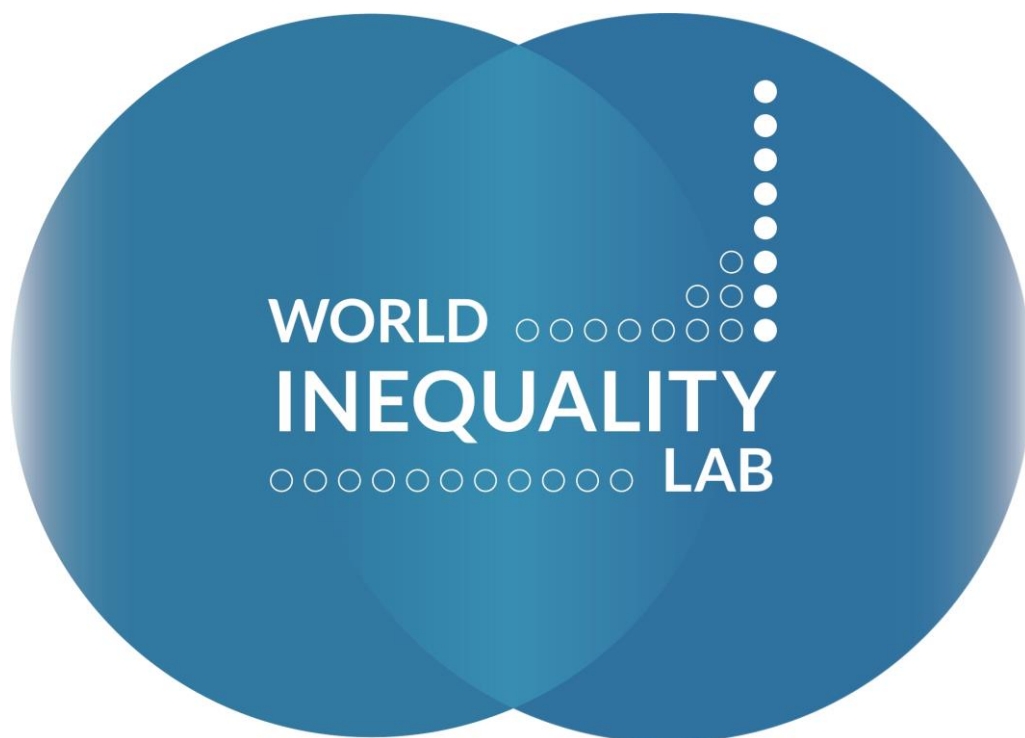


**Accounting for Wealth Inequality Dynamics:  
Methods, Estimates and Simulations for France  
APPENDIX**

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and Thomas Piketty

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**Data Appendix**

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## Appendix A: Detailed equations on the steady-state formula

In the Section 4 of the main paper, we present different simulation exercises derived from the transition equation. This section reports the technical details relative to the steady-state formula for wealth concentration along with two simulations of steady-state trajectories (Figure 12 of the core paper).<sup>1</sup>

### Section A.1. Steady-state formula

We start from a simple accounting equation to describe wealth accumulation between period t and t+1:

$$W_{t+1} = (1 + p_t)(1 + q_t) (W_t + s_t(Y_{L_t} + r_t W_t))$$

where p is the inflation rate, q is the real rate of capital gain, W is the aggregate wealth, s is the saving rate (in % of pretax income),  $Y_L$  is the labor income and r is the rate of return.

At t+1, the wealth share of wealth group p is:

$$sh_{W_{t+1}}^p = \frac{W_{t+1}^p}{W_{t+1}} = \frac{1 + q_t^p}{1 + q_t} \frac{W_t^p + s_t^p(Y_{L_t}^p + r_t^p W_t^p)}{W_t + s_t(Y_{L_t} + r_t W_t)}$$

Using the fact that  $W_t/Y_{L_t} = (W_t/Y_t)/(Y_t/Y_{L_t}) = \beta_t/(1 - \alpha_t)$  and dividing by W each term of the fraction, we obtain:

$$sh_{W_{t+1}}^p = \frac{1 + q_t^p}{1 + q_t} \frac{sh_{W_t}^p (1 + s_t^p r_t^p) + s_t^p \left(\frac{1 - \alpha_t}{\beta_t}\right) sh_{Y_{L_t}}^p}{1 + s_t r_t + s_t \left(\frac{1 - \alpha_t}{\beta_t}\right)}$$

where  $\alpha$  is the capital share and  $\beta$  is the wealth-income ratio.

Assume the relative capital gain channel disappears, i.e. all asset prices rise at the same rate in the long run (which must happen at some point, otherwise there will be only one asset left), and this rate is the same as consumer price inflation (otherwise wealth-income ratio would go to infinity).

At the steady state,  $sh_{W_t}^p = sh_W^p$  and is equal to:

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<sup>1</sup> An exhaustive description of the simulation exercises can be found in Appendix E of the working paper version of this article.

$$sh_W^p = \frac{s^p \left( \frac{1-\alpha}{\beta} \right)}{s \left( r + \frac{1-\alpha}{\beta} \right) - s^p \cdot r^p} sh_{Y_L}^p \quad (1)$$

Using  $\beta = s/g$  and  $\alpha = sr/g$ ,<sup>2</sup> the steady-state formula (1) can alternatively be computed as:

$$sh_W^p = \left( 1 + \frac{s^p r^p - sr}{g - s^p r^p} \right) \frac{s^p}{s} sh_{Y_L}^p \quad (2)$$

with

$$\begin{cases} r = r^p \cdot sh_W^p + r^{1-p} (1 - sh_W^p) \\ s = s^p \cdot sh_Y^p + s^{1-p} (1 - sh_Y^p) \\ sh_Y^p = \frac{s}{g} (r^p \cdot sh_W^p - r \cdot sh_{Y_L}^p) + sh_{Y_L}^p \end{cases} \quad (3)$$

The resolution of the system (2) and (3) gives:

$$sh_W^p = \frac{s^p \cdot sh_{Y_L}^p (g - s^{1-p} r^{1-p})}{(g - s^p r^p) \left[ s^{1-p} (1 - sh_{Y_L}^p) + s^p \cdot sh_{Y_L}^p \right] + s^p \cdot sh_{Y_L}^p (s^p r^p - s^{1-p} r^{1-p})} \quad (4)$$

The steady-state top 10% wealth shares derived from (4) are presented in Tables E1 and E2. Table E1 shows the top 10% steady-state wealth share based on the historical values of the parameters over different time periods (1970-1984 or 1984-2014). Table E2 reports six hypothetical scenarios illustrating the relative importance of the different parameters (growth rate, inequality of rates of return and saving rates) on the steady-state wealth shares.

### Section A.2. Steady-state trajectories

Tables E3 and E4 of the Appendix E show the steady-state wealth share trajectories until 2150. These simulations are based on the historical values of the parameters  $g$ ,  $Y_L^p$ ,  $r^p$ ,  $s^p$ ,  $s^{1-p}$ ,  $r^{1-p}$  computed over 1970-1984 or 1984-2014 periods and that we assume to be constant over time. Figure 17 of the

<sup>2</sup> Using  $\beta = W/Y = s/g$ ,  $\alpha = rW/Y = r \cdot \beta = rs/g$  at the steady state.

<sup>3</sup>  $sh_Y^p$  is obtained by replacing  $\beta = s/g$  and  $\alpha = rs/g$  in  $sh_Y^p = r^p \cdot sh_W^p \cdot \beta + sh_{Y_L}^p (1 - \alpha)$ .

main paper is derived from these tables. We now present the different equations used to estimate these trajectories.

The wealth share of the group p (e.g. top 10%) at time t+1 can be derived from the following equation:

$$sh_{wt+1}^p = W_{t+1}^p / W_{t+1} = (W_t^p + s_t^p \cdot Y_t^p) / (W_t + s_t \cdot Y_t)$$

By dividing by  $Y_t$  each member of the fraction and using the fact that  $W_t^p / Y_t = \beta_t \cdot sh_{Wt}^p$ , we obtain:

$$sh_{wt+1}^p = (\beta_t \cdot sh_{Wt}^p + s_t^p \cdot sh_{Yt}^p) / (\beta_t + s_t)$$

As  $W_{t+1} = W_t + S_t$ , by dividing successively each member of the equation by  $Y_t$  and  $Y_{t+1}$  and using the fact that  $g_t = Y_{t+1} / Y_t$ ,  $\beta_t = W_t / Y_t$  and  $s_t = S_t / Y_t$ , the wealth-income ratio at time t+1 is equal to:

$$\beta_{t+1} = (\beta_t + s_t) / (1 + g_t)$$

The aggregate rate of return and the capital share at time t+1 are respectively equal to:

$$r_{t+1} = r_{t+1}^p \cdot sh_{Wt}^p + r_{t+1}^{1-p} (1 - sh_{Wt+1}^p), \alpha_{t+1} = r_{t+1} \cdot \beta_{t+1}$$

The expression of  $sh_{Yt+1}^p$  is given by:

$$sh_{Yt+1}^p = (r_{t+1}^p W_{t+1}^p + Y_{L_{t+1}}^p) / (r_{t+1} W_t + Y_{L_{t+1}})$$

Dividing each member of the equation by  $W_{t+1}^p$  and using the fact that

$Y_{Lt} / W_t = (1 - \alpha_t) / \beta_t$ ,  $Y_{Lt}^p / W_t = (1 - \alpha_t) sh_{Y_{Lt}}^p / \beta_t$  and  $\alpha_t = r_t \cdot \beta_t$ , we obtain finally:

$$sh_{Yt+1}^p = \beta_{t+1} \cdot r_{t+1}^p \cdot sh_{Wt}^p + (1 - \alpha_{t+1}) \cdot sh_{Y_{Lt+1}}^p$$

Finally, we also need to compute the aggregate saving rate at time t+1 which is equal to:

$$s_{t+1} = s_{t+1}^p \cdot sh_{Yt+1}^p + s_{t+1}^{1-p} (1 - sh_{Yt+1}^p)$$

### Section A.3. Steady-state formula with capital depreciation or appreciation

We now extend the formula assuming some exogenous rate of capital depreciation or appreciation  $q$ .  $q < 0$  corresponds to depreciation and  $q > 0$  to appreciation. Note that the rate of capital gains could be endogenized via multi-sector growth models with differing rates of technical progress. Here, we take it as given for simplicity.

In this new framework, the steady-state wealth share formula remains equal to (1) as  $q_t^p = q_t = q$  and is the following:

$$sh_W^p = \frac{s^p \left( \frac{1-\alpha}{\beta} \right)}{s \left( r + \frac{1-\alpha}{\beta} \right) - s^p \cdot r^p} sh_{Y_L}^p \quad (1)$$

The only change comes from the wealth-income ratio  $\beta$  and the share of capital income  $\alpha$  that become respectively  $\beta = W/Y = s(1+q)/(g-q)$  and  $\alpha = rW/Y = r \cdot \beta = r \cdot s(1+q)/(g-q)$  at the steady state.<sup>4</sup>

Starting from the steady-state formula (1) and using the new expression of  $\beta$  and  $\alpha$ , we end up with:

$$sh_W^p = \left( 1 + \frac{s^p r^p - sr}{\frac{g-q}{1+q} - s^p r^p} \right) \frac{s^p}{s} sh_{Y_L}^p \quad (5)$$

As compared to the steady-state formula (2), the introduction of an exogenous rate of capital or depreciation mitigates the impact of growth on wealth concentration.

### **Appendix B: Wealth inequality breakdowns by age, 1970-2014**

We now present our detailed wealth inequality breakdowns by age for the 1970-2014 period.

If we first look at the age-wealth profile, we find that average wealth is always very small at age 20 (less than 15% of average adult wealth), then rises sharply with age until age 50-55, and finally stabilizes or slightly declines at very high levels (around 120%-150% of average adult wealth) at ages 60-85. This age-wealth profile appears to be relatively stable over the 1970-2014 period (see Online Appendix Figure 24).<sup>5</sup> The key difference with the standard Modigliani triangle (implied by a pure life-cycle model with no bequest) is that average wealth does not seem to decline at high ages: it

<sup>4</sup> At the steady-state,  $W_{t+1}/Y_{t+1} = W_t/Y_t$ . Using  $W_{t+1} = (1+q)[W_t + sY_t]$  and  $Y_{t+1} = (1+g)Y_t$ , we obtain  $\beta = s(1+q)/(g-q)$  and  $\alpha = rW/Y = r \cdot \beta = r \cdot s(1+q)/(g-q)$ .

<sup>5</sup> The complete series of age-wealth profiles over the 1970-2014 period are reported in Table B21 of Appendix B in the working paper version of this article.

remains stable at very high levels, which means that old-age individuals die with substantial wealth and transmit it to their offspring. Note also that old-age individuals make very substantial inter vivos gifts in France, so that average wealth at high ages would be even higher without these gifts, particularly at the end of the period. Gifts are made on average about 10 years before death, and the aggregate gift flow has increased from about 20%-30% of the aggregate bequest flow in the 1970s to as much as 80% of the aggregate bequest flow in the 2000s-2010s (see Piketty, 2011).<sup>6</sup>

Next, it is interesting to see that wealth inequality is almost as large within each age group than for the population taken as a whole (see Online Appendix Figure 25). For instance, if we look at the distribution of wealth within the individuals aged 60-year-old and over, we find a top 10% wealth share equal to 56% in 1970 (vs 59% for the population taken as a whole) and to 49% in 2012 (vs 55% for the population taken as a whole).<sup>7</sup>

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<sup>6</sup> In other words, when we observe in Online Appendix Figure 24 that the average wealth of 80-year-old individuals is about 140% of average adult wealth in 2010, it is important to keep in mind that this is the average wealth of individuals who have already given away almost half of their wealth (on average).

<sup>7</sup> Note that our wealth-age profiles reflect both age and cohort effects. However, since age-wealth profiles turn out to be stable over time, cohorts effects do not seem to lead to major changes across time.

**Table 1: Annual total returns on personal wealth by asset class  
(incl. real capital gains and gross of all taxes)**

year	Total Net Wealth	Housing (net of debt)	Business assets	Financial assets	Equities, shares and bonds	Deposits and savings accounts	Life insurance and pension funds	memo: Equities	memo: Bonds
1970	4,3%	6,9%	5,9%	1,1%	3,9%	-4,1%	6,5%	-0,1%	6,2%
1971	6,0%	6,5%	8,4%	3,9%	10,2%	-4,8%	6,2%	19,1%	5,6%
1972	5,8%	8,3%	7,1%	3,2%	9,9%	-5,6%	4,6%	27,9%	0,9%
1973	3,6%	11,2%	4,7%	-3,0%	0,2%	-8,2%	3,1%	-2,3%	1,3%
1974	2,7%	5,9%	4,6%	-1,3%	4,3%	-8,2%	1,1%	4,6%	3,9%
1975	3,3%	6,0%	5,2%	-0,4%	4,9%	-6,4%	1,6%	14,6%	1,1%
1976	4,3%	7,4%	5,5%	0,8%	4,6%	-4,4%	10,4%	6,5%	3,7%
1977	5,5%	11,6%	6,5%	-0,8%	10,3%	-4,7%	-27,2%	23,7%	6,1%
1978	5,9%	12,2%	6,1%	-0,5%	10,7%	-4,5%	-28,7%	25,3%	6,6%
1979	4,0%	6,7%	2,2%	2,8%	10,6%	-4,9%	1,0%	22,1%	7,5%
1980	2,4%	5,1%	0,7%	0,9%	5,6%	-4,3%	1,7%	14,1%	3,5%
1981	1,3%	2,2%	-0,1%	1,8%	7,0%	-3,5%	1,3%	20,1%	4,1%
1982	3,1%	1,7%	2,5%	5,8%	13,8%	-1,6%	4,3%	41,7%	7,4%
1983	3,9%	1,8%	1,7%	8,5%	17,1%	0,5%	7,0%	43,0%	8,9%
1984	4,1%	1,7%	-0,9%	10,6%	19,5%	1,7%	8,7%	40,0%	10,2%
1985	6,7%	4,1%	-0,2%	13,9%	24,1%	3,0%	8,7%	41,1%	12,3%
1986	8,4%	8,1%	2,2%	12,2%	17,5%	5,0%	12,2%	17,0%	18,0%
1987	8,3%	9,2%	1,2%	11,2%	17,1%	3,1%	9,8%	20,1%	14,0%
1988	11,7%	11,2%	3,7%	15,9%	24,9%	3,8%	10,9%	32,7%	14,8%
1989	8,5%	9,5%	7,0%	8,7%	10,8%	4,6%	10,8%	8,4%	14,4%
1990	4,9%	4,3%	4,0%	6,1%	7,4%	2,3%	10,2%	2,3%	15,8%
1991	4,2%	0,6%	-0,2%	9,5%	12,9%	3,3%	9,3%	11,0%	15,6%
1992	4,7%	-0,3%	0,8%	10,6%	13,3%	5,1%	10,6%	14,5%	11,8%
1993	5,0%	3,3%	4,1%	6,9%	6,8%	4,6%	10,5%	4,9%	9,5%
1994	4,4%	3,9%	4,2%	5,2%	4,4%	4,2%	8,9%	0,4%	9,2%
1995	6,2%	3,4%	4,2%	8,9%	12,0%	3,1%	7,9%	16,5%	7,2%
1996	8,1%	5,6%	6,9%	10,1%	14,2%	2,9%	8,3%	20,4%	7,5%
1997	9,2%	8,0%	9,7%	9,9%	13,8%	2,8%	8,7%	18,0%	8,7%
1998	13,9%	14,4%	16,7%	13,2%	19,5%	3,1%	9,7%	28,7%	7,7%
1999	12,3%	15,8%	17,8%	9,4%	14,2%	-0,3%	7,7%	19,2%	6,5%
2000	7,7%	15,0%	14,6%	2,1%	1,4%	-0,6%	5,3%	-2,2%	7,5%
2001	7,5%	16,3%	13,9%	0,4%	-2,2%	2,4%	3,8%	-7,3%	6,0%
2002	11,3%	19,8%	15,0%	4,0%	4,8%	2,2%	4,0%	5,6%	3,9%
2003	14,3%	22,6%	15,8%	6,9%	10,6%	0,4%	5,8%	16,1%	2,8%
2004	14,6%	21,9%	15,7%	7,3%	11,4%	-0,1%	6,2%	16,8%	2,7%
2005	12,7%	16,6%	11,8%	8,8%	13,8%	-0,2%	7,5%	20,6%	1,7%
2006	8,4%	10,2%	6,2%	7,1%	10,7%	-0,1%	6,4%	14,9%	2,2%
2007	0,1%	0,8%	-1,0%	-0,3%	-3,1%	0,7%	2,9%	-6,5%	4,5%
2008	0,2%	-1,8%	-2,0%	3,3%	1,2%	3,4%	5,6%	-2,4%	7,8%
2009	5,8%	5,5%	4,8%	6,5%	10,7%	1,2%	5,0%	15,6%	3,1%
2010	6,5%	8,4%	8,2%	4,1%	5,4%	1,0%	4,4%	7,2%	2,5%
2011	3,5%	2,4%	2,8%	4,9%	7,5%	0,8%	4,4%	10,4%	3,0%
2012	2,9%	0,1%	0,7%	6,8%	11,4%	0,8%	5,3%	16,3%	2,9%
2013	2,6%	0,2%	1,5%	5,4%	8,3%	0,9%	5,0%	11,3%	2,7%

Source: Table A23a, Appendix A, Garbinti, Goupille-Lebret and Piketty (2017)

Notes: Real yields on equities, debt assets and life insurance include primary surplus from corporate sector (corporate taxes and retained earnings) accruing to households. Rental income includes property taxes. All income are gross of production taxes. Corporate savings are deducted from capital gains on financial assets except deposits.



