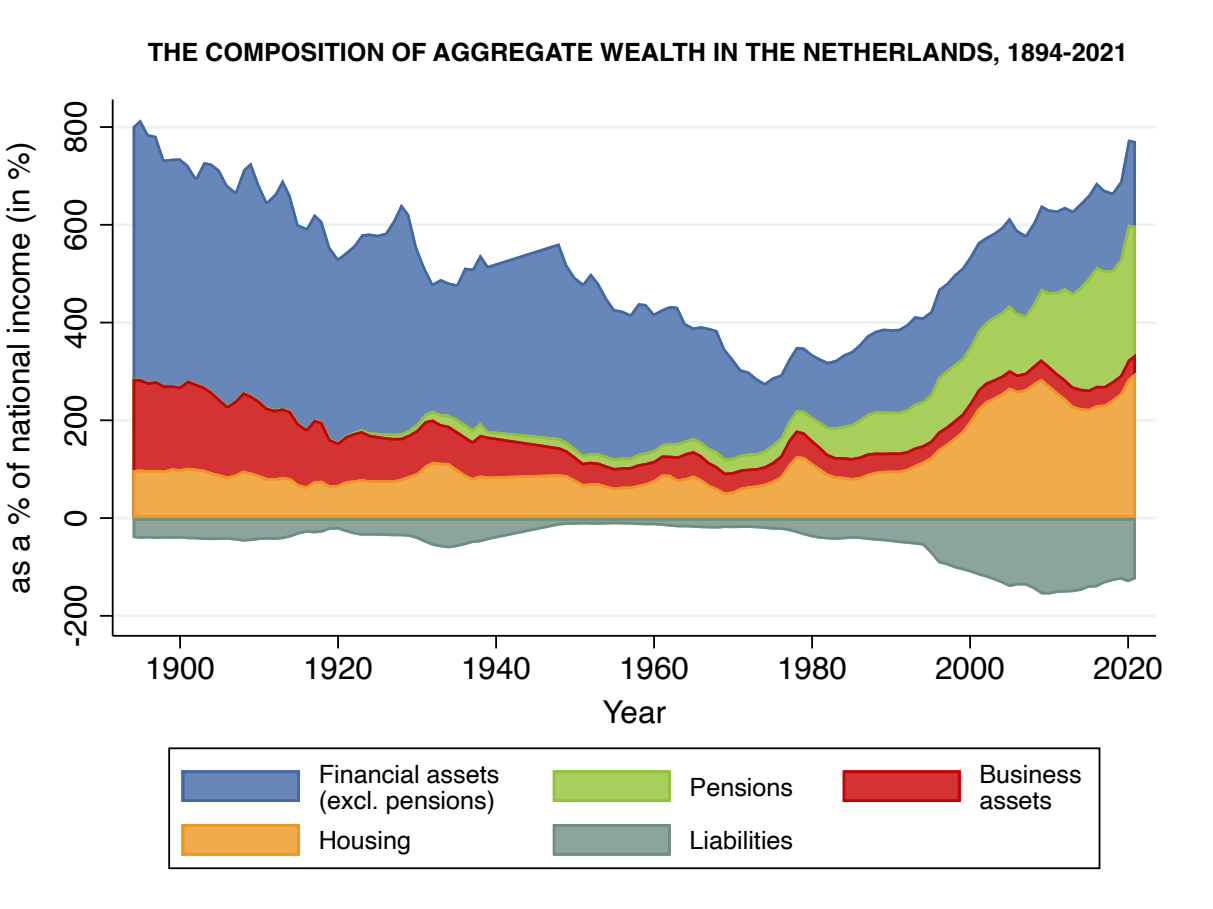
Figure 1: THE COMPOSITION OF AGGREGATE WEALTH DISTRIBUTION IN THE NETHERLANDS, 1894-2021

Notes: The figure shows the evolution of the composition of household aggregate wealth between 1894 and 2021 expressed as a percentage of national income. Financial assets (excluding pensions) cover currency, deposits, equities, investment funds, fixed income assets, life insurance reserves.
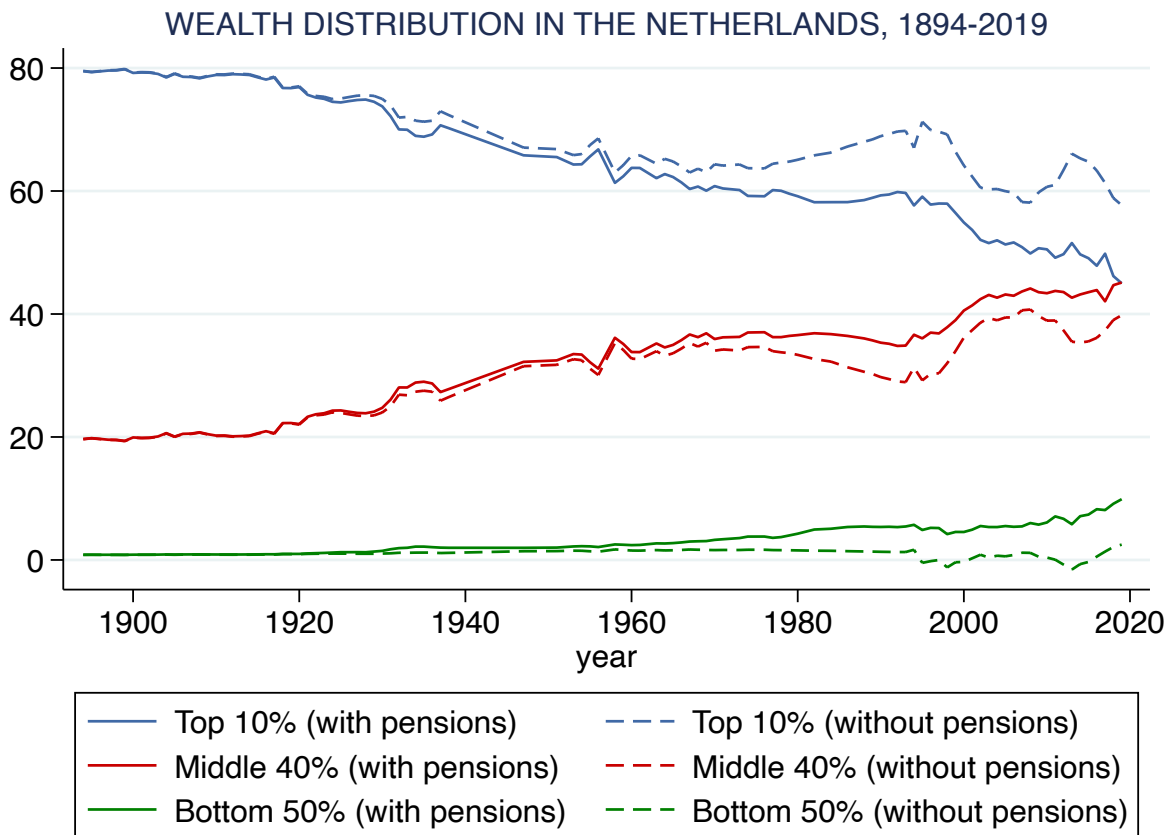
Figure 2: WEALTH DISTRIBUTION IN THE NETHERLANDS, 1894-2019

Notes: This figure depicts the evolution of the wealth distribution in the Netherlands between 1894 and 2019. The wealth distribution is decomposed into three groups: top 10%, middle 40% and bottom 50%. For comparability reasons, we present the series with and without private pension wealth.
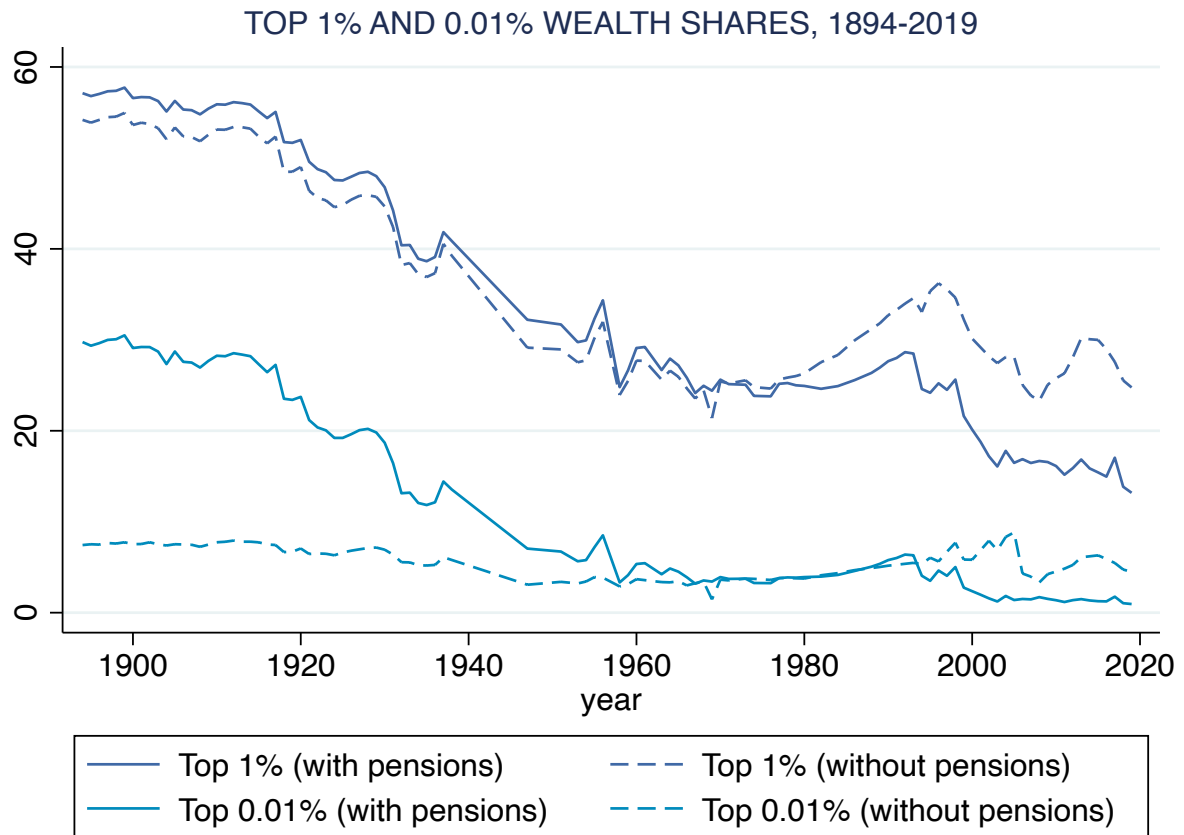
Figure 3: TOP 1% AND 0.01% WEALTH SHARES, 1894-2019