**Table 2: Annual flow returns on personal wealth by asset class  
(excl. real capital gains and gross of all taxes)**

Year	Total Net Wealth	Housing (net of debt)	Business assets	Financial assets	Equities & bonds	Deposits and savings accounts	Life insurance and pension funds	Memo: Equities	Memo: Bonds
1970	6,2%	3,9%	5,1%	9,2%	13,0%	2,4%	14,4%	17,8%	10,0%
1971	6,2%	3,8%	5,1%	9,5%	13,8%	2,7%	14,6%	21,3%	10,0%
1972	6,1%	3,6%	5,2%	9,1%	13,3%	2,7%	13,9%	21,6%	9,1%
1973	6,1%	2,9%	5,1%	9,9%	14,3%	3,4%	15,5%	19,0%	11,6%
1974	6,1%	1,7%	4,9%	11,7%	17,2%	4,9%	13,8%	23,7%	14,1%
1975	5,3%	2,2%	4,5%	9,3%	13,5%	4,3%	12,0%	21,6%	10,3%
1976	5,2%	1,9%	4,5%	9,6%	14,0%	4,7%	12,8%	22,6%	10,8%
1977	5,2%	1,6%	4,4%	9,9%	15,0%	4,7%	12,1%	27,6%	11,0%
1978	5,1%	2,1%	4,5%	9,3%	13,7%	4,6%	10,8%	26,5%	10,1%
1979	5,1%	1,8%	4,5%	9,7%	14,2%	4,9%	11,1%	28,6%	10,4%
1980	4,8%	1,1%	4,5%	9,8%	13,9%	5,1%	11,5%	29,0%	10,3%
1981	5,0%	1,1%	4,3%	10,9%	15,4%	6,1%	11,5%	32,4%	11,5%
1982	4,9%	0,9%	4,6%	10,8%	15,0%	6,4%	12,2%	29,0%	11,9%
1983	5,1%	1,1%	4,7%	10,8%	15,0%	6,4%	12,9%	25,9%	11,9%
1984	5,5%	1,4%	4,6%	11,3%	15,6%	6,4%	13,7%	23,3%	12,6%
1985	6,0%	1,6%	5,0%	11,8%	15,8%	6,5%	14,3%	19,3%	13,8%
1986	6,6%	1,8%	5,3%	12,5%	16,6%	6,1%	16,6%	16,7%	16,5%
1987	6,9%	2,2%	5,4%	12,6%	17,2%	5,5%	15,0%	19,7%	14,7%
1988	7,4%	2,3%	5,6%	13,4%	17,7%	6,0%	16,5%	17,3%	18,2%
1989	7,6%	2,0%	6,2%	13,5%	17,1%	6,3%	15,7%	15,6%	19,4%
1990	7,4%	1,9%	6,3%	13,2%	16,9%	6,1%	14,4%	15,8%	18,5%
1991	7,1%	2,2%	6,1%	12,5%	15,8%	5,9%	13,2%	15,2%	16,7%
1992	7,5%	2,8%	6,5%	12,2%	14,7%	5,6%	14,4%	13,9%	15,8%
1993	7,4%	3,4%	6,5%	11,0%	13,1%	5,2%	12,9%	12,2%	14,3%
1994	7,5%	4,0%	6,8%	10,6%	12,9%	4,8%	11,8%	12,6%	13,3%
1995	7,6%	4,4%	7,1%	10,1%	12,4%	4,3%	11,1%	13,5%	11,3%
1996	7,5%	5,0%	7,6%	9,3%	11,0%	3,8%	11,1%	12,0%	9,9%
1997	7,7%	5,3%	7,6%	9,2%	10,5%	3,7%	11,6%	11,1%	9,7%
1998	7,6%	5,5%	7,6%	8,9%	10,0%	3,3%	11,4%	10,7%	9,1%
1999	7,0%	5,4%	7,4%	8,0%	8,4%	2,5%	11,5%	9,1%	7,4%
2000	6,8%	5,0%	6,9%	7,9%	8,4%	2,9%	10,5%	8,4%	8,4%
2001	6,6%	4,5%	6,7%	8,0%	9,0%	3,4%	9,5%	8,8%	9,2%
2002	6,0%	4,2%	6,3%	7,4%	8,8%	2,8%	8,3%	10,0%	7,3%
2003	5,6%	3,8%	5,7%	7,3%	8,9%	2,4%	8,1%	10,7%	6,3%
2004	5,3%	3,3%	5,3%	7,3%	8,9%	2,3%	8,2%	10,7%	6,1%
2005	4,8%	2,9%	4,7%	6,9%	8,5%	2,1%	7,8%	10,2%	5,4%
2006	4,5%	2,5%	4,5%	6,8%	8,1%	2,5%	7,6%	9,0%	6,3%
2007	4,4%	2,2%	4,5%	7,1%	8,5%	3,1%	7,6%	8,8%	7,8%
2008	4,5%	2,0%	4,7%	7,4%	9,4%	3,5%	7,2%	10,0%	8,2%
2009	3,9%	2,4%	4,5%	5,6%	7,6%	2,2%	5,3%	9,5%	4,6%
2010	4,0%	2,5%	4,6%	5,5%	7,3%	1,6%	5,8%	9,4%	3,7%
2011	3,9%	2,3%	4,4%	5,7%	8,0%	1,8%	5,3%	10,4%	4,2%
2012	3,6%	2,3%	4,5%	4,9%	6,8%	1,7%	4,7%	8,7%	3,6%
2013	3,6%	2,5%	4,7%	4,6%	6,2%	1,4%	4,6%	8,0%	2,9%
2014	3,5%	2,6%	4,9%	4,3%	6,1%	1,2%	4,2%	7,9%	2,5%

Source: Table A24a, Appendix A, Garbinti, Goupille-Lebret and Piketty (2017)

Notes: Rates of returns are computed by dividing pre-tax capital income by private wealth from National Accounts. Retained earnings and corporate tax accruing to household are added to flows from bonds, equities and life insurance and pension funds. Real yields on equities, debt assets and life insurance include primary surplus from corporate sector (corporate taxes and retained earnings) accruing to households. Rental income includes property taxes. All income are gross of production taxes.

**Table 3: Annual real capital gains on personal wealth by asset class from t to t+1**

(i.e. difference between annual asset price change and GDP price index change)

Year	Net personal wealth	Housing (net of debt)	Business assets	Financial assets	Equities & bonds	Deposits and savings accounts	Life insurance and pension funds	memo: Equities	memo: Bonds
1970	-1,9%	3%	1%	-8%	-9%	-7%	-8%	-18%	-4%
1971	-0,2%	3%	3%	-4%	1%	-3%	-7%	-18%	-4%
1972	-0,2%	5%	2%	-5%	11%	-7%	-8%	-2%	-4%
1973	-2,6%	8%	0%	-12%	-19%	-9%	-12%	6%	-8%
1974	-3,4%	4%	0%	-13%	-18%	-10%	-13%	-21%	-10%
1975	-2,0%	4%	1%	-9%	-6%	-9%	-11%	-19%	-10%
1976	-0,9%	5%	1%	-8%	-15%	-6%	-9%	-7%	-9%
1977	0,3%	10%	2%	-10%	-3%	-5%	-9%	-16%	-7%
1978	0,8%	10%	2%	-10%	-1%	-3%	-9%	-4%	-5%
1979	-1,0%	5%	-2%	-7%	-7%	-3%	-10%	-1%	-3%
1980	-2,4%	4%	-4%	-9%	-16%	-7%	-9%	-6%	-3%
1981	-3,7%	1%	-4%	-10%	-14%	-8%	-10%	-15%	-7%
1982	-1,8%	1%	-2%	-6%	11%	-5%	-8%	-12%	-7%
1983	-1,2%	1%	-3%	-3%	16%	-3%	-6%	13%	-5%
1984	-1,4%	0%	-6%	-1%	17%	-2%	-5%	17%	-3%
1985	0,7%	2%	-5%	3%	24%	0%	-4%	17%	-2%
1986	1,8%	6%	-3%	1%	3%	5%	-1%	22%	-1%
1987	1,4%	7%	-4%	1%	4%	2%	-2%	0%	2%
1988	4,3%	9%	-2%	5%	20%	1%	-2%	0%	-1%
1989	1,0%	7%	1%	-3%	-4%	-1%	-2%	15%	-3%
1990	-2,5%	2%	-2%	-5%	-11%	0%	-4%	-7%	-5%
1991	-2,9%	-2%	-6%	-1%	-2%	2%	-3%	-14%	-3%
1992	-2,7%	-3%	-6%	0%	3%	-1%	-1%	-4%	-1%
1993	-2,3%	0%	-2%	-2%	-5%	-2%	-1%	1%	-4%
1994	-3,1%	0%	-3%	-4%	-10%	-2%	-1%	-7%	-5%
1995	-1,4%	-1%	-3%	0%	6%	-2%	-1%	-12%	-4%
1996	0,6%	1%	-1%	2%	11%	0%	-1%	3%	-4%
1997	1,5%	3%	2%	3%	10%	1%	-1%	8%	-2%
1998	6,4%	9%	9%	7%	21%	1%	0%	7%	-1%
1999	5,3%	10%	10%	3%	13%	1%	-3%	18%	-1%
2000	0,9%	10%	8%	-5%	-9%	1%	-4%	10%	-1%
2001	0,9%	12%	7%	-7%	-15%	-2%	-1%	-11%	-1%
2002	5,3%	16%	9%	-2%	-3%	-2%	-1%	-16%	-3%
2003	8,7%	19%	10%	1%	8%	-2%	-2%	-4%	-3%
2004	9,3%	19%	10%	1%	8%	-2%	-2%	5%	-4%
2005	7,9%	14%	7%	3%	12%	-3%	-2%	6%	-3%
2006	4,0%	8%	2%	1%	7%	-3%	-3%	10%	-4%
2007	-4,3%	-1%	-6%	-7%	-14%	-2%	-2%	6%	-4%
2008	-4,3%	-4%	-7%	-3%	-11%	0%	0%	-15%	-3%
2009	1,9%	3%	0%	2%	7%	-1%	-1%	-12%	0%
2010	2,6%	6%	4%	-1%	-1%	-1%	-1%	6%	-1%
2011	-0,4%	0%	-2%	0%	1%	-1%	-1%	-2%	-1%
2012	-0,6%	-2%	-4%	2%	8%	-1%	-1%	0%	-1%
2013	-1,0%	-2%	-3%	1%	3%	0%	-1%	8%	-1%

Source: Table A25a, Appendix A, Garbinti, Goupille-Lebret and Piketty (2017)

**Table 5: Flow return by wealth group  
(gross of all taxes)**

Year	All	Bottom 50%	Middle 40%	Top 10%	Top 1%
1970	6,2%	3,4%	5,0%	7,2%	8,8%
1971	6,2%	3,6%	5,0%	7,3%	8,9%
1972	6,1%	3,5%	4,9%	7,1%	8,6%
1973	6,1%	4,0%	4,7%	7,3%	8,9%
1974	6,1%	4,7%	4,4%	7,5%	9,4%
1975	5,3%	4,3%	4,1%	6,2%	7,5%
1976	5,2%	4,5%	4,0%	6,2%	7,5%
1977	5,2%	4,5%	3,9%	6,2%	7,6%
1978	5,1%	4,5%	4,0%	6,0%	7,2%
1979	5,1%	4,6%	3,9%	6,0%	7,3%
1980	4,8%	4,5%	3,5%	5,8%	7,0%
1981	5,0%	5,1%	3,7%	5,9%	7,2%
1982	4,9%	5,1%	3,7%	5,9%	7,0%
1983	5,1%	5,2%	4,0%	6,0%	7,2%
1984	5,5%	5,3%	4,4%	6,4%	7,6%
1985	6,0%	5,5%	4,8%	7,0%	8,0%
1986	6,6%	5,5%	5,4%	7,7%	8,8%
1987	6,9%	5,1%	5,6%	8,2%	9,5%
1988	7,4%	5,5%	6,1%	8,7%	9,6%
1989	7,6%	5,5%	6,2%	8,9%	10,0%
1990	7,4%	5,1%	6,0%	8,8%	10,1%
1991	7,1%	5,0%	5,9%	8,4%	9,9%
1992	7,5%	5,6%	6,4%	8,5%	9,8%
1993	7,4%	5,3%	6,5%	8,3%	9,5%
1994	7,5%	5,2%	6,6%	8,5%	10,0%
1995	7,6%	5,1%	6,5%	8,6%	10,2%
1996	7,5%	5,0%	6,4%	8,6%	9,9%
1997	7,7%	5,2%	6,6%	8,6%	9,7%
1998	7,6%	5,2%	6,4%	8,5%	9,4%
1999	7,0%	5,0%	6,1%	7,8%	8,3%
2000	6,8%	4,8%	5,8%	7,5%	8,1%
2001	6,6%	4,6%	5,5%	7,4%	8,3%
2002	6,0%	4,2%	4,9%	6,9%	7,9%
2003	5,6%	3,8%	4,5%	6,5%	7,7%
2004	5,3%	3,6%	4,1%	6,2%	7,6%
2005	4,8%	3,3%	3,6%	5,7%	7,1%
2006	4,5%	3,2%	3,4%	5,3%	6,6%
2007	4,4%	3,2%	3,2%	5,4%	6,6%
2008	4,5%	3,0%	3,2%	5,5%	6,9%
2009	3,9%	2,7%	3,0%	4,7%	5,9%
2010	4,0%	2,7%	2,9%	4,7%	6,0%
2011	3,9%	2,5%	2,8%	4,7%	6,2%
2012	3,6%	2,5%	2,7%	4,3%	5,4%
2013	3,6%	2,6%	2,8%	4,2%	5,2%
2014	3,5%	2,6%	2,8%	4,1%	5,1%

**Table 6: Real capital gains by wealth group  
from t to t+1 (gross of all taxes)**

Year	All	Bottom 50%	Middle 40%	Top 10%	Top 1%
1970	-1,9%	-6,2%	-0,8%	-2,3%	-4,0%
1971	-0,2%	-3,9%	0,6%	0,7%	-0,2%
1972	-0,2%	-3,9%	1,1%	0,4%	-0,3%
1973	-2,6%	-9,5%	-0,2%	-3,5%	-5,6%
1974	-3,4%	-9,8%	-1,7%	-3,4%	-5,1%
1975	-2,0%	-7,0%	-0,6%	-1,6%	-2,6%
1976	-0,9%	-6,0%	0,4%	-1,1%	-2,3%
1977	0,3%	-6,2%	3,4%	1,7%	1,0%
1978	0,8%	-5,0%	3,8%	2,0%	1,5%
1979	-1,0%	-3,9%	0,6%	-1,1%	-1,4%
1980	-2,4%	-5,6%	-0,9%	-3,1%	-3,8%
1981	-3,7%	-6,2%	-2,6%	-4,1%	-4,6%
1982	-1,8%	-2,9%	-0,9%	-1,3%	-1,2%
1983	-1,2%	-1,0%	-0,3%	-0,8%	-0,5%
1984	-1,4%	0,1%	-0,3%	-1,2%	-0,8%
1985	0,7%	3,3%	2,0%	1,0%	1,9%
1986	1,8%	2,2%	3,1%	1,1%	1,0%
1987	1,4%	1,7%	2,9%	0,7%	0,5%
1988	4,3%	5,9%	5,6%	4,6%	6,1%
1989	1,0%	0,0%	1,8%	-0,4%	-1,4%
1990	-2,5%	-3,5%	-1,9%	-4,0%	-5,6%
1991	-2,9%	-2,0%	-2,5%	-3,4%	-3,6%
1992	-2,7%	-1,9%	-2,8%	-2,7%	-2,1%
1993	-2,3%	-3,0%	-2,4%	-3,5%	-4,5%
1994	-3,1%	-4,0%	-3,1%	-5,0%	-6,8%
1995	-1,4%	-1,0%	-1,3%	-0,9%	-0,2%
1996	0,6%	1,6%	0,9%	1,9%	3,1%
1997	1,5%	2,8%	2,2%	2,8%	3,4%
1998	6,4%	9,0%	7,9%	9,0%	9,9%
1999	5,3%	7,6%	7,6%	7,1%	6,7%
2000	0,9%	1,7%	3,6%	-1,4%	-4,6%
2001	0,9%	1,2%	3,8%	-3,1%	-7,4%
2002	5,3%	6,2%	8,5%	2,9%	-0,5%
2003	8,7%	9,6%	12,5%	7,6%	4,8%
2004	9,3%	9,6%	13,0%	8,5%	5,7%
2005	7,9%	8,8%	10,4%	8,1%	7,4%
2006	4,0%	4,9%	5,6%	4,1%	3,9%
2007	-4,3%	-5,3%	-3,6%	-7,0%	-9,4%
2008	-4,3%	-5,5%	-4,5%	-6,3%	-7,7%
2009	1,9%	3,0%	2,5%	2,6%	3,3%
2010	2,6%	4,3%	3,8%	1,5%	0,1%
2011	-0,4%	0,0%	-0,2%	-0,4%	-0,4%
2012	-0,6%	-0,3%	-1,0%	1,1%	2,9%
2013	-1,0%	-1,0%	-1,4%	-0,1%	1,0%

**Note:** For housing assets, computation is made separately on gross housing and debts.

**Table 7: Savings rates by wealth groups  
from t to t+1 (gross of all taxes)**

Year	All	Bottom 50%	Middle 40%	Top 10%
1970	16,6%	9,2%	16,3%	27,1%
1971	16,8%	7,6%	13,3%	26,5%
1972	17,3%	6,9%	13,1%	28,5%
1973	17,7%	9,1%	17,2%	30,3%
1974	16,7%	8,6%	15,9%	26,1%
1975	15,7%	9,1%	15,1%	21,5%
1976	14,5%	9,1%	14,3%	22,7%
1977	21,8%	9,5%	17,0%	28,4%
1978	19,2%	8,1%	13,5%	26,0%
1979	10,6%	4,1%	6,4%	21,3%
1980	10,2%	6,0%	8,4%	19,7%
1981	10,3%	7,1%	8,2%	17,9%
1982	9,3%	4,7%	5,8%	14,7%
1983	8,0%	2,7%	3,8%	14,9%
1984	7,4%	2,1%	1,1%	16,9%
1985	7,6%	0,1%	-0,1%	19,3%
1986	7,3%	2,7%	2,0%	18,6%
1987	7,4%	2,4%	1,4%	19,8%
1988	8,4%	-2,9%	5,9%	15,1%
1989	8,7%	0,8%	11,7%	18,0%
1990	8,7%	0,3%	5,7%	29,7%
1991	9,5%	-10,9%	5,2%	38,5%
1992	10,5%	3,0%	7,1%	23,4%
1993	10,6%	1,8%	11,5%	28,0%
1994	16,2%	7,1%	13,7%	43,3%
1995	15,7%	-1,5%	-6,0%	64,0%
1996	10,4%	-0,6%	-1,6%	28,4%
1997	11,0%	-1,2%	-2,1%	30,3%
1998	11,6%	0,6%	2,5%	10,9%
1999	11,5%	-1,2%	2,1%	14,4%
2000	10,2%	3,2%	5,4%	28,7%
2001	10,0%	4,5%	10,0%	32,4%
2002	10,4%	1,0%	5,3%	29,4%
2003	10,5%	2,0%	3,2%	18,0%
2004	9,6%	2,1%	4,0%	11,5%
2005	9,0%	-3,3%	-2,7%	20,3%
2006	9,0%	-3,4%	-3,0%	25,6%
2007	8,9%	4,1%	10,7%	37,2%
2008	8,8%	-2,8%	4,8%	51,8%
2009	9,5%	-10,8%	-8,4%	45,4%
2010	9,1%	6,0%	7,9%	16,1%
2011	7,6%	6,5%	9,0%	4,8%
2012	6,5%	1,3%	2,9%	0,0%
2013	6,5%	0,2%	2,7%	11,0%

**Table 8: Distribution of national income, labor income and capital income ranked by wealth**

Year	Income shares (in % national income)					Labor income shares (in % labor national income)					Capital income shares (in % capital national income)				
	Bottom 50%	Middle 40%	Top 10%	Top 1%	Top 0.1%	Bottom 50%	Middle 40%	Top 10%	Top 1%	Top 0.1%	Bottom 50%	Middle 40%	Top 10%	Top 1%	Top 0.1%
1970	33%	39%	29%	9%	3%	40%	41%	19%	5%	0,8%	4%	28%	68%	29%	12%
1971	33%	39%	28%	9%	3%	40%	41%	19%	4%	0,9%	4%	29%	67%	28%	12%
1972	33%	39%	28%	9%	3%	40%	41%	19%	5%	0,9%	4%	29%	67%	28%	12%
1973	34%	39%	28%	9%	3%	40%	41%	19%	4%	0,9%	5%	28%	68%	28%	12%
1974	34%	39%	27%	9%	3%	41%	41%	18%	4%	0,9%	6%	26%	68%	29%	13%
1975	35%	40%	25%	8%	3%	41%	42%	17%	4%	0,9%	6%	29%	65%	27%	11%
1976	36%	40%	24%	7%	2%	41%	42%	17%	4%	0,8%	7%	29%	64%	26%	11%
1977	35%	40%	24%	7%	2%	41%	43%	17%	4%	0,8%	7%	29%	64%	26%	11%
1978	35%	41%	24%	7%	2%	40%	43%	17%	4%	0,8%	7%	31%	62%	25%	10%
1979	35%	41%	24%	7%	2%	40%	43%	17%	4%	0,8%	7%	31%	62%	25%	10%
1980	35%	42%	24%	7%	2%	40%	44%	17%	4%	0,8%	8%	30%	62%	25%	10%
1981	34%	42%	24%	7%	2%	39%	44%	16%	4%	0,7%	9%	31%	61%	24%	10%
1982	34%	43%	23%	7%	2%	39%	45%	17%	4%	0,7%	9%	31%	60%	23%	9%
1983	33%	43%	24%	7%	2%	38%	45%	17%	4%	0,7%	9%	32%	59%	22%	9%
1984	32%	44%	24%	7%	2%	37%	46%	17%	3%	0,7%	9%	33%	58%	22%	9%
1985	32%	43%	25%	7%	2%	37%	46%	17%	4%	0,7%	9%	33%	58%	22%	9%
1986	31%	43%	26%	8%	3%	37%	45%	18%	4%	0,7%	8%	33%	59%	22%	9%
1987	31%	42%	27%	8%	3%	37%	45%	18%	4%	0,8%	7%	32%	61%	24%	10%
1988	30%	42%	28%	8%	3%	37%	45%	18%	4%	0,8%	7%	33%	60%	23%	10%
1989	30%	42%	29%	9%	3%	37%	45%	18%	4%	0,7%	7%	33%	60%	23%	11%
1990	30%	42%	28%	8%	3%	37%	45%	18%	3%	0,7%	7%	33%	60%	24%	12%
1991	30%	43%	28%	9%	4%	37%	46%	18%	3%	0,7%	7%	33%	60%	25%	13%
1992	30%	43%	27%	8%	3%	37%	46%	17%	3%	0,6%	6%	35%	59%	24%	11%
1993	30%	43%	27%	8%	3%	37%	46%	17%	3%	0,5%	6%	36%	59%	25%	12%
1994	29%	44%	27%	9%	4%	36%	47%	17%	3%	0,5%	6%	35%	59%	26%	13%
1995	29%	44%	28%	9%	4%	36%	47%	17%	3%	0,5%	6%	35%	60%	27%	13%
1996	29%	43%	28%	10%	4%	36%	47%	17%	3%	0,5%	5%	32%	63%	31%	15%
1997	29%	43%	29%	10%	4%	37%	47%	17%	3%	0,5%	5%	31%	64%	33%	16%
1998	29%	42%	29%	11%	4%	37%	46%	17%	3%	0,5%	5%	29%	66%	34%	16%
1999	28%	42%	29%	11%	4%	36%	47%	17%	3%	0,5%	5%	30%	65%	33%	15%
2000	28%	42%	30%	11%	4%	36%	46%	18%	3%	0,5%	5%	29%	66%	34%	16%
2001	29%	42%	30%	11%	4%	36%	46%	18%	3%	0,5%	5%	29%	66%	35%	16%
2002	29%	42%	29%	10%	4%	37%	45%	18%	3%	0,5%	5%	30%	66%	34%	16%
2003	29%	42%	29%	11%	4%	37%	46%	18%	3%	0,5%	5%	30%	66%	34%	16%
2004	29%	42%	29%	11%	4%	37%	46%	18%	3%	0,5%	5%	29%	66%	35%	16%
2005	29%	42%	29%	11%	4%	37%	46%	18%	3%	0,5%	5%	29%	66%	34%	15%
2006	29%	42%	29%	10%	4%	36%	46%	18%	3%	0,6%	5%	29%	66%	33%	15%
2007	29%	41%	30%	11%	4%	36%	46%	18%	3%	0,6%	5%	28%	67%	34%	15%
2008	29%	42%	29%	11%	4%	36%	46%	18%	3%	0,5%	5%	28%	67%	34%	15%
2009	30%	43%	27%	9%	3%	37%	47%	17%	3%	0,5%	5%	29%	66%	33%	14%
2010	30%	42%	28%	10%	4%	37%	46%	17%	3%	0,5%	4%	27%	69%	36%	17%
2011	30%	42%	28%	10%	4%	37%	46%	17%	3%	0,5%	4%	27%	69%	37%	17%
2012	31%	43%	27%	9%	3%	37%	46%	16%	3%	0,5%	5%	28%	67%	35%	15%
2013	30%	43%	27%	9%	3%	37%	46%	16%	3%	0,5%	5%	29%	66%	34%	15%
2014	31%	43%	26%	9%	3%	37%	46%	16%	3%	0,5%	5%	29%	67%	34%	15%