Notes: This figure displays the evolution of the top 1% and top 0.01% wealth shares in the Netherlands between 1894 and 2019. For comparability reasons, we present the series with and without private pension wealth.
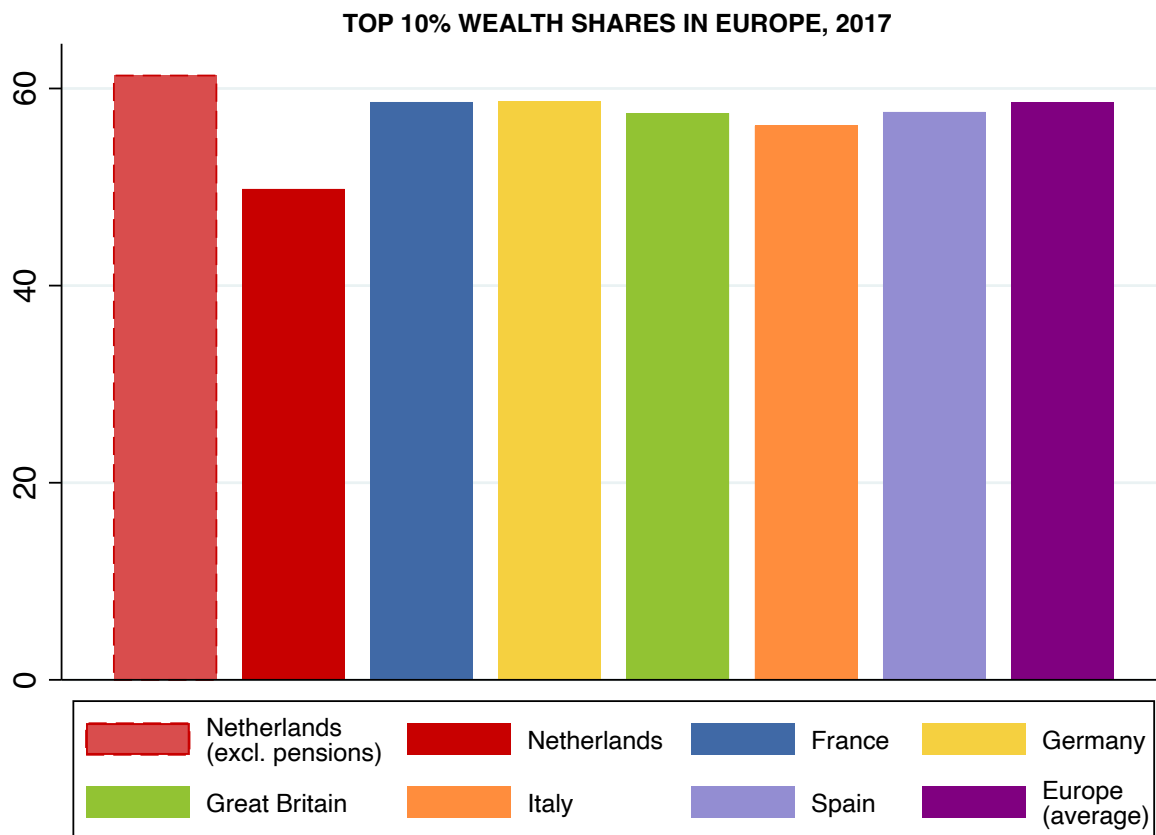
Figure 4: TOP 10% WEALTH SHARES IN EUROPE, 2017