**Table 9. Testing the survey-based imputation methods using wealth surveys: results on total wealth**

Wealth group	Wealth shares			Wealth shares		
	Observed	Imputed		Observed	Imputed	
		Simple method	Refined method		Simple method	Refined method
	Year 1992			Year 2004		
p0-p10	<b>0,2%</b>	0,6%	<b>0,1%</b>	<b>0,0%</b>	0,2%	<b>0,1%</b>
p10-p20	<b>0,5%</b>	1,0%	<b>0,5%</b>	<b>0,1%</b>	0,5%	<b>0,3%</b>
p20-p30	<b>1,1%</b>	1,7%	<b>1,2%</b>	<b>0,5%</b>	1,0%	<b>0,9%</b>
p30-p40	<b>2,2%</b>	2,9%	<b>2,5%</b>	<b>1,6%</b>	2,9%	<b>2,4%</b>
p40-p50	<b>4,2%</b>	6,2%	<b>4,5%</b>	<b>3,7%</b>	6,1%	<b>4,7%</b>
p50-p60	<b>6,4%</b>	8,4%	<b>6,7%</b>	<b>6,2%</b>	8,0%	<b>6,9%</b>
p60-p70	<b>9,2%</b>	10,1%	<b>9,4%</b>	<b>9,0%</b>	9,8%	<b>9,2%</b>
p70-p80	<b>12,7%</b>	12,6%	<b>12,8%</b>	<b>12,4%</b>	12,1%	<b>12,4%</b>
p80-p90	<b>18,3%</b>	17,5%	<b>18,5%</b>	<b>18,4%</b>	17,1%	<b>18,2%</b>
Top10	<b>45,3%</b>	39,0%	<b>43,8%</b>	<b>48,0%</b>	42,4%	<b>44,9%</b>
Top5	<b>31,5%</b>	26,2%	<b>29,9%</b>	<b>33,5%</b>	29,5%	<b>31,0%</b>
Top1	<b>13,0%</b>	9,8%	<b>11,4%</b>	<b>13,6%</b>	12,4%	<b>12,7%</b>
	Year 1998			Year 2010		
p0-p10	<b>0,0%</b>	0,2%	<b>0,1%</b>	<b>0,0%</b>	0,1%	<b>0,0%</b>
p10-p20	<b>0,2%</b>	0,6%	<b>0,4%</b>	<b>0,1%</b>	0,2%	<b>0,1%</b>
p20-p30	<b>0,7%</b>	1,2%	<b>1,1%</b>	<b>0,3%</b>	0,5%	<b>0,4%</b>
p30-p40	<b>1,9%</b>	3,2%	<b>2,8%</b>	<b>1,2%</b>	2,1%	<b>1,7%</b>
p40-p50	<b>4,3%</b>	6,3%	<b>5,0%</b>	<b>3,3%</b>	5,4%	<b>4,1%</b>
p50-p60	<b>6,5%</b>	8,0%	<b>7,0%</b>	<b>5,9%</b>	7,4%	<b>6,3%</b>
p60-p70	<b>9,0%</b>	9,6%	<b>9,2%</b>	<b>8,6%</b>	9,2%	<b>8,7%</b>
p70-p80	<b>12,1%</b>	12,1%	<b>12,3%</b>	<b>11,9%</b>	11,6%	<b>11,8%</b>
p80-p90	<b>17,9%</b>	17,1%	<b>17,7%</b>	<b>17,6%</b>	16,4%	<b>17,3%</b>
Top10	<b>47,4%</b>	41,7%	<b>44,3%</b>	<b>51,1%</b>	47,1%	<b>49,4%</b>
Top5	<b>33,6%</b>	29,2%	<b>31,0%</b>	<b>37,5%</b>	34,7%	<b>36,2%</b>
Top1	<b>14,9%</b>	12,5%	<b>13,3%</b>	<b>18,8%</b>	17,4%	<b>18,0%</b>

Note: This tables depicts inequality indicators from the wealth surveys using the reported wealth or the imputed wealth implied by our survey-based imputation methods. (see Section 2.2.5 Robutness checks)

**Table 10. Testing the survey-based imputation methods  
using wealth surveys : results on imputed assets**

	Life insurance			Net housing			Saving accounts		
	Observed	Imputed (simple method)	Imputed (refined method)	Observed	Imputed (simple method)	Imputed (refined method)	Observed	Imputed (simple method)	Imputed (refined method)
year	<b>1992</b>								
p5	0	0	0	0	0	0	172	4 057	290
p10	0	0	0	0	0	0	504	5 852	579
p25	0	0	0	0	0	0	1 665	7 381	1 720
p50	0	0	0	0	0	0	4 537	9 819	4 595
p75	2 439	8 869	2 419	67 284	79 962	68 610	11 537	14 496	11 496
p90	11 245	13 337	11 212	128 165	111 477	123 885	25 382	20 759	25 738
p95	21 098	18 717	21 259	175 925	149 109	169 215	43 242	24 099	43 409
p99	66 258	30 113	66 573	361 384	211 387	357 673	140 261	64 535	142 231
mean	4 452	4 452	4 452	45 932	45 932	45 932	12 342	12 342	12 342
st dev	17 440	10 083	17 414	91 961	56 071	87 302	37 311	10 020	35 476
year	<b>1998</b>								
p5	0	0	0	0	0	0	186	2 060	207
p10	0	0	0	0	0	0	378	2 680	400
p25	0	0	0	0	0	0	1 167	4 325	1 188
p50	0	0	0	23 665	54 531	28 287	3 933	6 788	3 953
p75	2 286	9 990	2 283	78 880	85 575	77 807	10 406	10 042	10 354
p90	15 093	21 236	15 174	122 941	110 453	120 931	20 726	16 725	20 827
p95	32 645	28 428	32 874	160 843	142 310	158 109	30 698	19 922	30 826
p99	100 252	70 313	99 484	275 683	189 569	274 515	59 289	31 352	58 732
mean	6 824	6 824	6 824	48 105	48 105	48 105	8 311	8 311	8 311
st dev	38 253	25 352	38 089	108 580	51 216	83 718	12 789	5 995	12 674
year	<b>2004</b>								
p5	0	0	0	0	0	0	184	2 613	201
p10	0	0	0	0	0	0	391	3 041	409
p25	0	0	0	0	0	0	1 243	5 569	1 259
p50	0	0	0	19 926	72 465	38 319	3 940	7 481	3 950
p75	1 188	7 788	1 151	114 794	124 013	111 166	11 145	11 360	11 192
p90	16 802	25 867	16 963	186 602	157 865	178 161	22 622	17 487	22 646
p95	40 313	42 595	40 283	247 273	213 898	237 913	34 109	24 795	34 000
p99	133 671	89 137	133 362	412 483	292 466	407 425	68 297	35 494	71 047
mean	8 200	8 200	8 200	68 546	68 546	68 546	9 426	9 426	9 426
st dev	45 417	23 012	45 307	99 345	73 804	94 211	21 989	6 748	20 586
year	<b>2010</b>								
p5	0	0	0	0	0	0	162	1 199	214
p10	0	0	0	0	0	0	400	1 534	434
p25	0	0	0	0	0	0	1 338	3 437	1 378
p50	0	0	0	39 262	99 831	58 573	5 198	7 358	5 199
p75	4 529	9 914	4 537	166 542	176 882	163 429	14 824	19 085	14 838
p90	33 375	42 760	33 637	270 196	233 771	261 017	31 969	30 508	32 099
p95	80 000	90 279	79 604	358 024	295 454	341 262	47 862	39 826	47 762
p99	302 259	219 852	303 292	616 951	405 486	605 861	107 319	73 310	107 300
mean	19 166	19 166	19 166	101 407	101 407	101 407	13 145	13 145	13 145
st dev	173 808	84 407	171 160	146 202	108 840	141 361	30 562	13 557	29 385



<b>Table 11. Wealth shares by income and labor groups and total income shares by wealth groups</b>										
		<b>Wealth share by total income group</b>			<b>Wealth share by labor income group</b>			<b>Total income share by wealth group</b>		
<b>year</b>	<b>Group</b>	<b>observed</b>	<b>simple method</b>	<b>refined method</b>	<b>observed</b>	<b>simple method</b>	<b>refined method</b>	<b>observed</b>	<b>simple method</b>	<b>refined method</b>
<b>1992</b>	B50	<b>27,6%</b>	29,9%	<b>29,8%</b>	<b>32,2%</b>	32,8%	<b>32,8%</b>	<b>34,4%</b>	35,8%	<b>35,8%</b>
	M40	<b>45,4%</b>	44,3%	<b>44,3%</b>	<b>41,7%</b>	41,5%	<b>41,5%</b>	<b>43,5%</b>	42,0%	<b>43,6%</b>
	Top10	<b>27,0%</b>	25,9%	<b>25,9%</b>	<b>26,1%</b>	25,8%	<b>25,8%</b>	<b>22,1%</b>	22,1%	<b>20,6%</b>
	Top1	<b>4,7%</b>	3,8%	<b>3,8%</b>	<b>4,5%</b>	3,8%	<b>3,8%</b>	<b>2,9%</b>	3,1%	<b>2,7%</b>
<b>1998</b>	B50	<b>27,0%</b>	29,0%	<b>29,0%</b>	<b>32,8%</b>	33,1%	<b>33,1%</b>	<b>36,5%</b>	36,6%	<b>37,4%</b>
	M40	<b>42,7%</b>	42,2%	<b>42,3%</b>	<b>41,8%</b>	42,1%	<b>42,1%</b>	<b>44,9%</b>	44,3%	<b>44,1%</b>
	Top10	<b>30,3%</b>	28,8%	<b>28,7%</b>	<b>25,5%</b>	24,8%	<b>24,8%</b>	<b>18,6%</b>	19,1%	<b>18,5%</b>
	Top1	<b>7,4%</b>	6,0%	<b>6,0%</b>	<b>6,1%</b>	4,9%	<b>4,9%</b>	<b>3,1%</b>	2,8%	<b>2,7%</b>
<b>2004</b>	B50	<b>25,6%</b>	26,7%	<b>26,7%</b>	<b>29,1%</b>	29,5%	<b>29,5%</b>	<b>33,4%</b>	34,3%	<b>34,2%</b>
	M40	<b>42,5%</b>	42,6%	<b>42,6%</b>	<b>42,2%</b>	42,6%	<b>42,6%</b>	<b>44,7%</b>	42,7%	<b>44,4%</b>
	Top10	<b>31,9%</b>	30,6%	<b>30,7%</b>	<b>28,7%</b>	27,9%	<b>27,9%</b>	<b>21,9%</b>	22,9%	<b>21,4%</b>
	Top1	<b>5,2%</b>	4,3%	<b>4,3%</b>	<b>4,2%</b>	3,5%	<b>3,4%</b>	<b>3,6%</b>	3,6%	<b>3,5%</b>
<b>2010</b>	B50	<b>20,7%</b>	21,4%	<b>21,4%</b>	<b>27,5%</b>	27,5%	<b>27,5%</b>	<b>32,1%</b>	32,4%	<b>32,1%</b>
	M40	<b>42,1%</b>	42,4%	<b>42,4%</b>	<b>42,8%</b>	43,6%	<b>43,6%</b>	<b>43,7%</b>	42,4%	<b>43,7%</b>
	Top10	<b>37,2%</b>	36,2%	<b>36,2%</b>	<b>29,7%</b>	28,9%	<b>28,9%</b>	<b>24,1%</b>	25,2%	<b>24,3%</b>
	Top1	<b>12,5%</b>	11,2%	<b>11,3%</b>	<b>8,4%</b>	7,7%	<b>7,7%</b>	<b>6,1%</b>	6,3%	<b>6,0%</b>

Note : this table depicts wealth shares by income and labor groups and total income shares by wealth groups

**Table 12. Link between wealth and income (detailed groups)**

year	group	Wealth share by total income group			Wealth share by labor income group			Total income share by wealth group		
		observed	simple method	refined method	observed	simple method	refined method	observed	simple method	refined method
1992	p0-p10	<b>4,9%</b>	4,9%	<b>4,8%</b>	<b>8,5%</b>	6,8%	<b>6,8%</b>	<b>5,2%</b>	4,8%	<b>5,6%</b>
	p10-p20	<b>4,1%</b>	5,3%	<b>5,2%</b>	<b>4,4%</b>	5,6%	<b>5,6%</b>	<b>5,9%</b>	7,6%	<b>6,5%</b>
	p20-p30	<b>4,6%</b>	5,6%	<b>5,6%</b>	<b>5,7%</b>	6,2%	<b>6,2%</b>	<b>7,4%</b>	6,5%	<b>7,5%</b>
	p30-p40	<b>6,7%</b>	6,9%	<b>7,0%</b>	<b>6,3%</b>	6,8%	<b>6,8%</b>	<b>7,8%</b>	9,3%	<b>7,9%</b>
	p40-p50	<b>7,3%</b>	7,2%	<b>7,2%</b>	<b>7,2%</b>	7,4%	<b>7,4%</b>	<b>8,2%</b>	7,6%	<b>8,2%</b>
	p50-p60	<b>8,8%</b>	8,6%	<b>8,6%</b>	<b>8,6%</b>	8,1%	<b>8,1%</b>	<b>9,2%</b>	6,8%	<b>8,9%</b>
	p60-p70	<b>11,2%</b>	10,9%	<b>10,9%</b>	<b>9,1%</b>	9,3%	<b>9,3%</b>	<b>10,5%</b>	9,2%	<b>10,3%</b>
	p70-p80	<b>10,3%</b>	10,1%	<b>10,1%</b>	<b>11,1%</b>	11,1%	<b>11,1%</b>	<b>11,0%</b>	11,9%	<b>11,2%</b>
	p80-p90	<b>15,1%</b>	14,8%	<b>14,7%</b>	<b>13,0%</b>	13,1%	<b>13,0%</b>	<b>12,8%</b>	14,2%	<b>13,2%</b>
	p90-p95	<b>9,6%</b>	9,7%	<b>9,8%</b>	<b>9,6%</b>	10,0%	<b>10,1%</b>	<b>8,8%</b>	8,8%	<b>8,3%</b>
	p95-p99	<b>12,7%</b>	12,3%	<b>12,3%</b>	<b>12,0%</b>	12,0%	<b>11,9%</b>	<b>10,4%</b>	10,2%	<b>9,6%</b>
	p99-p99.5	<b>2,3%</b>	1,9%	<b>1,9%</b>	<b>2,0%</b>	1,7%	<b>1,7%</b>	<b>1,6%</b>	1,6%	<b>1,5%</b>
	p99.5-p99.9	<b>2,0%</b>	1,6%	<b>1,6%</b>	<b>1,9%</b>	1,5%	<b>1,5%</b>	<b>1,2%</b>	1,4%	<b>1,0%</b>
	p99.9-p100	<b>0,4%</b>	0,3%	<b>0,3%</b>	<b>0,6%</b>	0,6%	<b>0,6%</b>	<b>0,2%</b>	0,2%	<b>0,2%</b>
1998	p0-p10	<b>3,6%</b>	4,0%	<b>4,0%</b>	<b>6,8%</b>	6,2%	<b>6,2%</b>	<b>5,0%</b>	4,9%	<b>5,4%</b>
	p10-p20	<b>4,3%</b>	4,9%	<b>4,9%</b>	<b>5,4%</b>	5,8%	<b>5,8%</b>	<b>6,6%</b>	7,1%	<b>7,0%</b>
	p20-p30	<b>5,4%</b>	6,1%	<b>6,1%</b>	<b>7,0%</b>	7,1%	<b>7,1%</b>	<b>7,5%</b>	8,4%	<b>8,1%</b>
	p30-p40	<b>7,0%</b>	7,1%	<b>7,1%</b>	<b>6,4%</b>	6,6%	<b>6,6%</b>	<b>8,6%</b>	9,1%	<b>8,3%</b>
	p40-p50	<b>6,6%</b>	6,9%	<b>6,9%</b>	<b>7,2%</b>	7,4%	<b>7,4%</b>	<b>8,8%</b>	7,2%	<b>8,5%</b>
	p50-p60	<b>8,2%</b>	8,2%	<b>8,2%</b>	<b>8,2%</b>	8,1%	<b>8,1%</b>	<b>9,4%</b>	8,3%	<b>9,3%</b>
	p60-p70	<b>9,1%</b>	8,9%	<b>8,9%</b>	<b>9,1%</b>	8,9%	<b>8,9%</b>	<b>10,7%</b>	10,6%	<b>10,3%</b>
	p70-p80	<b>11,6%</b>	11,3%	<b>11,3%</b>	<b>10,5%</b>	10,7%	<b>10,7%</b>	<b>11,6%</b>	11,3%	<b>11,4%</b>
	p80-p90	<b>13,9%</b>	13,8%	<b>13,8%</b>	<b>13,9%</b>	14,4%	<b>14,4%</b>	<b>13,3%</b>	14,1%	<b>13,2%</b>
	p90-p95	<b>10,1%</b>	10,1%	<b>10,1%</b>	<b>8,1%</b>	8,5%	<b>8,6%</b>	<b>7,7%</b>	8,1%	<b>7,8%</b>
	p95-p99	<b>12,8%</b>	12,6%	<b>12,6%</b>	<b>11,3%</b>	11,4%	<b>11,4%</b>	<b>7,8%</b>	8,2%	<b>8,1%</b>
	p99-p99.5	<b>2,9%</b>	2,5%	<b>2,5%</b>	<b>1,8%</b>	1,6%	<b>1,6%</b>	<b>1,6%</b>	1,3%	<b>1,2%</b>
	p99.5-p99.9	<b>3,1%</b>	2,4%	<b>2,4%</b>	<b>3,1%</b>	2,4%	<b>2,4%</b>	<b>1,1%</b>	1,0%	<b>1,0%</b>
	p99.9-p100	<b>1,4%</b>	1,2%	<b>1,2%</b>	<b>1,2%</b>	0,9%	<b>0,9%</b>	<b>0,4%</b>	0,4%	<b>0,4%</b>

<b>2004</b>	p0-p10	<b>4,7%</b>	4,4%	<b>4,4%</b>	<b>6,2%</b>	5,6%	<b>5,6%</b>	<b>3,9%</b>	3,5%	<b>4,2%</b>
	p10-p20	<b>4,1%</b>	5,0%	<b>5,0%</b>	<b>4,6%</b>	5,3%	<b>5,3%</b>	<b>5,7%</b>	5,6%	<b>5,9%</b>
	p20-p30	<b>4,8%</b>	4,9%	<b>4,9%</b>	<b>5,6%</b>	5,7%	<b>5,7%</b>	<b>6,9%</b>	8,1%	<b>7,3%</b>
	p30-p40	<b>5,2%</b>	5,7%	<b>5,7%</b>	<b>5,7%</b>	6,0%	<b>6,0%</b>	<b>8,4%</b>	9,1%	<b>8,3%</b>
	p40-p50	<b>6,7%</b>	6,8%	<b>6,8%</b>	<b>6,9%</b>	6,9%	<b>6,9%</b>	<b>8,5%</b>	8,0%	<b>8,5%</b>
	p50-p60	<b>8,3%</b>	8,4%	<b>8,4%</b>	<b>7,9%</b>	7,8%	<b>7,8%</b>	<b>9,1%</b>	7,7%	<b>9,0%</b>
	p60-p70	<b>8,8%</b>	9,1%	<b>9,0%</b>	<b>9,2%</b>	9,5%	<b>9,5%</b>	<b>10,0%</b>	9,1%	<b>10,2%</b>
	p70-p80	<b>10,3%</b>	10,1%	<b>10,0%</b>	<b>10,5%</b>	10,5%	<b>10,5%</b>	<b>11,7%</b>	11,6%	<b>11,4%</b>
	p80-p90	<b>15,1%</b>	15,1%	<b>15,1%</b>	<b>14,6%</b>	14,9%	<b>14,9%</b>	<b>13,9%</b>	14,4%	<b>13,8%</b>
	p90-p95	<b>11,3%</b>	11,3%	<b>11,3%</b>	<b>10,1%</b>	10,2%	<b>10,2%</b>	<b>8,5%</b>	9,6%	<b>8,5%</b>
	p95-p99	<b>15,4%</b>	15,0%	<b>15,0%</b>	<b>14,4%</b>	14,2%	<b>14,2%</b>	<b>9,9%</b>	9,7%	<b>9,5%</b>
	p99-p99.5	<b>2,6%</b>	2,2%	<b>2,2%</b>	<b>1,9%</b>	1,6%	<b>1,6%</b>	<b>1,8%</b>	1,9%	<b>1,8%</b>
	p99.5-p99.9	<b>1,8%</b>	1,5%	<b>1,5%</b>	<b>1,5%</b>	1,1%	<b>1,1%</b>	<b>1,3%</b>	1,2%	<b>1,2%</b>
	p99.9-p100	<b>0,8%</b>	0,7%	<b>0,7%</b>	<b>0,8%</b>	0,7%	<b>0,7%</b>	<b>0,5%</b>	0,5%	<b>0,5%</b>
<b>2010</b>	p0-p10	<b>2,2%</b>	2,3%	<b>2,3%</b>	<b>3,6%</b>	3,6%	<b>3,6%</b>	<b>3,4%</b>	2,9%	<b>3,5%</b>
	p10-p20	<b>3,3%</b>	3,3%	<b>3,3%</b>	<b>5,0%</b>	4,9%	<b>4,9%</b>	<b>5,4%</b>	5,5%	<b>5,5%</b>
	p20-p30	<b>3,8%</b>	4,2%	<b>4,2%</b>	<b>5,5%</b>	5,7%	<b>5,6%</b>	<b>6,5%</b>	7,2%	<b>6,9%</b>
	p30-p40	<b>5,3%</b>	5,4%	<b>5,4%</b>	<b>5,7%</b>	5,8%	<b>5,8%</b>	<b>8,0%</b>	8,8%	<b>7,8%</b>
	p40-p50	<b>6,2%</b>	6,2%	<b>6,2%</b>	<b>7,7%</b>	7,5%	<b>7,5%</b>	<b>8,8%</b>	8,1%	<b>8,4%</b>
	p50-p60	<b>7,4%</b>	7,6%	<b>7,6%</b>	<b>7,6%</b>	7,9%	<b>7,9%</b>	<b>8,9%</b>	8,1%	<b>9,1%</b>
	p60-p70	<b>9,2%</b>	9,1%	<b>9,1%</b>	<b>9,9%</b>	10,1%	<b>10,1%</b>	<b>10,0%</b>	9,2%	<b>10,1%</b>
	p70-p80	<b>11,3%</b>	11,4%	<b>11,4%</b>	<b>10,3%</b>	10,6%	<b>10,6%</b>	<b>11,2%</b>	11,1%	<b>11,2%</b>
	p80-p90	<b>14,2%</b>	14,3%	<b>14,3%</b>	<b>15,0%</b>	15,0%	<b>15,0%</b>	<b>13,6%</b>	14,0%	<b>13,3%</b>
	p90-p95	<b>10,2%</b>	10,2%	<b>10,2%</b>	<b>9,8%</b>	9,8%	<b>9,7%</b>	<b>8,3%</b>	8,8%	<b>8,7%</b>
	p95-p99	<b>14,4%</b>	14,8%	<b>14,8%</b>	<b>11,5%</b>	11,4%	<b>11,5%</b>	<b>9,7%</b>	10,1%	<b>9,6%</b>
	p99-p99.5	<b>4,6%</b>	4,5%	<b>4,5%</b>	<b>2,6%</b>	2,4%	<b>2,4%</b>	<b>2,1%</b>	2,3%	<b>2,1%</b>
	p99.5-p99.9	<b>4,2%</b>	3,8%	<b>3,8%</b>	<b>4,4%</b>	4,1%	<b>4,1%</b>	<b>2,6%</b>	2,7%	<b>2,6%</b>
	p99.9-p100	<b>3,8%</b>	2,9%	<b>2,9%</b>	<b>1,5%</b>	1,2%	<b>1,2%</b>	<b>1,5%</b>	1,3%	<b>1,2%</b>