Notes: The figure compares the top 10% wealth shares in the Netherlands (with and without pension wealth) with other selected European countries and the European average. The reference year is 2017, as it is the most recent year with direct wealth distribution data for most European countries.

BOTTOM 50% WEALTH SHARES IN EUROPE, 2017

Legend:
- Netherlands (excl. pensions)
- Netherlands
- France
- Germany
- Great Britain
- Italy
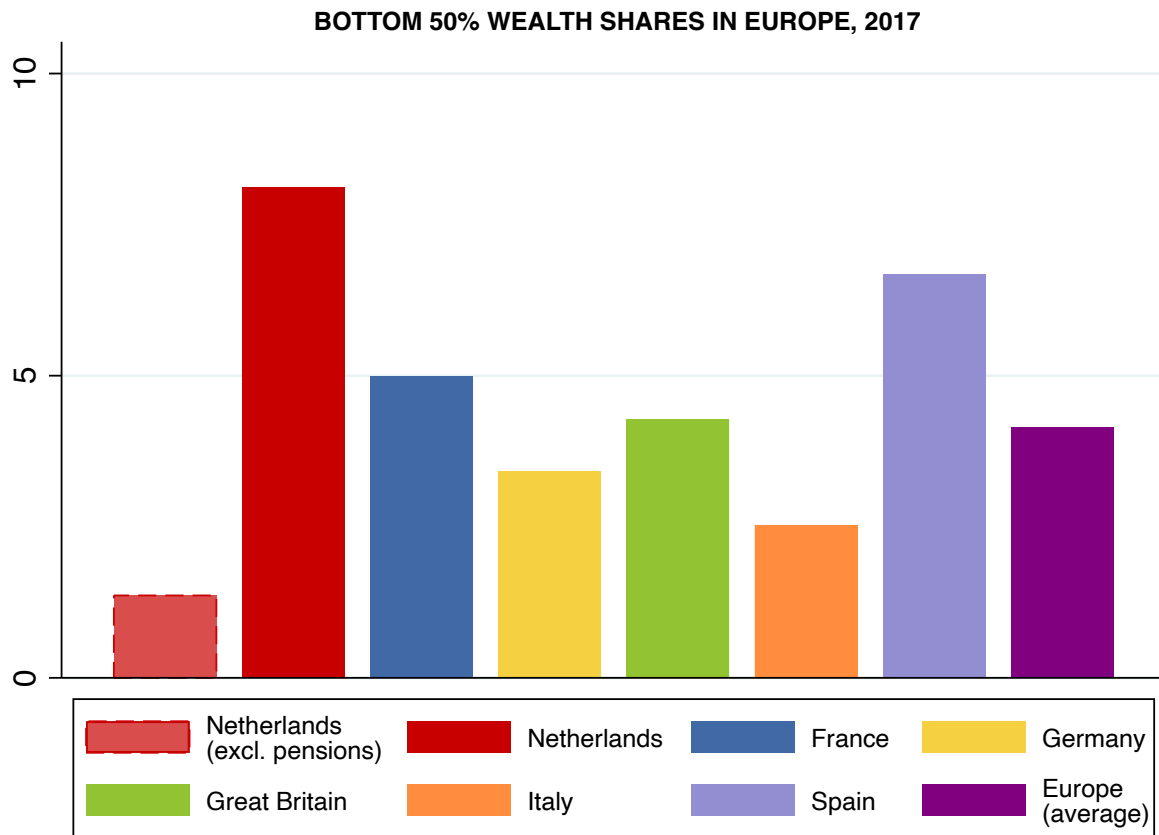- Spain
- Europe (average)

Figure 5: BOTTOM 50% WEALTH SHARES IN EUROPE, 2017

Notes: The figure compares the bottom 50% wealth shares in the Netherlands (with and without pension wealth) with other selected European countries and the European average. The reference year is 2017, as it is the most recent year with direct wealth distribution data for most European countries..