**Table 13: Number of imputation groups for housing and wealth surveys**

Number of imputation groups for the wealth surveys				
	Age groups	Groups of financial income	Groups of labor income	Total number of groups
Owner-occupied housing assets	10 groups: < 25, 25-30, 31-39, 40-49, 50-54, 55-60, 61-65, 66-70, 71-80, > 80	4 groups: P0-50, P50-90, P90-99, P99-100	5 groups: P0-25, P25-50, P50-75, P75-90, P90-100	200 groups=10*4*5
Life insurance assets	8 groups: < 31, 31-39, 40-49, 50-54, 55-60, 61-65, 66-70, > 70	6 groups: P0-50, P50-75, P75-90, P90-95, P95-99, P99-100	6 groups: P0-25, P25-50, P50-75, P75-90, P90-95, P95-100	384 groups=8*6*6
Deposits and saving accounts	8 groups: < 31, 31-39, 40-49, 50-54, 55-60, 61-65, 66-70, > 70	5 groups: P0-50, P50-75, P75-90, P90-95, P95-100	6 groups: P0-25, P25-50, P50-75, P75-90, P90-95, P95-100	240 groups=8*5*6

**Number of imputation groups for housing surveys over the 1970-1991 period**

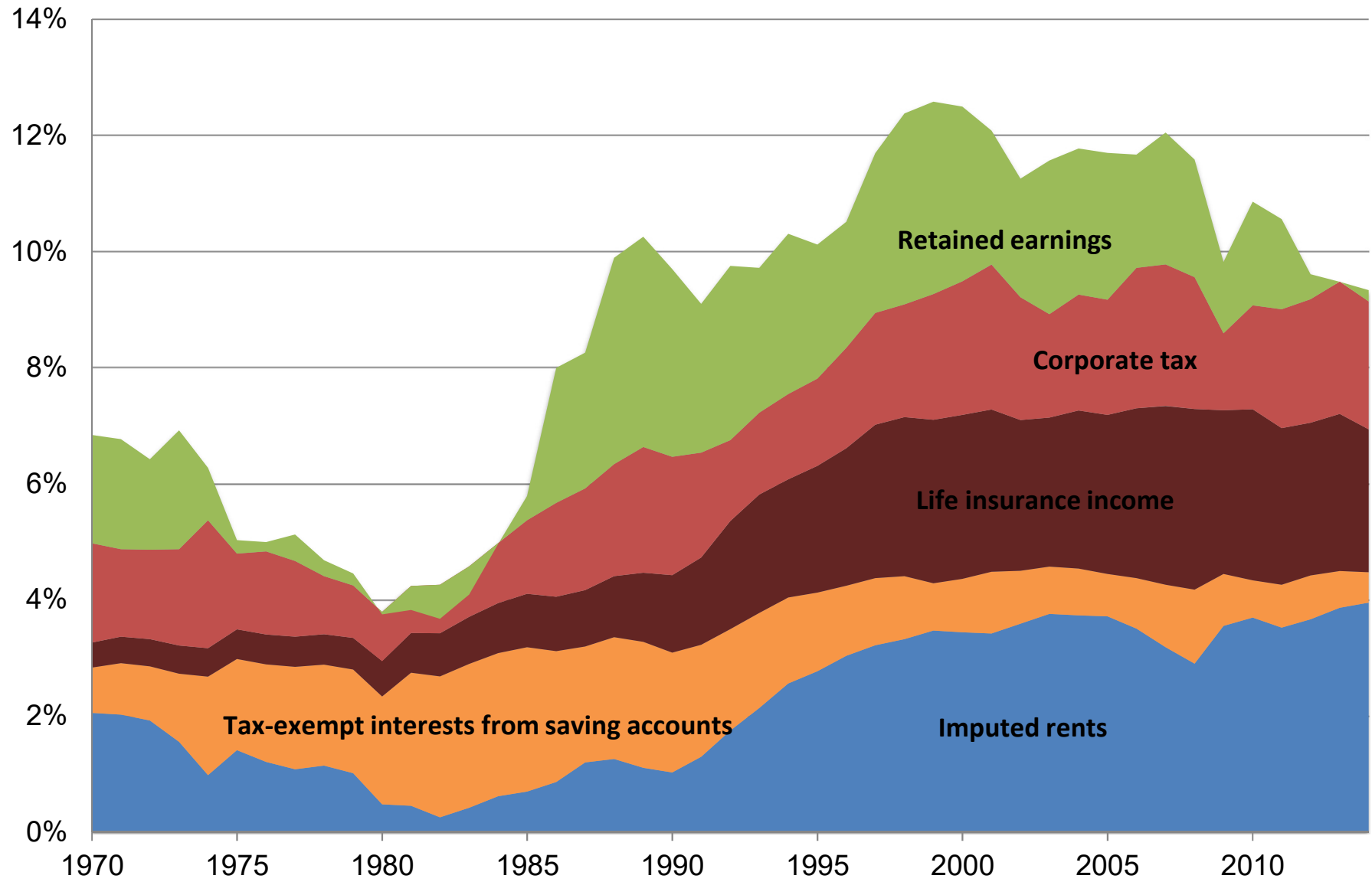
	Age groups	Groups of total income	Total number of groups
Owner-occupied housing assets	9 groups: < 25, 25-30, 31-39, 40-49, 50-54, 55-60, 61-65, 66-70, > 70	7 groups: P0-25, P25-50, P50-75, P75-90, P90-95, P95-99, P99-100	63 groups=10*4*5

Note: This tables depicts the number of imputation groups for the wealth surveys

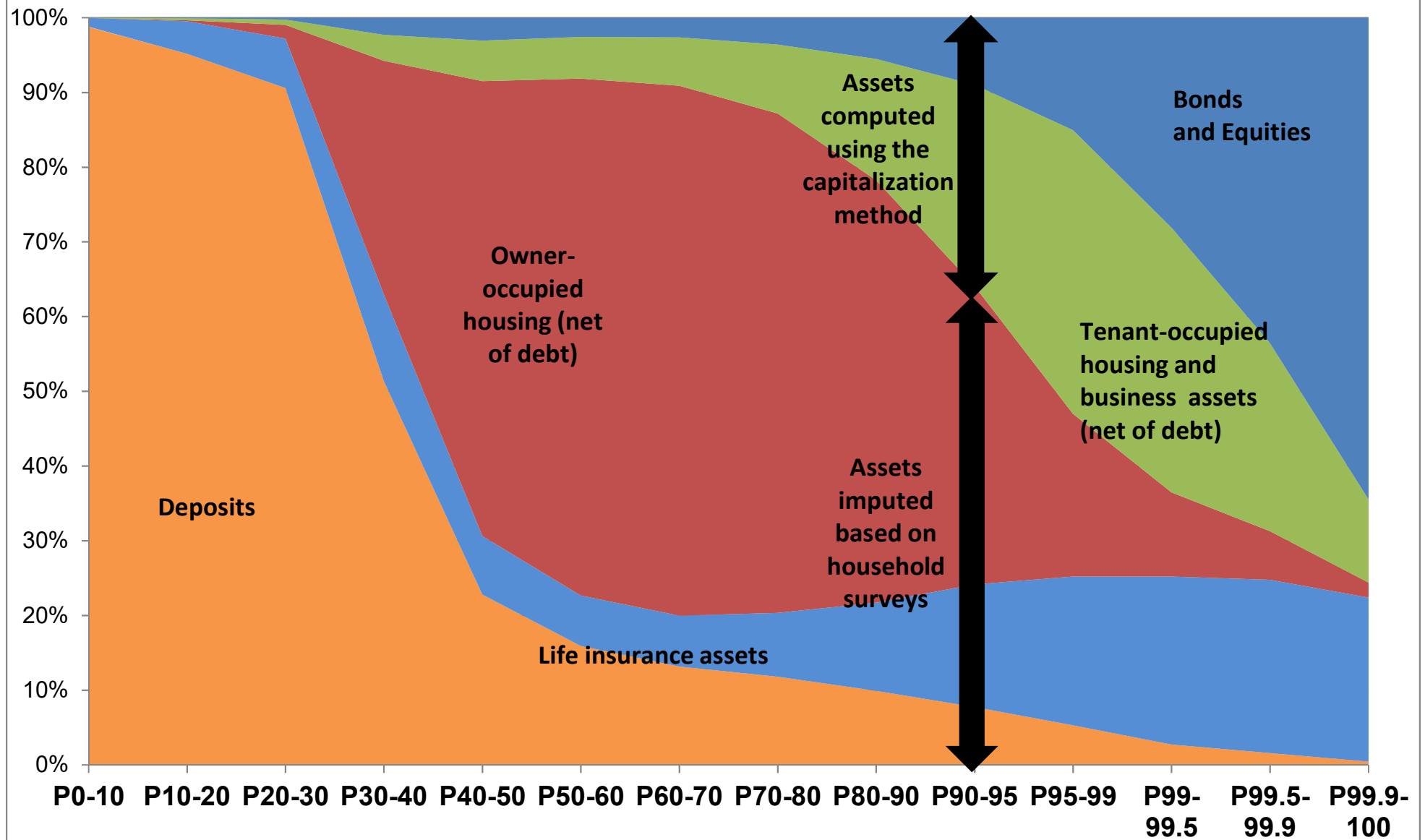
<b>Table 14. Average wealth by wealth group : Wealth surveys vs MICS method</b>								
	MICS Method				Wealth surveys			
	<b>1992</b>	<b>1998</b>	<b>2004</b>	<b>2010</b>	<b>1992</b>	<b>1998</b>	<b>2004</b>	<b>2010</b>
P0-50	9 296	10 083	16 795	17 755	6 245	5 878	7 444	12 631
P50-90	71 945	74 403	129 537	172 967	60 039	66 569	93 836	149 158
P90-100	381 573	504 219	775 091	1 079 404	245 667	296 006	399 053	670 030
P99-100	1 316 628	2 340 350	3 361 923	4 479 603	720 439	932 585	1 124 839	2 456 829
P99.9-100	4 910 059	10 335 606	14 059 146	18 056 343	2 032 726	2 577 704	2 602 284	10 252 457

Note : This table depicts the average wealth by wealth group, either computed directly from the wealth surveys or with our MICS method. Unit of analysis is the individual.

**Figure 1. Tax-exempt capital income (in % of national income)**



**Figure 2. Asset composition by wealth level, France 2012**



**Figure 3. Share of wealth obtained from capitalization method by wealth groups**

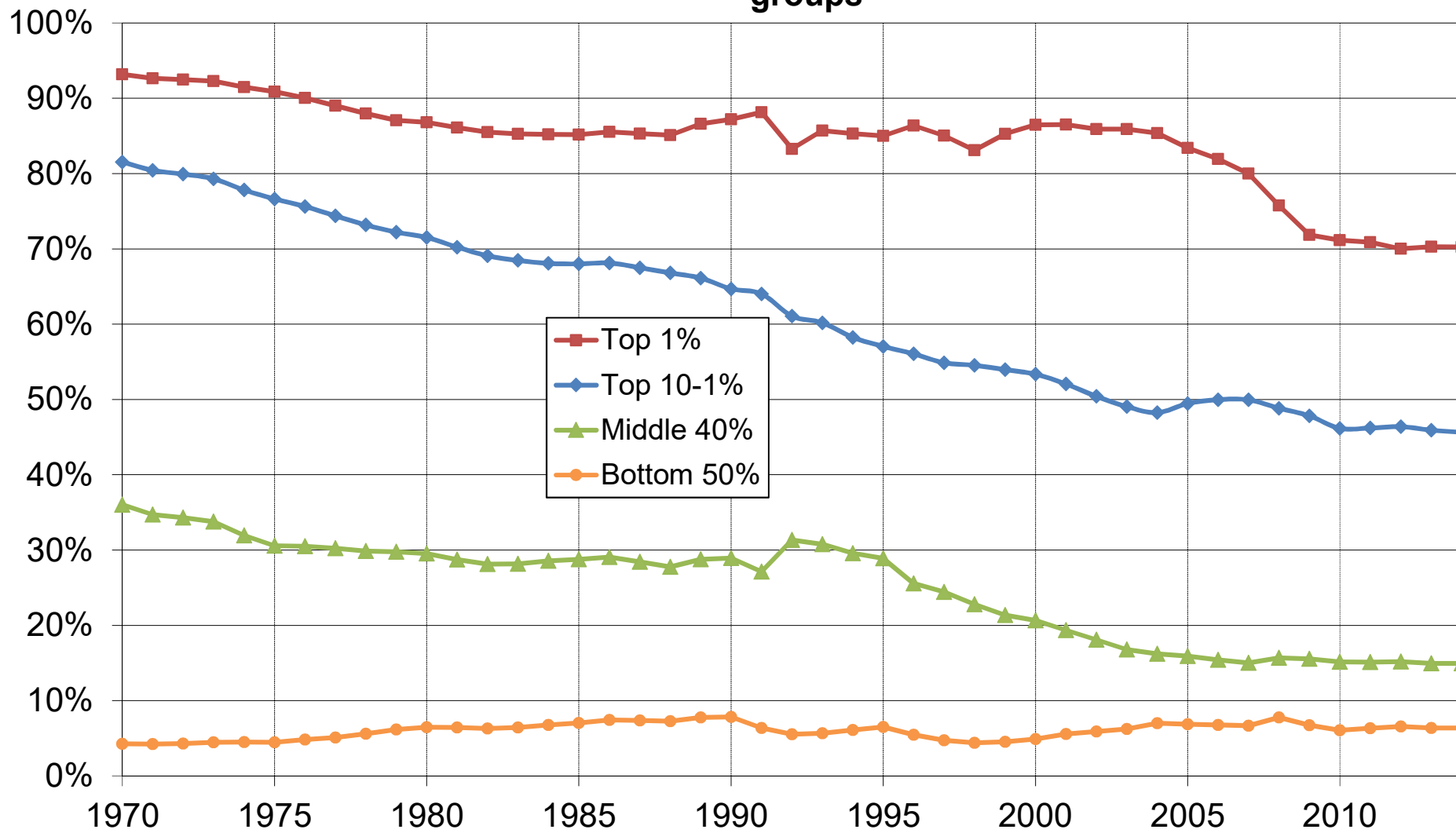




Figure 4. Robustness checks for owner-occupied housing assets: Top 1% wealth share

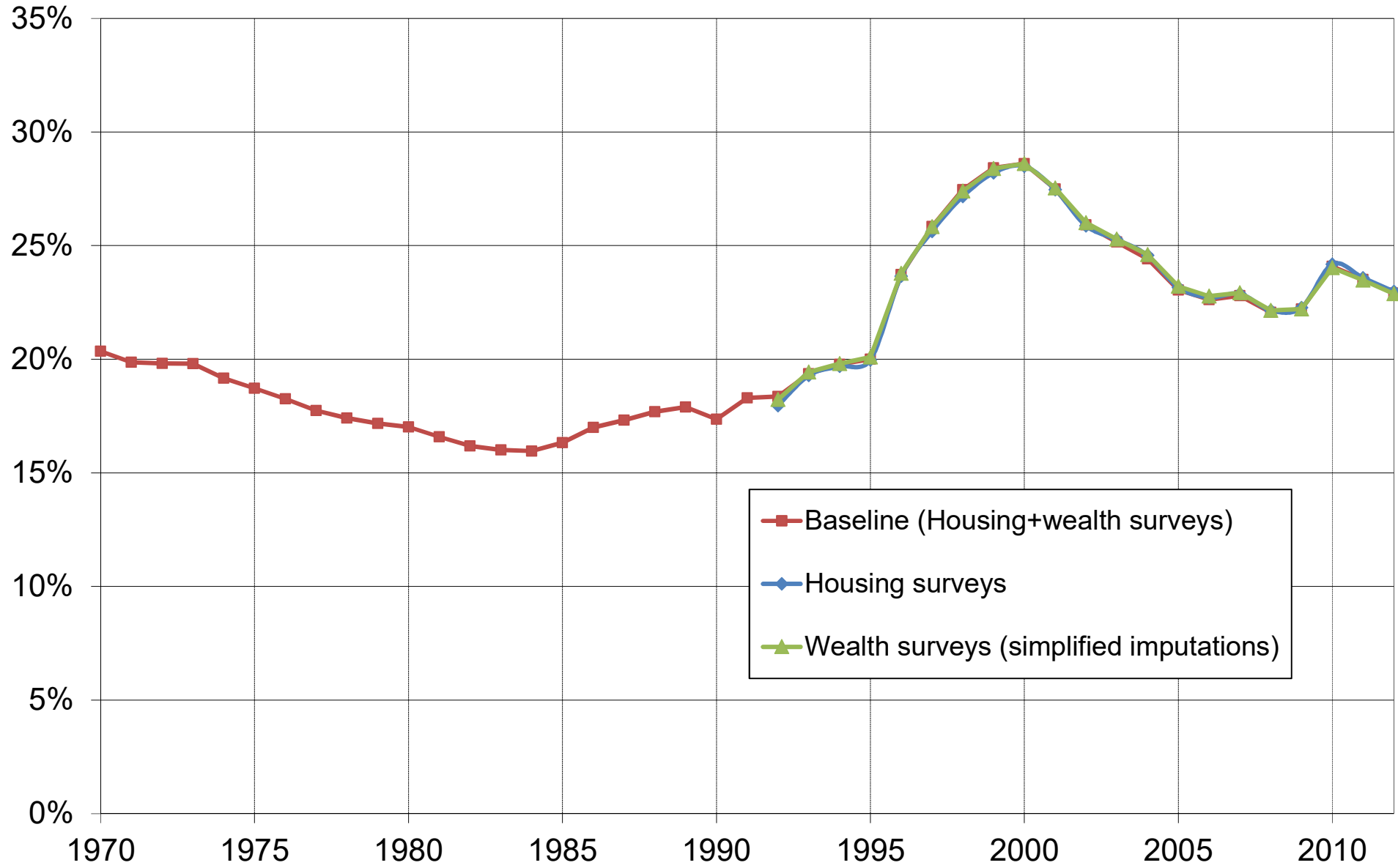


Figure 5. Robustness checks for owner-occupied housing assets: Middle 40% wealth share

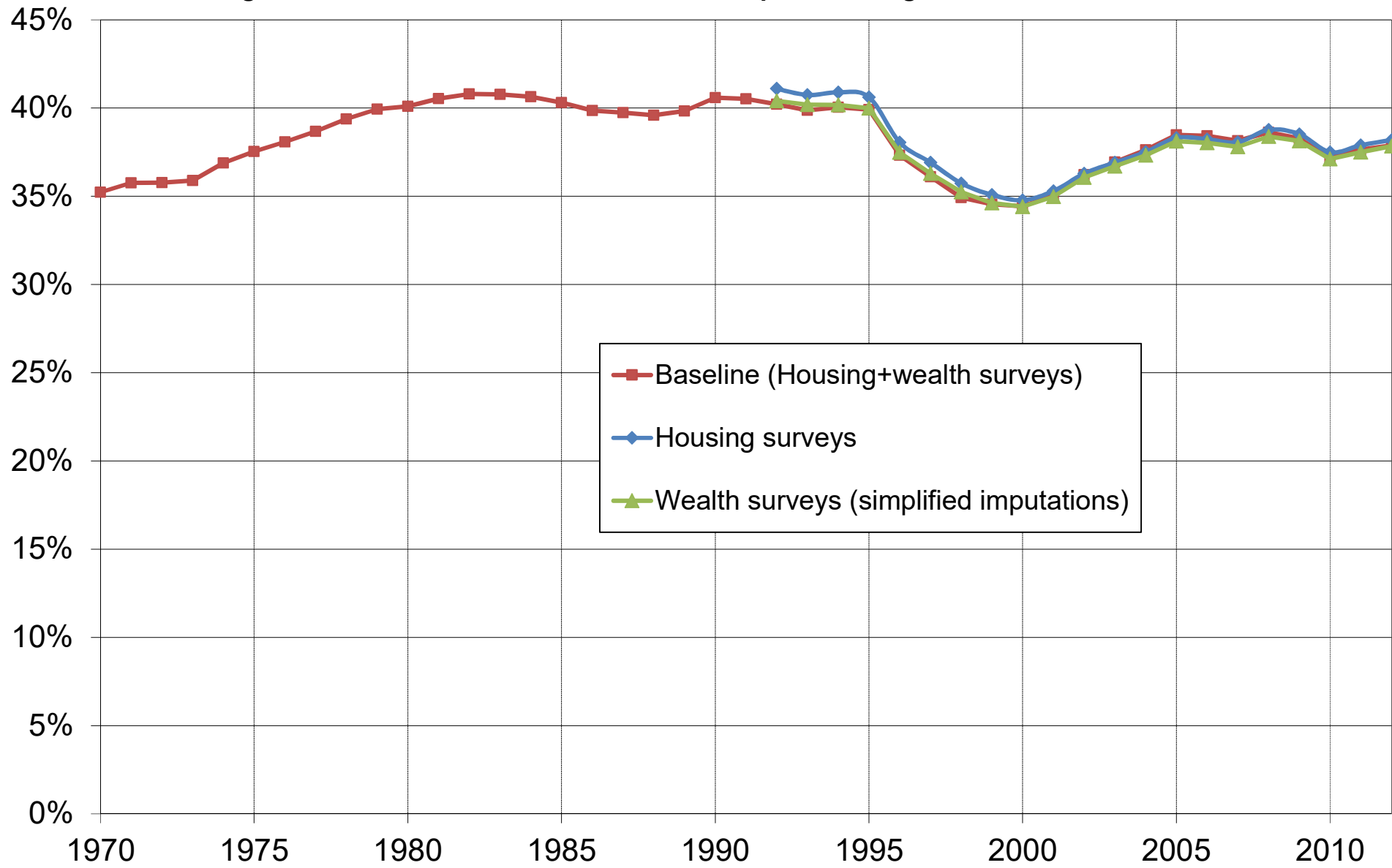


Figure 6. Robustness checks for owner-occupied housing assets: Bottom 50% wealth share

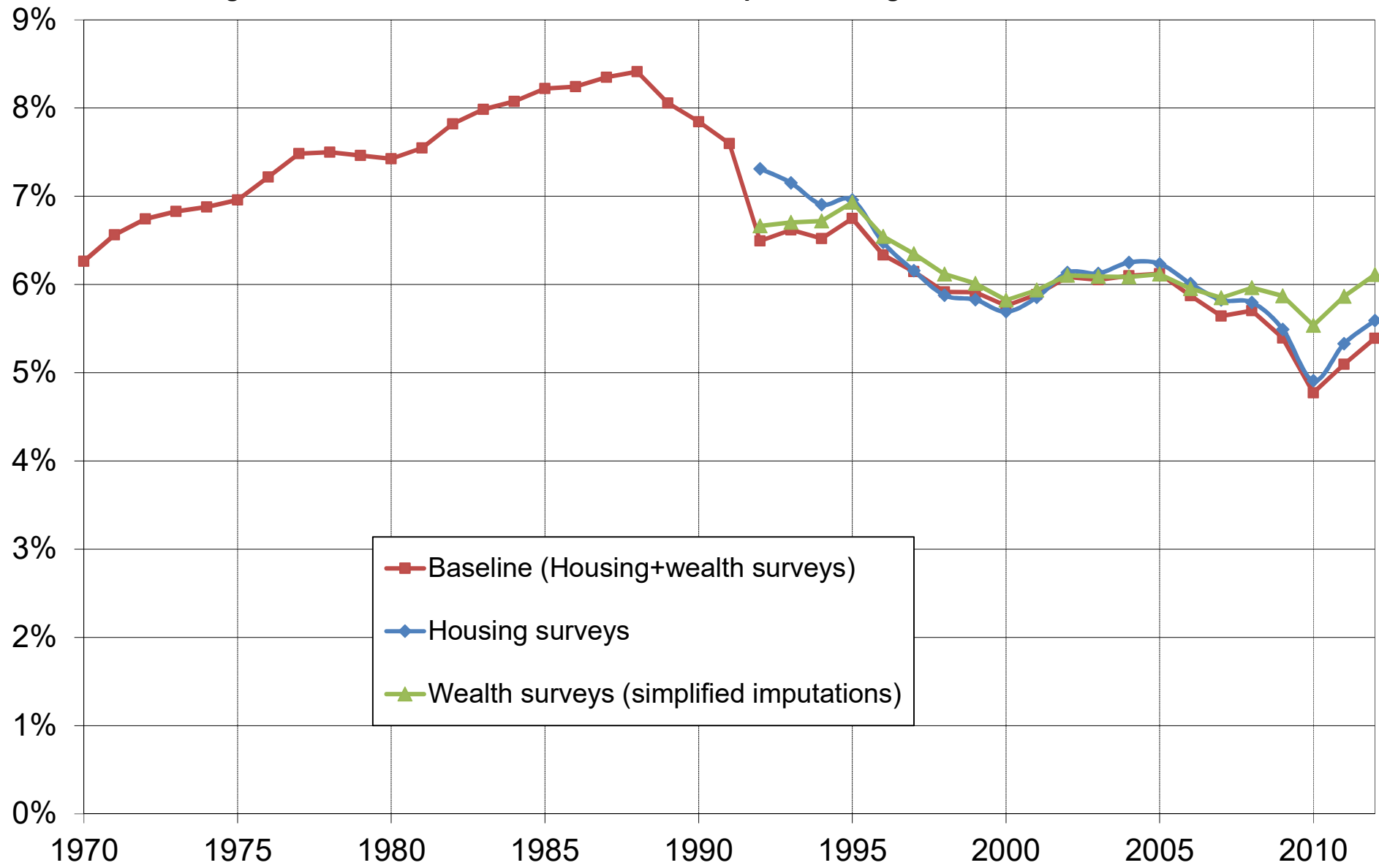
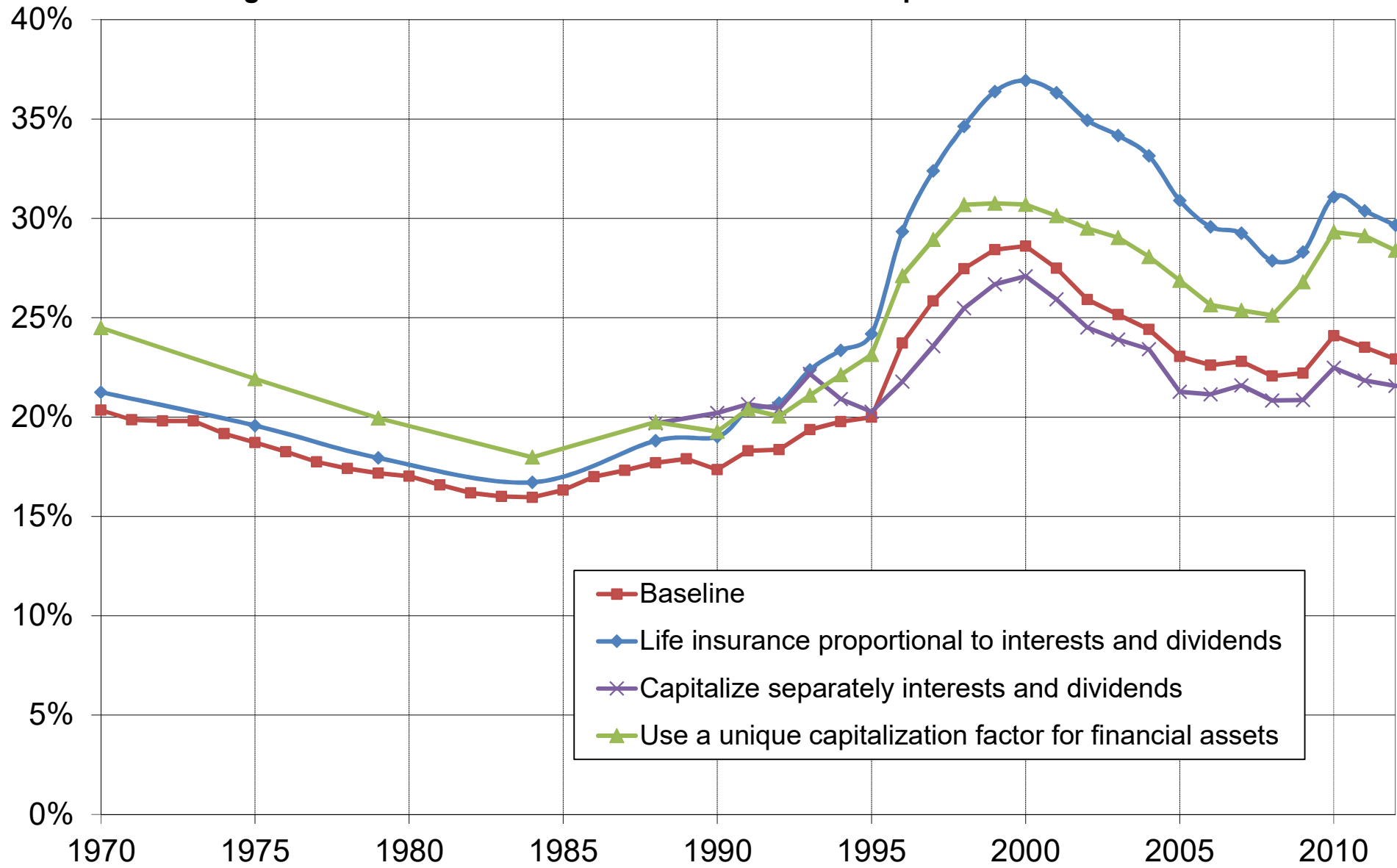


Figure 7. Robustness checks for financial assets: Top 1% wealth share



**Figure 8. Robustness checks for financial assets: Middle 40% wealth share**

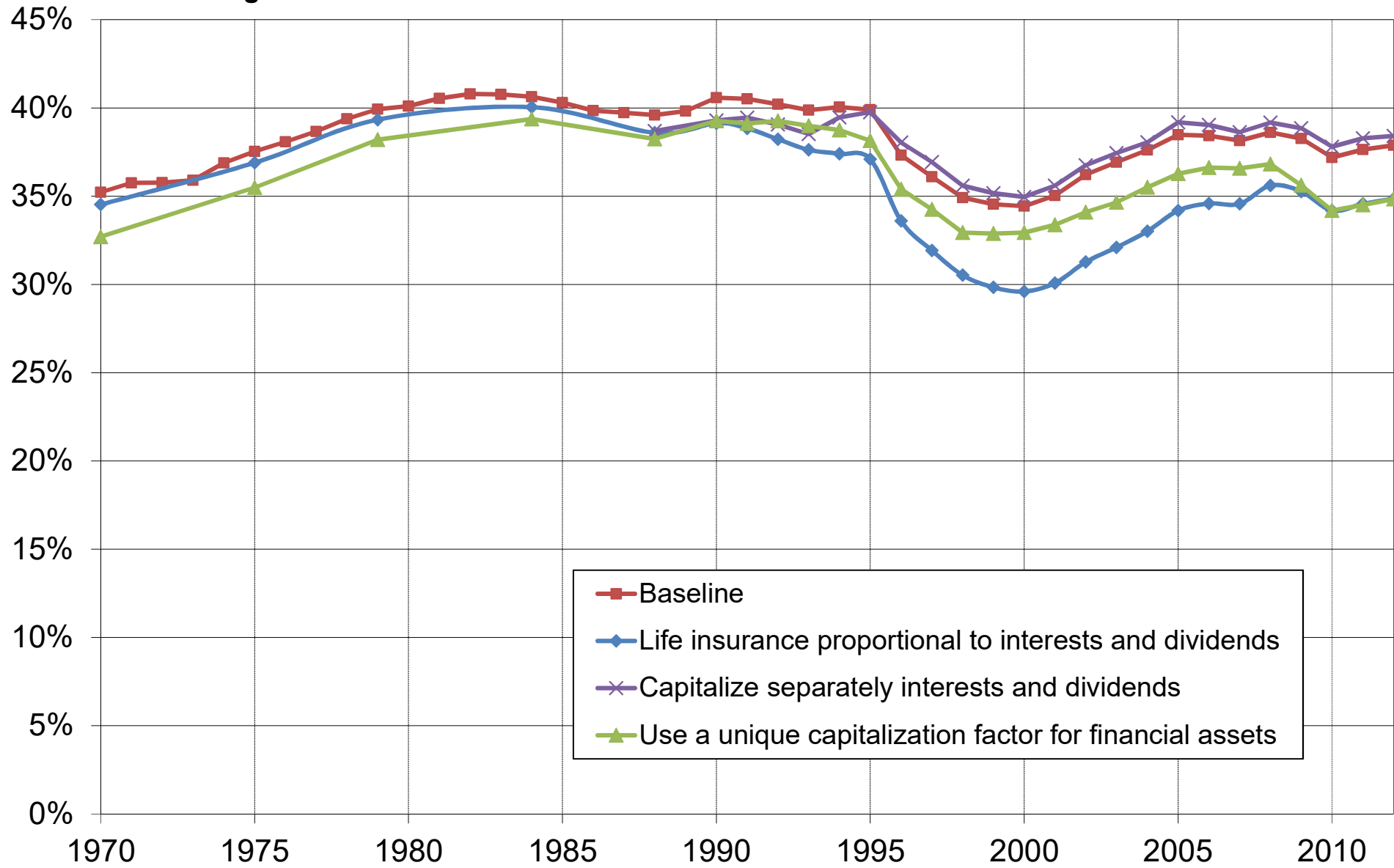
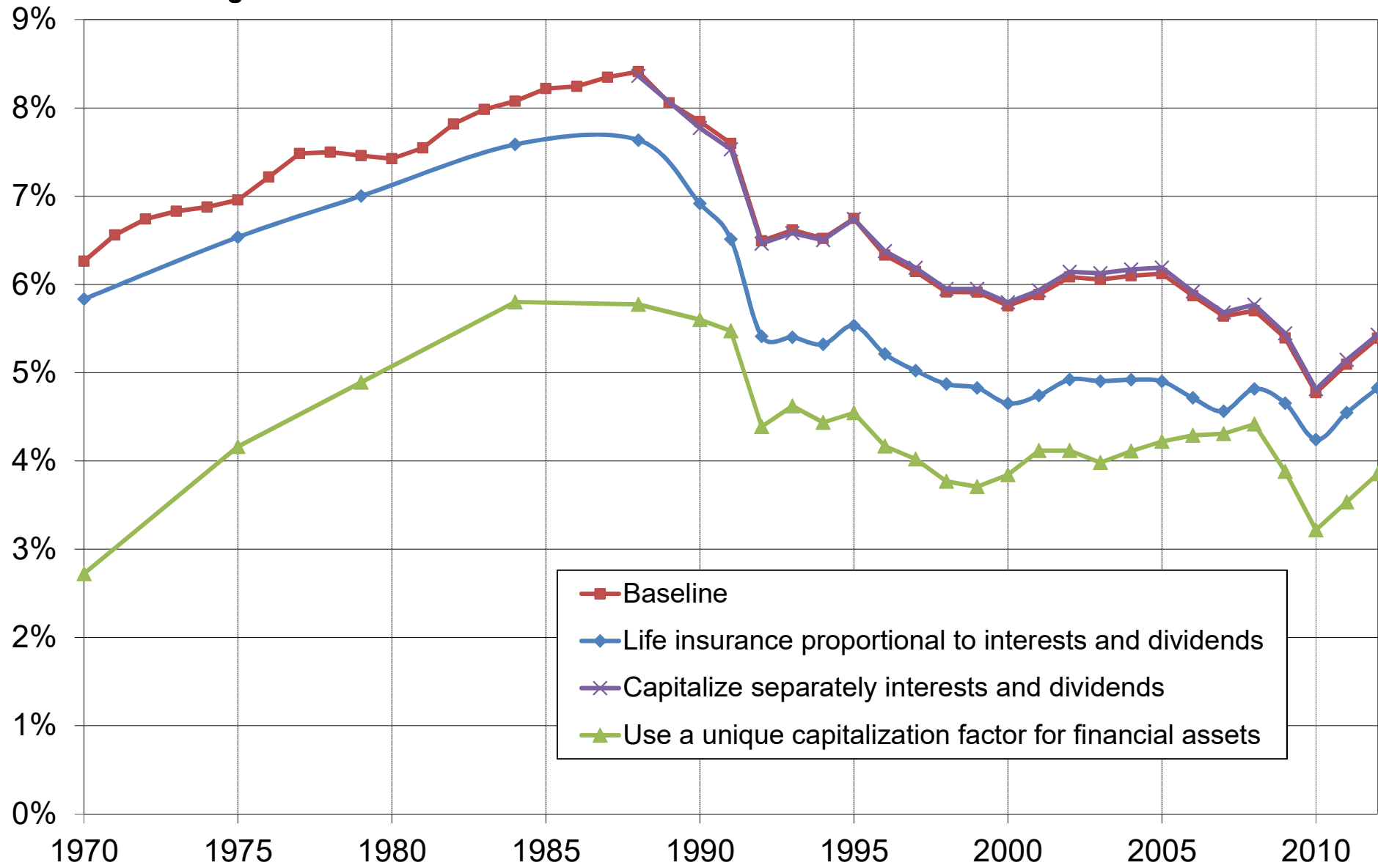
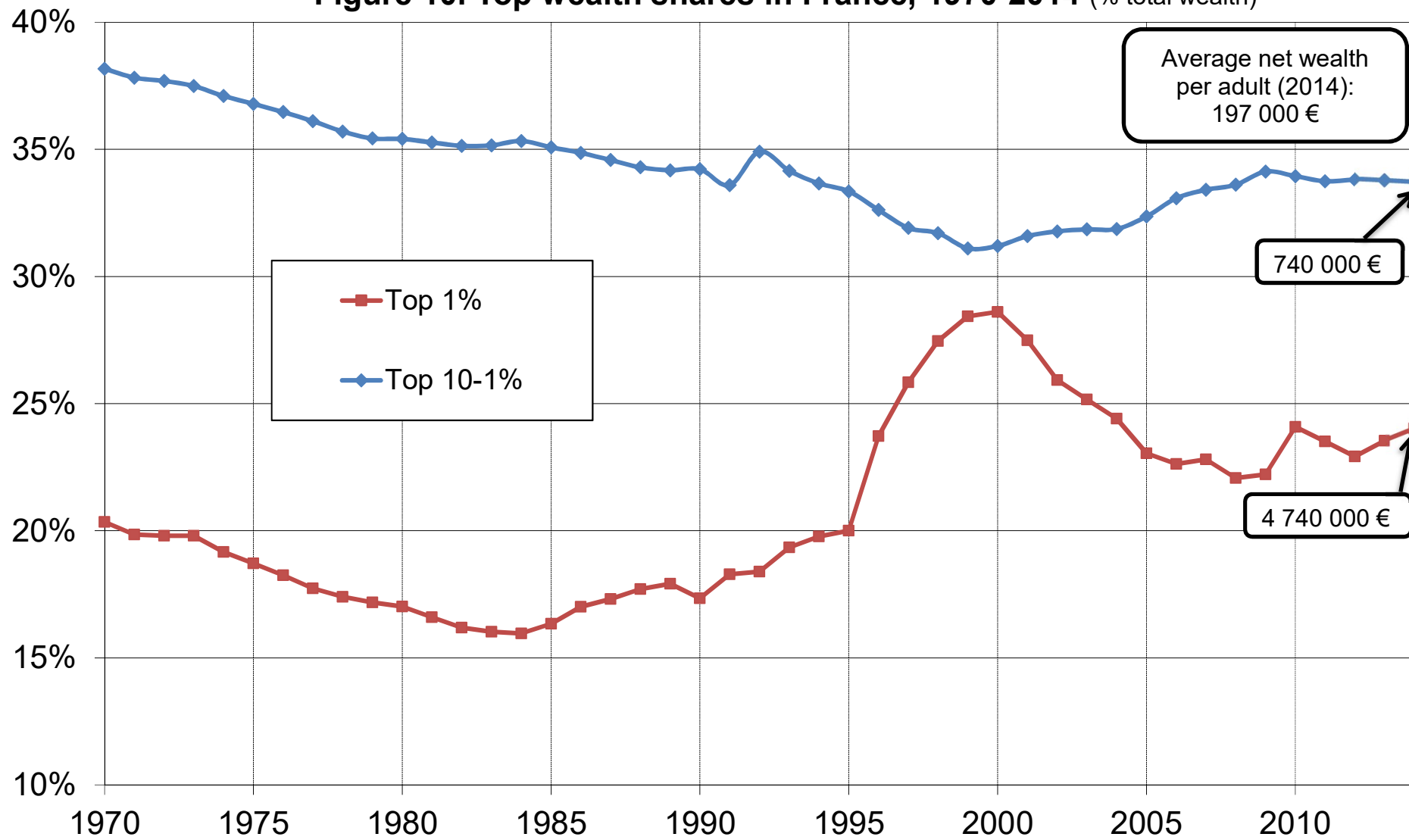


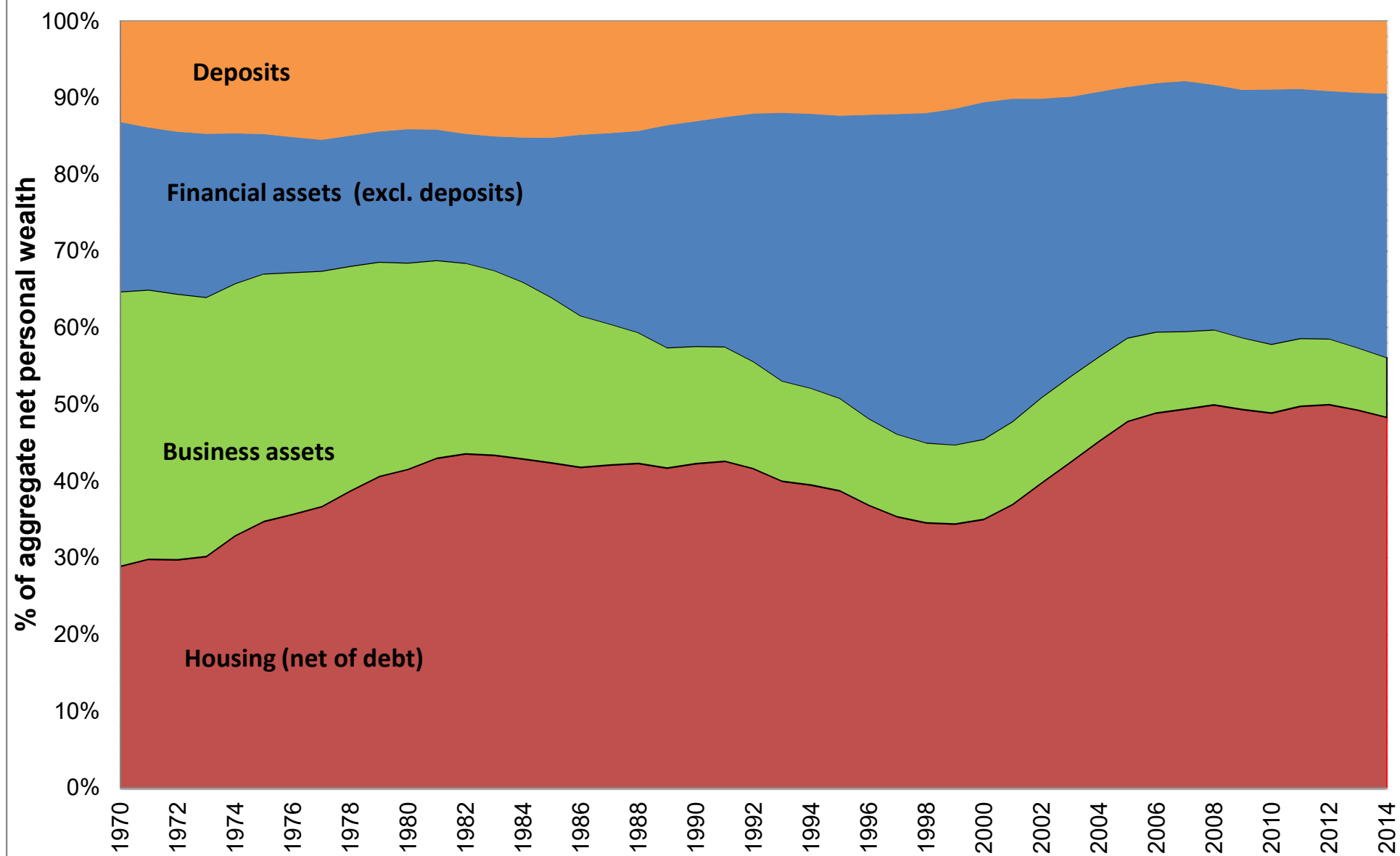
Figure 9. Robustness checks for financial assets: Bottom 50% wealth share



**Figure 10. Top wealth shares in France, 1970-2014** (% total wealth)

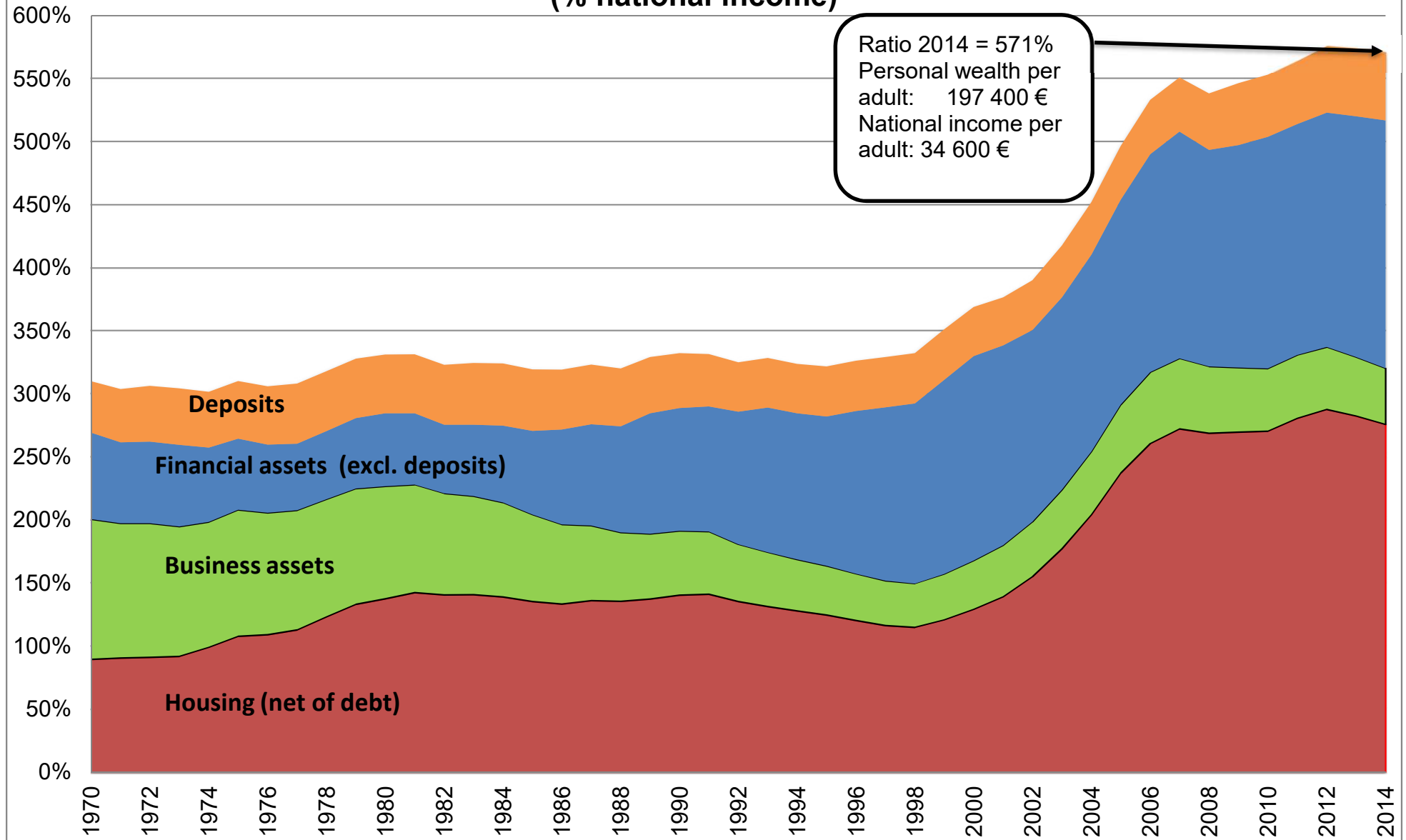


**Figure 11. Composition of aggregate personal wealth, France 1970-2014**

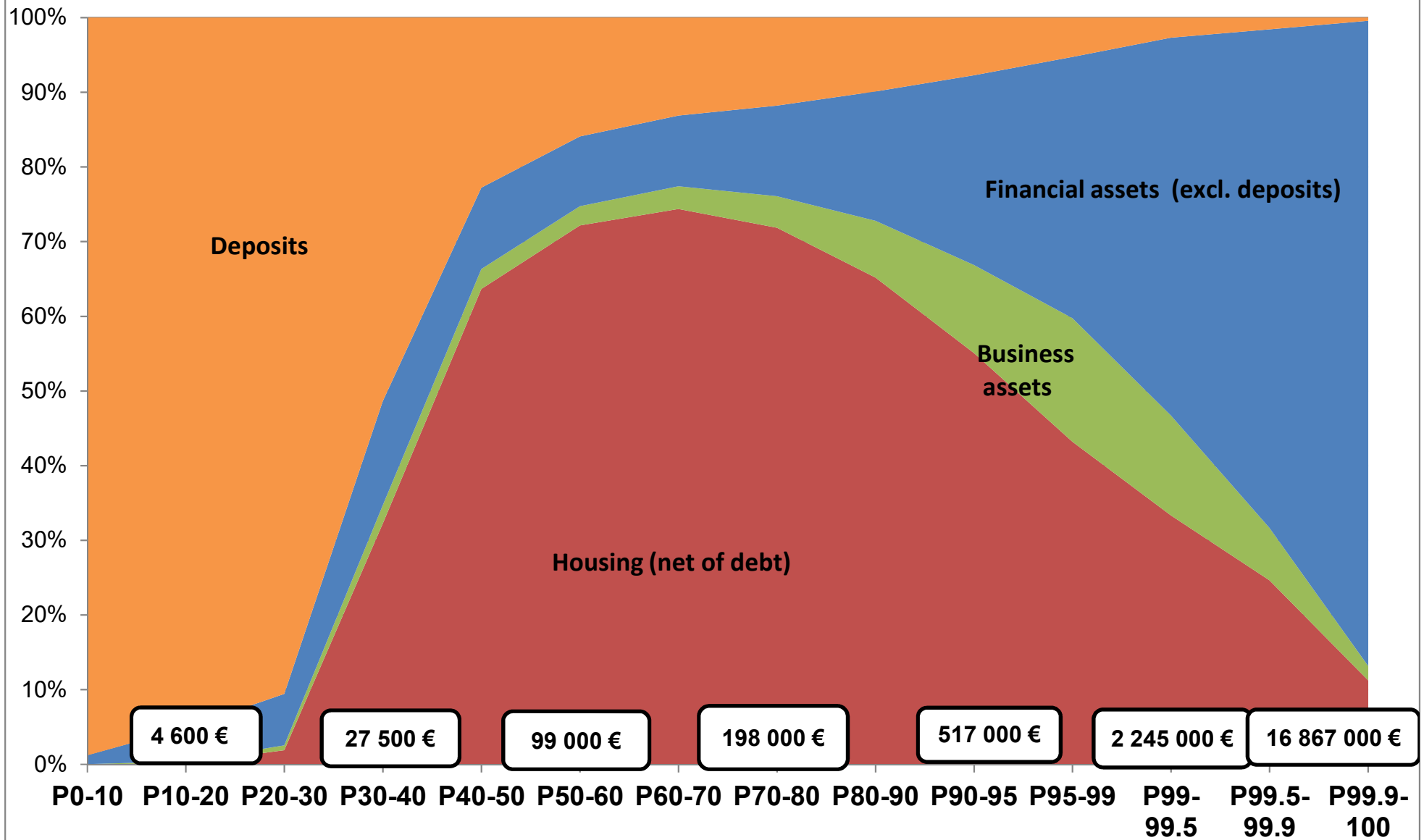




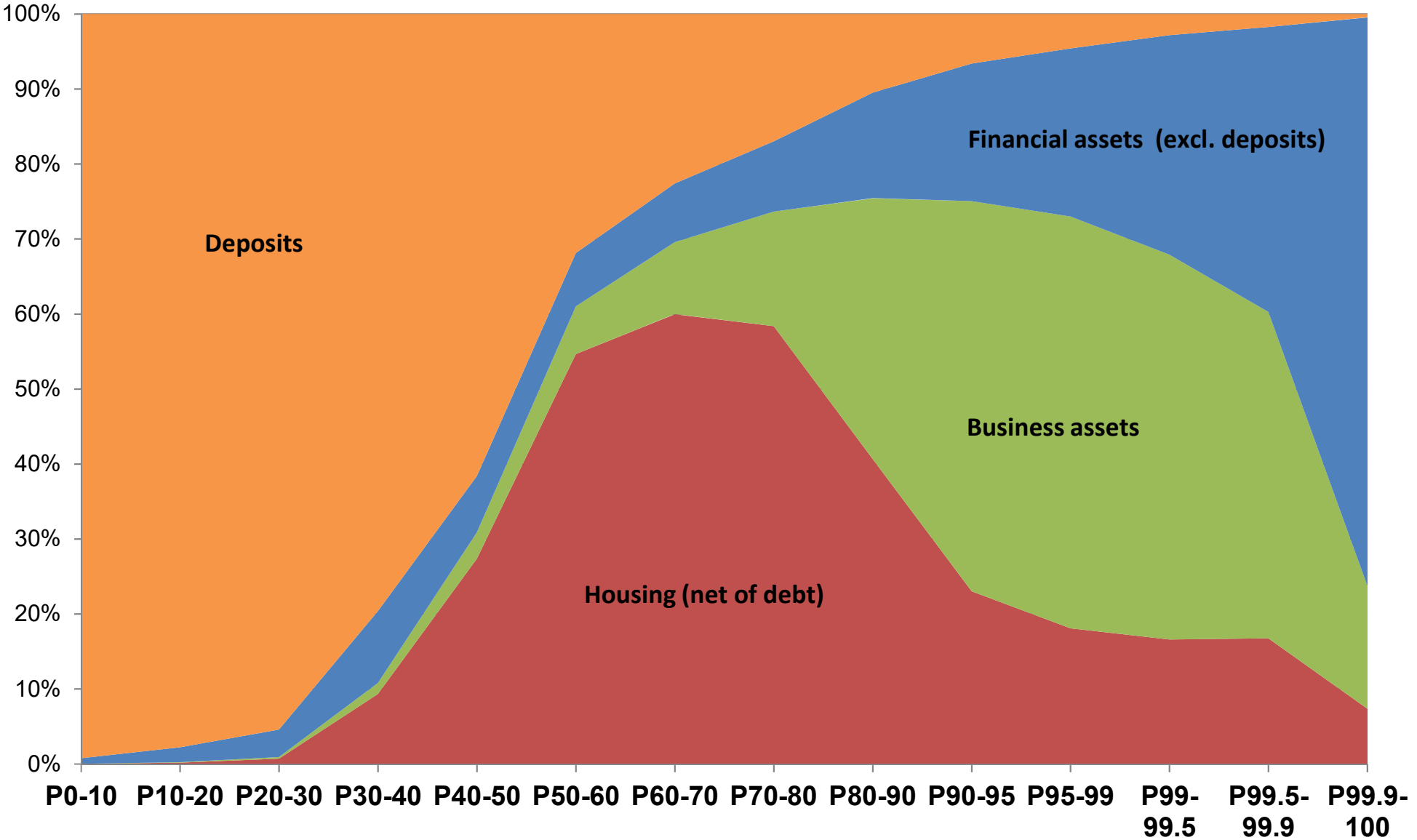
**Figure 12. Level and composition of personal wealth, France 1970-2014**  
 (% national income)



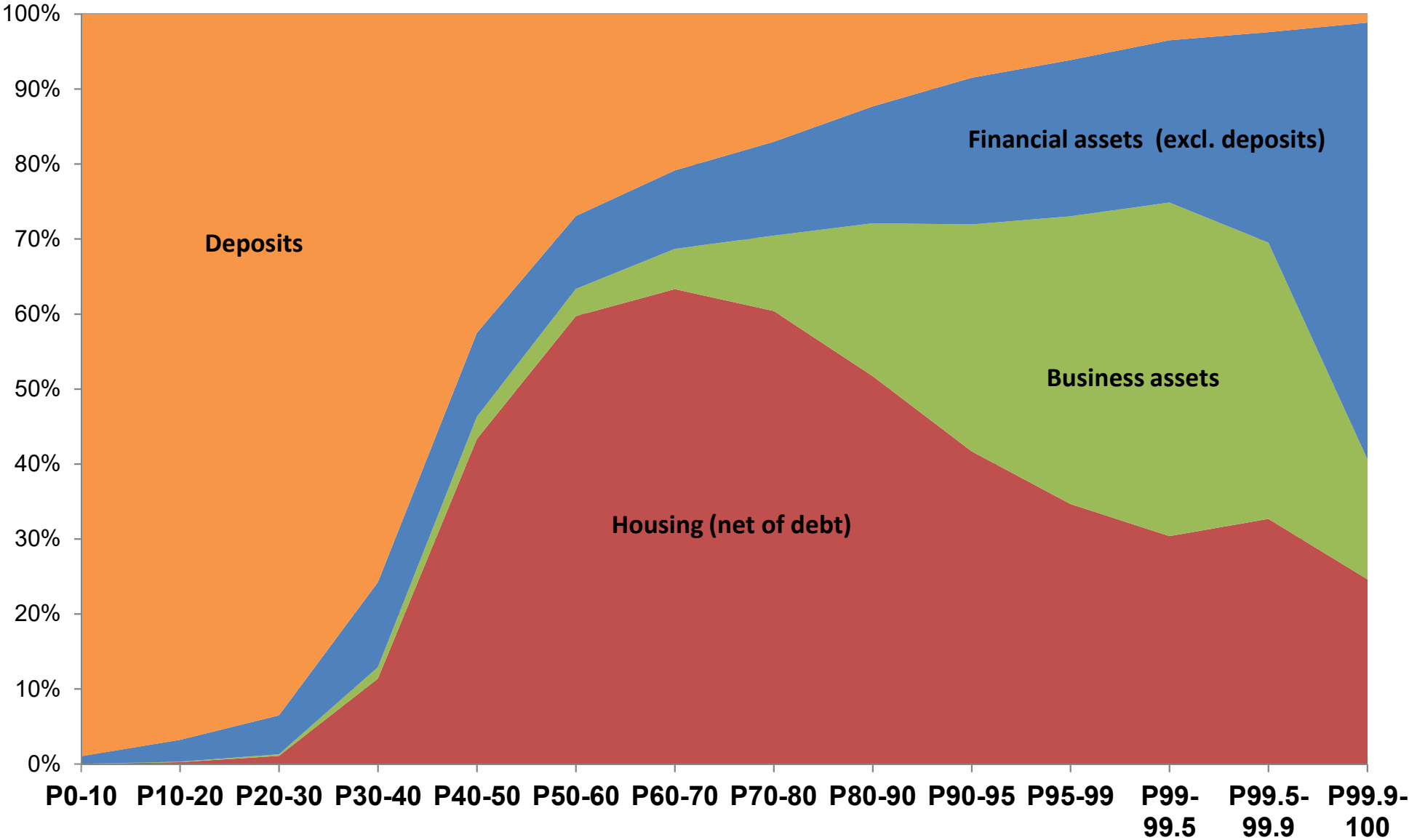
**Figure 13. Asset composition by wealth level, France 2012**



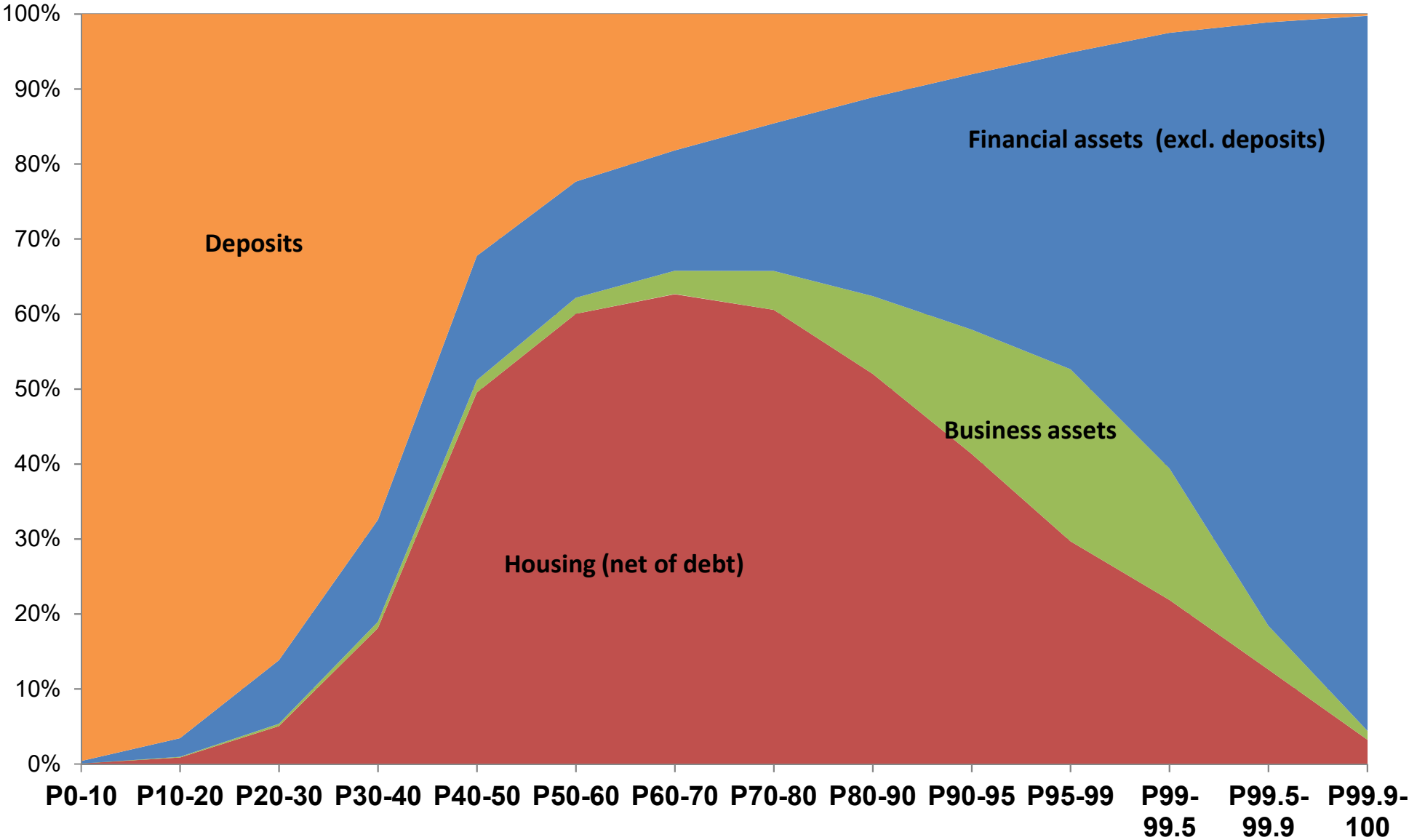
**Figure 14. Asset composition by wealth level, France 1970**



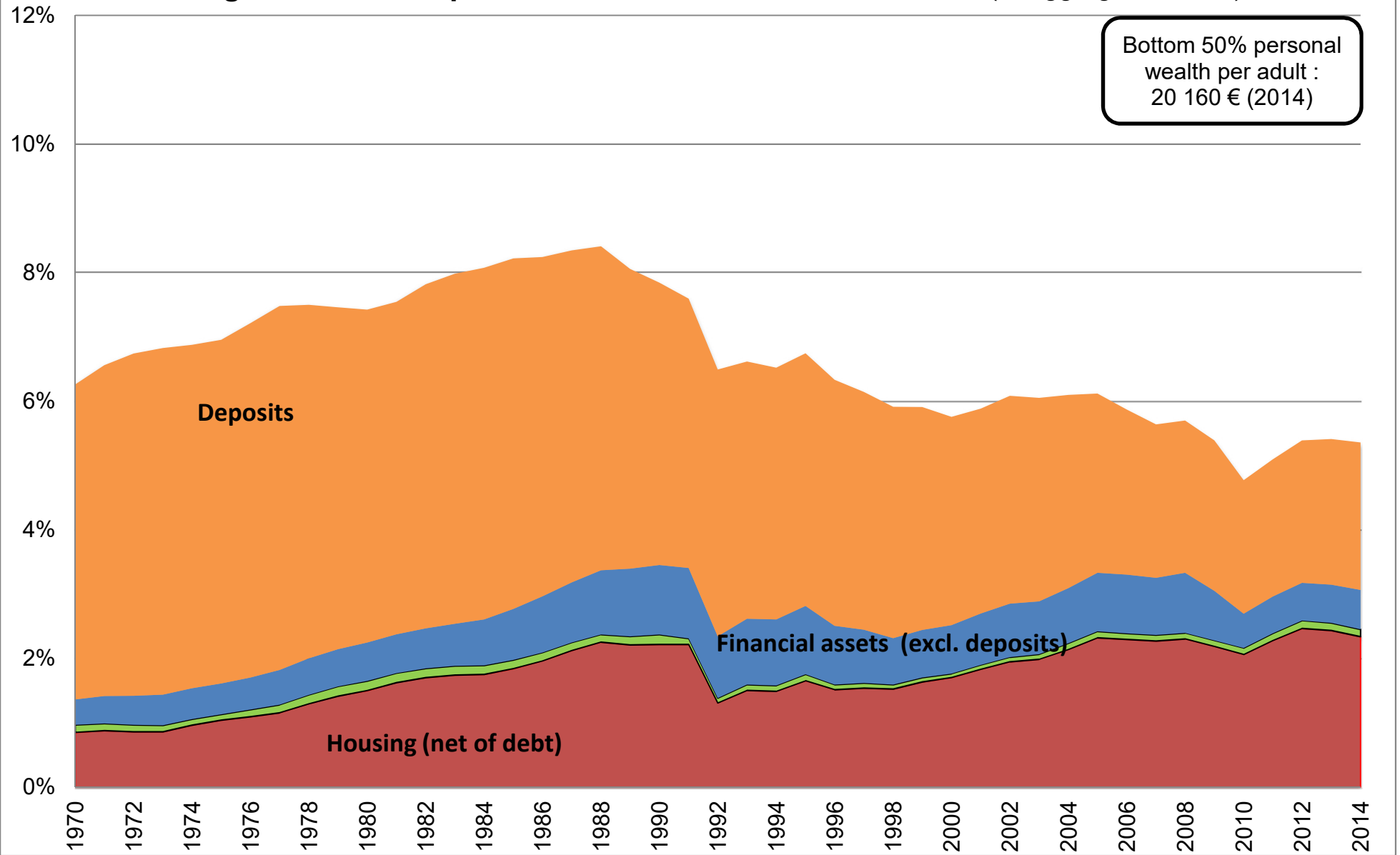
**Figure 15. Asset composition by wealth level, France 1984**



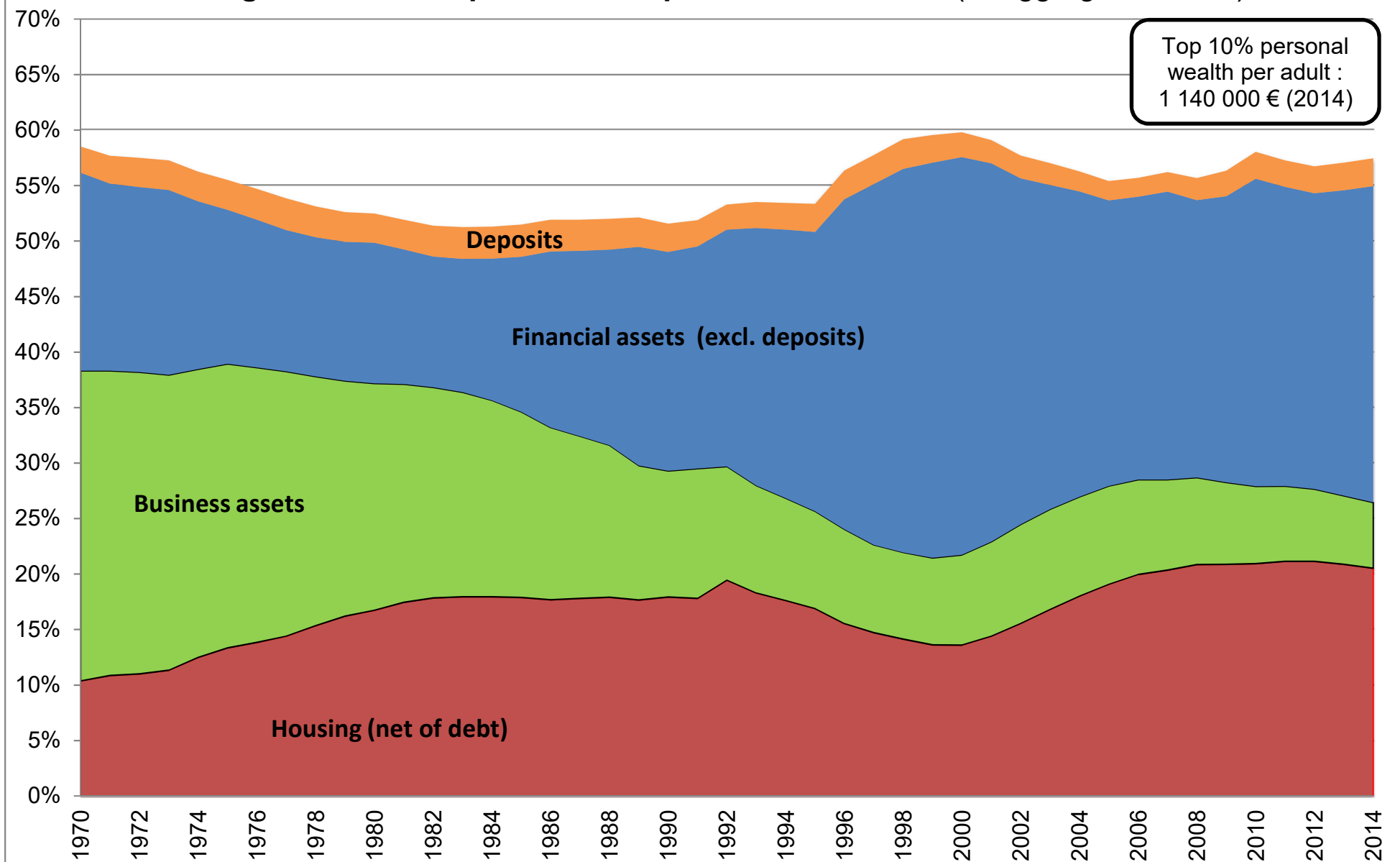
**Figure 16. Asset composition by wealth level, France 2000**



**Figure 17. Decomposition of bottom 50% wealth share (% aggregate wealth)**



**Figure 18. Decomposition of top 10% wealth share (% aggregate wealth)**



**Figure 19. Decomposition of top 10-1% wealth share (% aggregate wealth)**

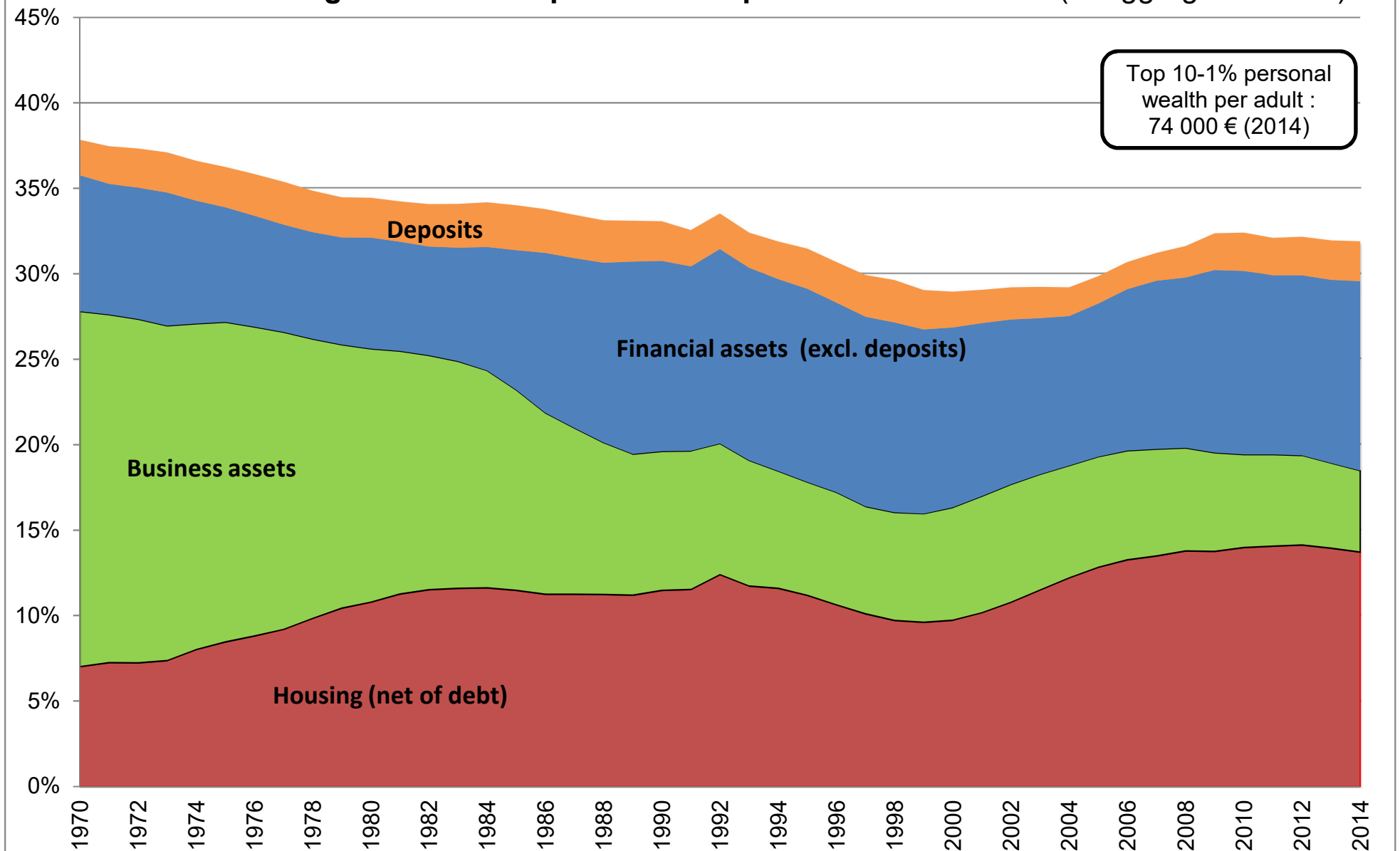




Figure 20. Total income share by wealth group

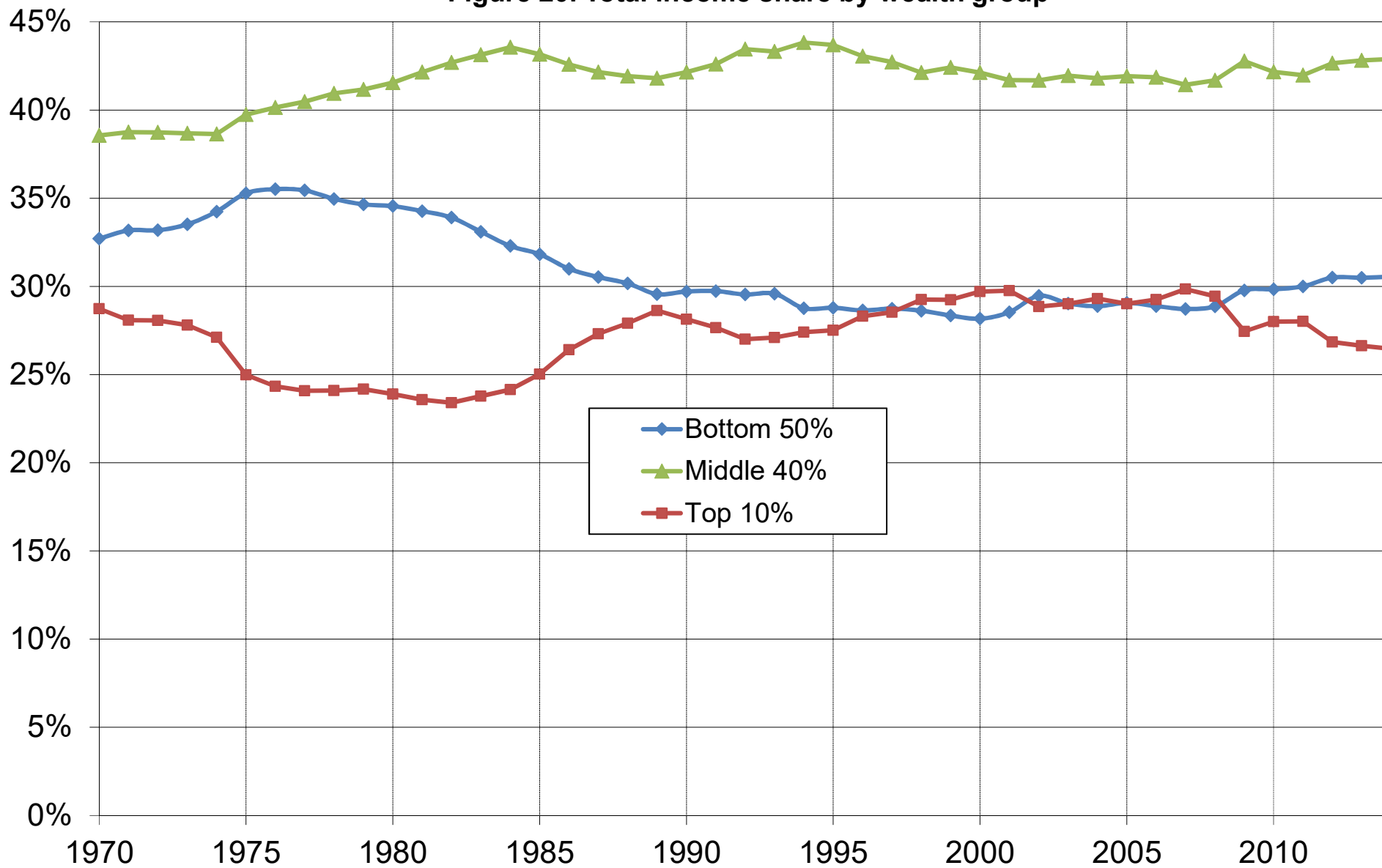
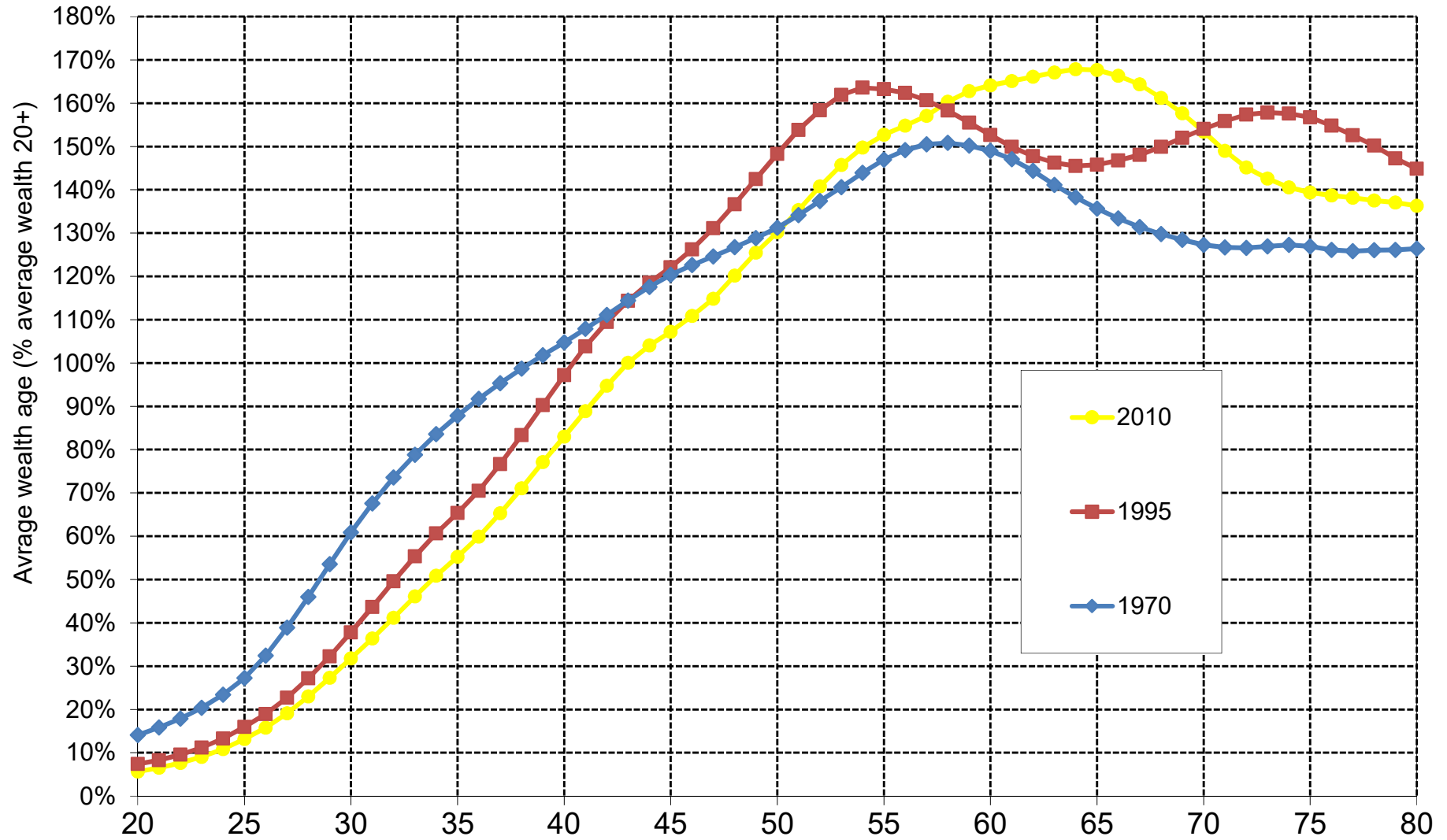


Figure 21. Age-wealth profiles in France, 1970-2012



**Figure 22. Wealth concentration by age group, France 1970-2012**

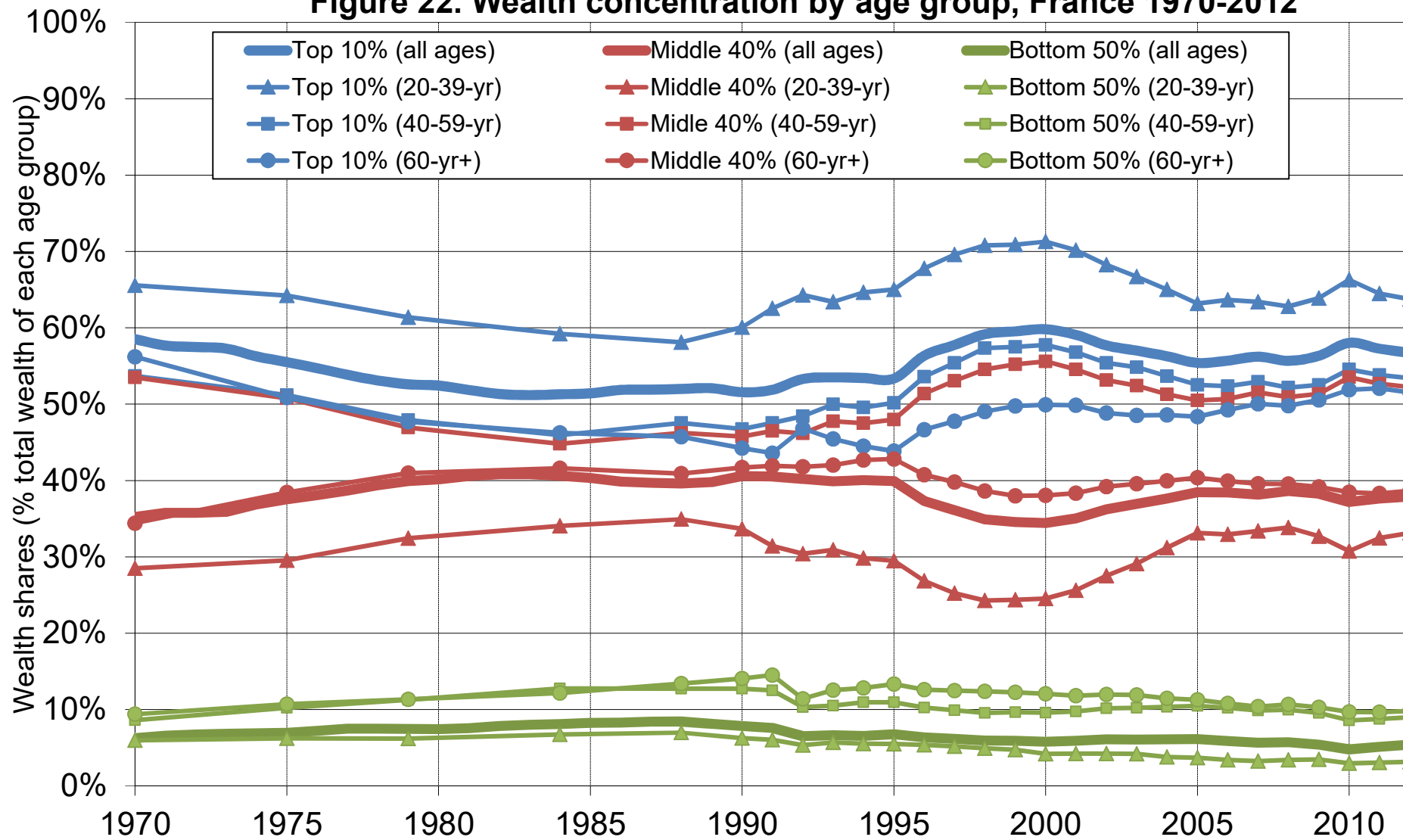
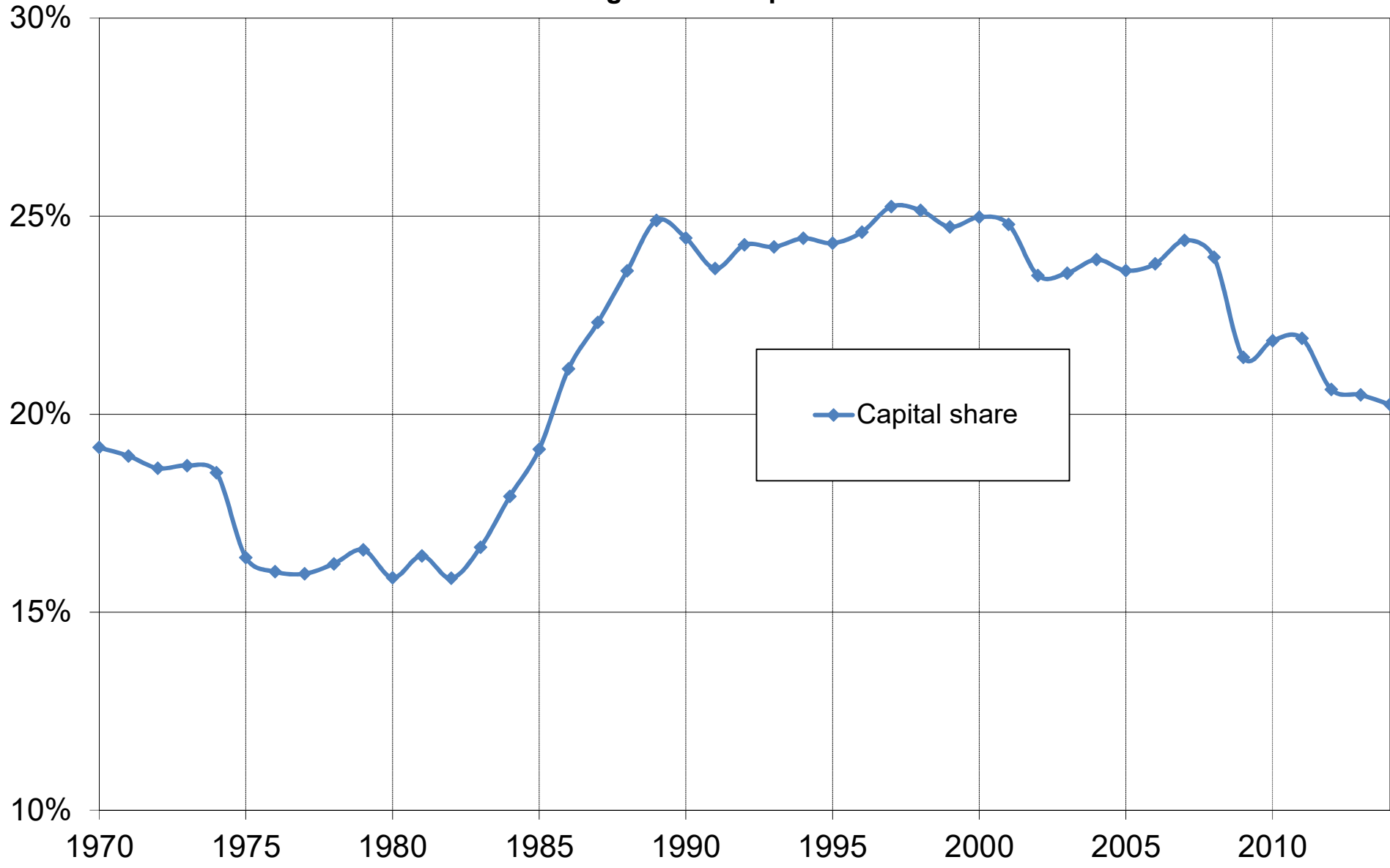


Figure 23a. Capital share



**Figure 23b. Income share accruing to the top 1% wealth group**

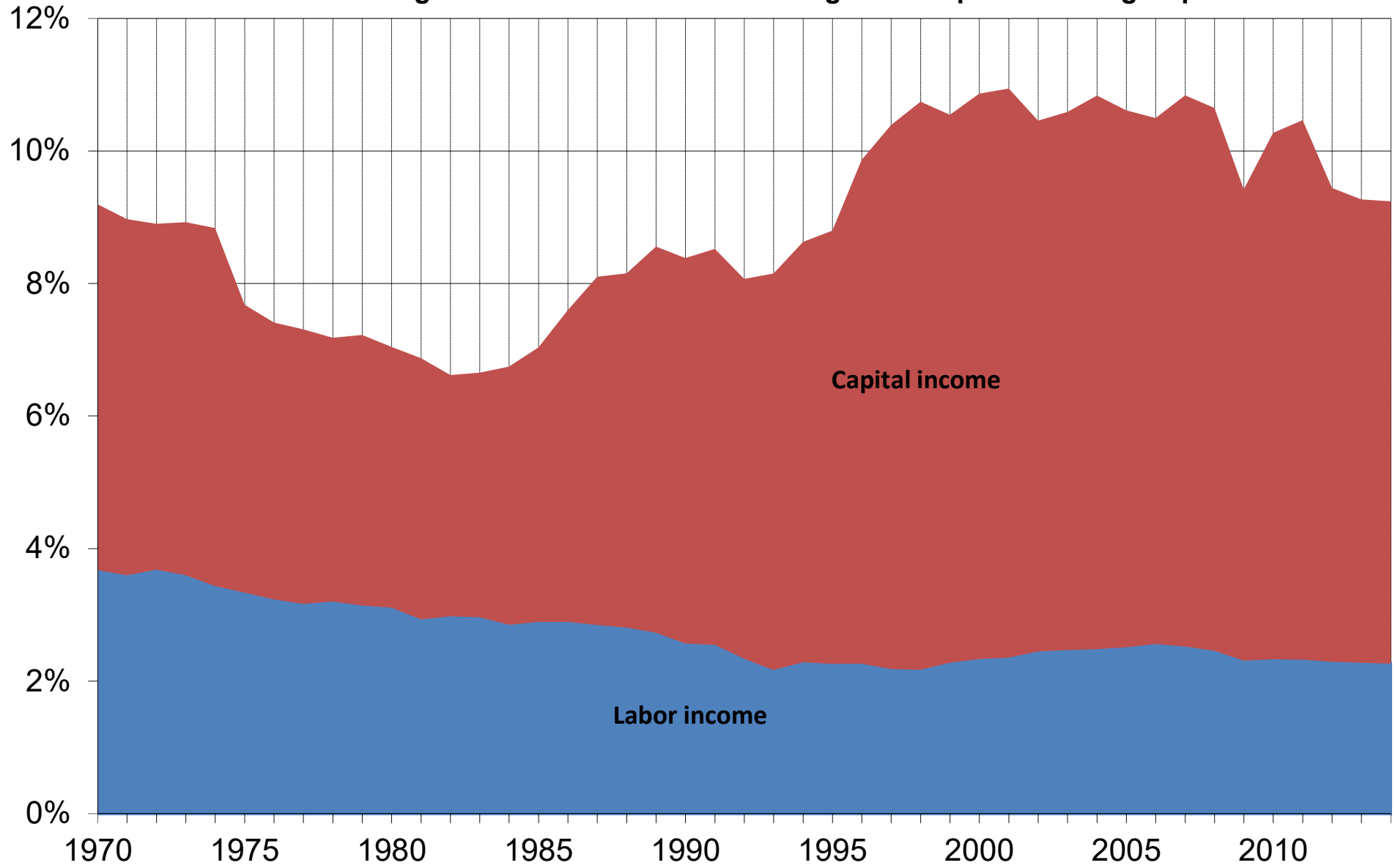
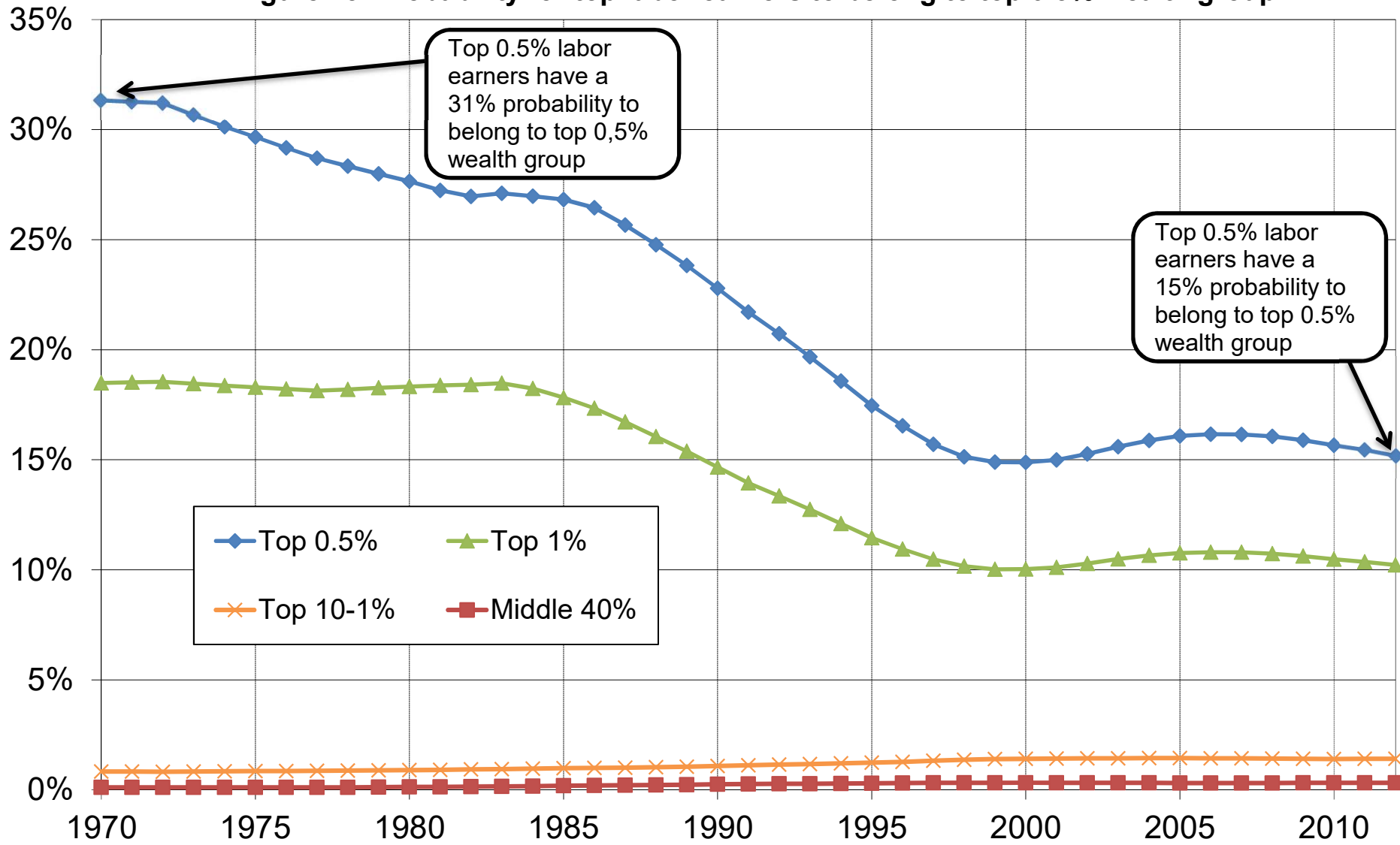
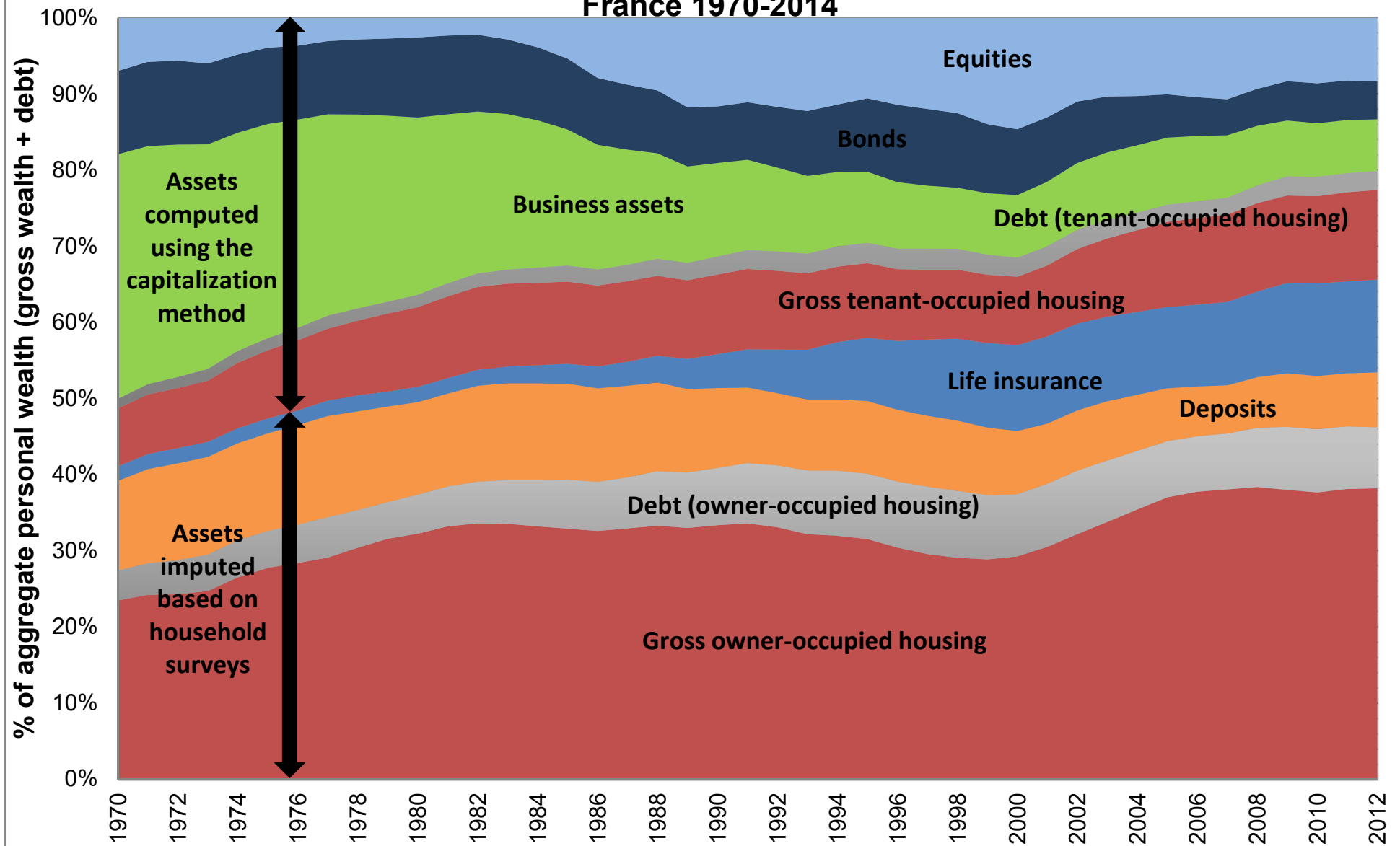


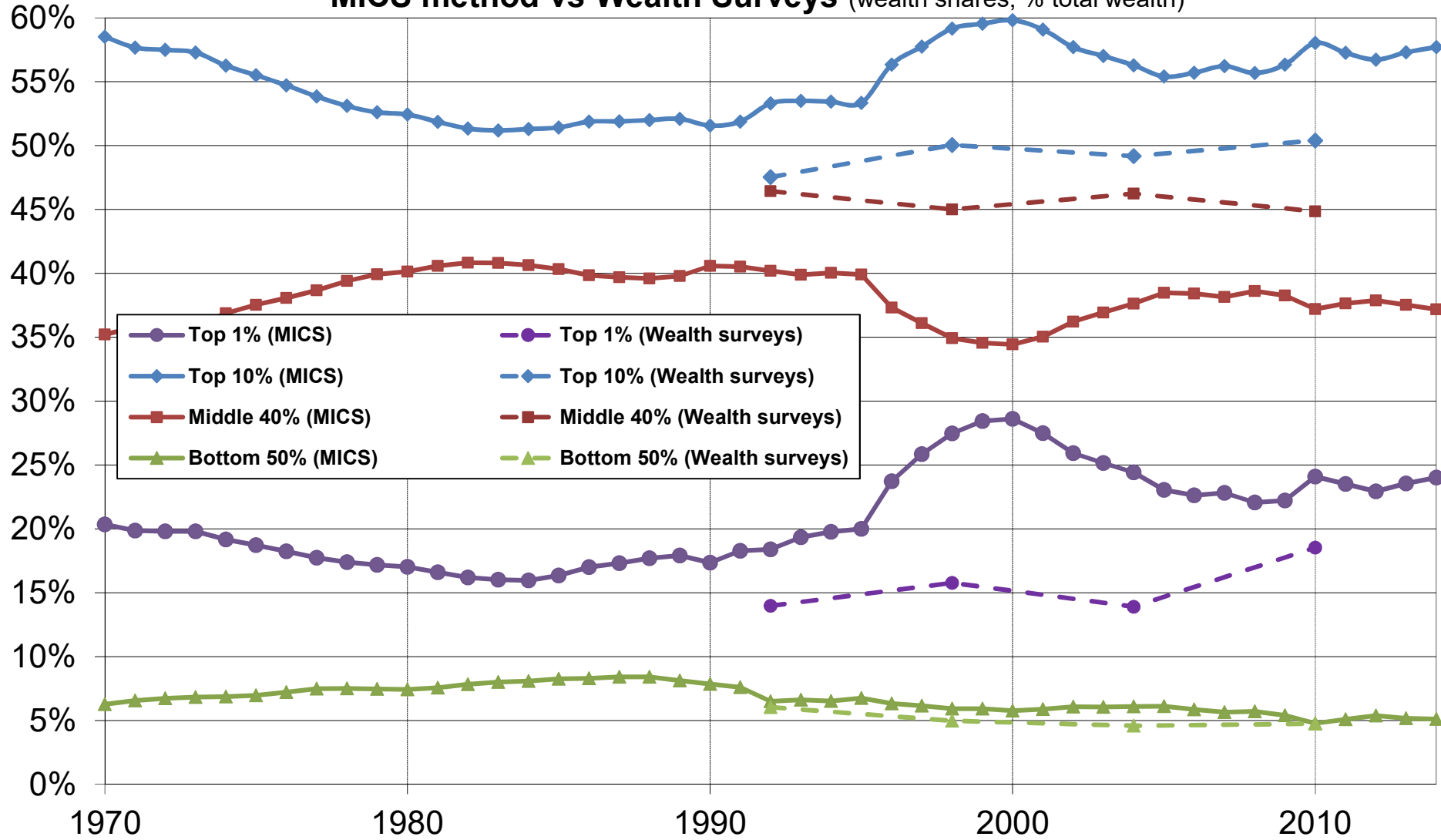
Figure 25. Probability for top labor earners to belong to top 0.5% wealth group



**Figure 28. Composition of aggregate personal wealth (% gross wealth + debt), France 1970-2014**

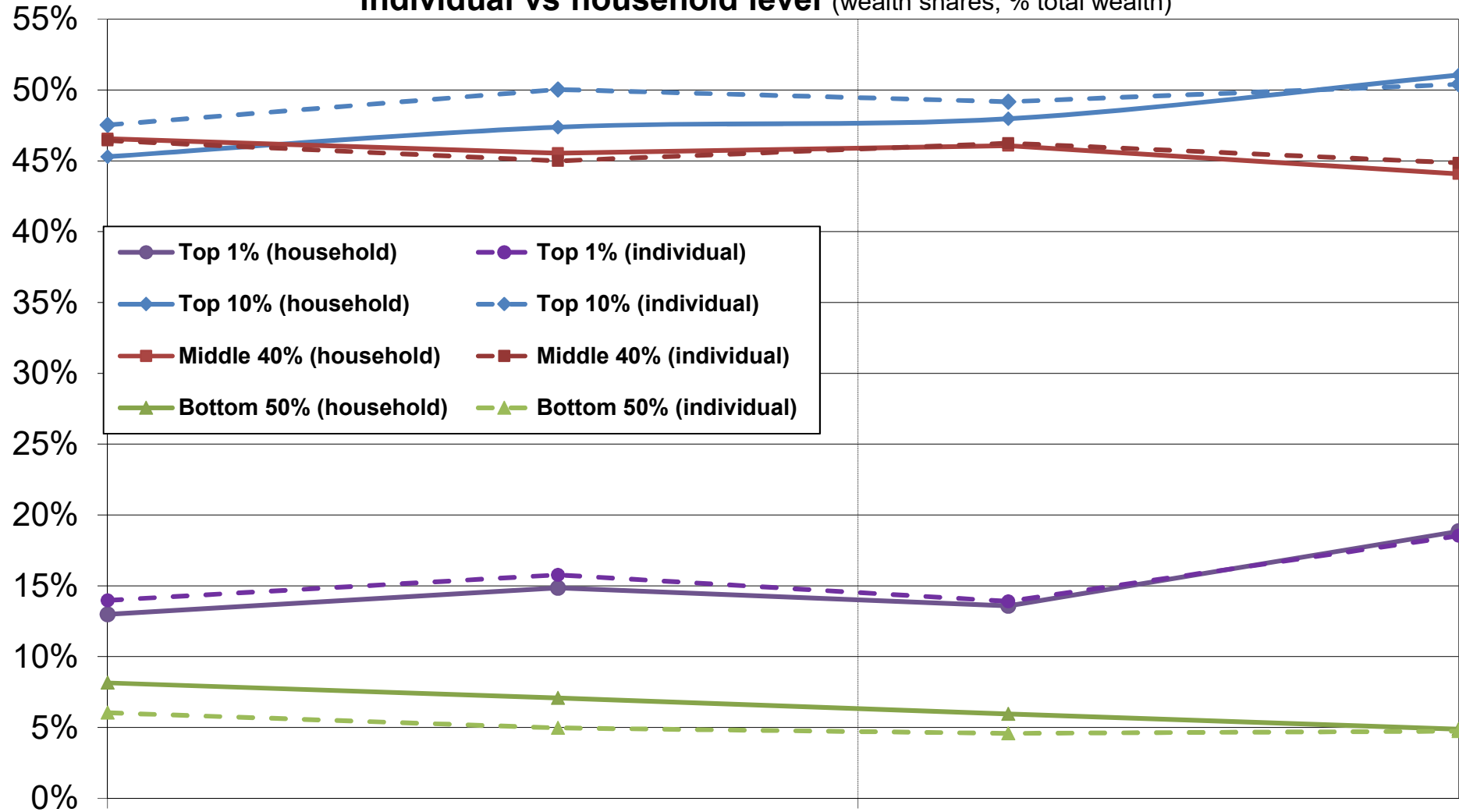


**Figure 29. Wealth concentration in France:**  
**MICS method vs Wealth Surveys** (wealth shares, % total wealth)





**Figure 30. Wealth concentration in France from Wealth Surveys:**  
**individual vs household level** (wealth shares, % total wealth)



**Figure 31. The role of asset price fluctuations on wealth inequality**

