

Income Inequality in the U.S., 1913-1998

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1. INTRODUCTION

Key mechanisms behind the Evolution of Inequality in capitalist economies?

- Technical change (Kuznets process)
- Shocks and Government Interventions

Aim to the paper:

- Construct homogeneous inequality series from 1913-1998 in the U.S.
- Provide Plausible Interpretations of empirical patterns

TIME SERIES CONSTRUCTED

- Shares of overall income accruing to upper income groups (top decile, top percentile, etc.)
- Composition of income for each group
- Shares of wages and salaries accruing to top groups of salary earners

KEY RESULTS

- Overall pattern of top income and wage shares is U-shaped over the century
- Important to separate capital income from labor income to understand evolution of inequality

INTERPRETATION

- Top capital incomes: hit by shocks (wars, economic downturns) made persistent by development of progressive income taxation
- Patterns of Shares of Top wage earners hard to reconcile with technical change explanation. We emphasize role of social norms regarding pay inequality.

OUTLINE

1. Introduction
2. Data and Methodology
3. Income Inequality Series
4. Salary Inequality Series
5. Comparison with other countries

2. DATA AND DEFINITIONS

Tax returns statistics published by the IRS from 1913 to 1998. Micro-files available from 1960 to 1995

Before 1944, only top incomes liable for income tax \implies our analysis restricted to the top decile

Unit of analysis is the tax unit: married couples (plus dependents), or single adults (plus dependents).

Upper groups defined relative to total number of tax units in U.S. population.

Top fractiles: P90-100, P95-100, P99-100, P99.5-100, P99.9-100, P99.99-100

Intermediate fractiles: P90-95, P95-99, P99-99.5, P99.5-99.9, P99.9-99.99

2. METHODOLOGY

Income definition: gross income reported (before deductions and individual taxes). We exclude realized capital gains.

Pareto interpolation method to obtain thresholds and amounts reported in each fractile

Shares obtained by dividing amounts by total personal income in the economy from National Accounts

Micro-files used to assess adjustments needed

2. PREVIOUS WORK

Kuznets (1953) produced top 1% and top 5% shares from 1913-1948 using the same source and similar methodology

We consider smaller upper groups, adjust for biases (using micro-files). We also estimate top wage shares (from 1927-1998).

Feenberg and Poterba (1993, 2000) produce top 0.5% share from 1960-1995 using micro-files. Simpler method but not consistent with Kuznets.

3. INCOME TOP SHARES

- Top decile share is U-shaped: decrease concentrated in short period of time (WWII) and sharp increase around TRA 1986.
- Middle income fractiles P90-95 P95-99: do better during depression, drop in WWII less dramatic, recovery quicker, modest increase in the 1980s
- Top percentile: enormous fluctuations (from 18% to 8% to 14%). Very specific timing: WWI downturn, boom 1920s, great depression and Fluctuations more pronounced for higher fractiles suggest that shocks to capital income play a key role.
- TRA 1986 effect looks short-term rather than permanent

3. DECLINE IN TOP CAPITAL INCOMES

Composition of income within fractiles in 1929 and 1998

- In 1929, top fractiles composed mostly of capital income. Suggests that pattern of top shares from 1913-1945 primary a capital income phenomenon
- In 1998, top fractiles mostly composed of labor and business income \implies Recent increase in top shares is not a capital income phenomenon

”Working rich” have overtaken ”coupon-clippers”

Gradual decline of capital income share of top 0.5% from 1913-1998: mostly due to decline in shares of dividends

3. DECLINE IN TOP DIVIDENDS

Dividends reported by Top 0.1% tax units (ranked by size of dividends) have decreased by 50% between 1927 to 1995.

Decline is due to a decreased concentration of capital income and not a decline of total capital income. National Accounts evidence:

- Well known stability of factor shares
- Capital income share and dividends share in total personal income share relatively stable in the long-run (corporate income taxes + retained earnings explain dip of 1940-1965)
- Share of dividends reported on tax returns has declined but mostly due to pensions, 401(k)s and IRAs.

3. DECLINE IN TOP ESTATES

IRS published tables on number and amount of estates by size of gross estates from 1916-1997. Top fractiles defined relative to total number of adult deaths (above 25).

- Level of top 0.01% estates has stagnated in real terms between 1929 and 1997 (around \$70 million).
- Estates in lower fractiles have increased significantly

Potential bias: increasing estate tax evasion overtime

Evidence on current level is controversial (Wolff vs Poterba). No evidence that estate tax evasion has increased.

3. PROPOSED INTERPRETATION: ROLE OF PROGRESSIVE TAXATION

1913-1945 shocks (post WWI downturn, great depression, WWII) have hit top capital incomes.

From 1933 on, very progressive individual income taxation and estate taxation, and large corporate income tax \implies Reduces substantially the rate of return on assets (relative to the 19th century experience with no tax)

Behavioral response on savings likely to exacerbate this negative effect on accumulation

Decrease in tax progressivity + repeal of estate tax might generate again high levels of wealth concentration

4. TOP WAGES SHARES

Data: IRS tables on number of returns and wages amounts by size of wages from 1927 on. Surprisingly not exploited before.

Results:

- Top shares appear roughly stable during the interwar period. No gradual decrease in wage inequality during inter-war period.
- Precipitous decline during WWII with no recovery. Top fractiles experience a second phase of compression in the 1950s.
- Steep increase since the 1970s, especially for top fractiles. Effect of TRA 1986 seems transitory rather than permanent (top CEOs evidence).

4. PROPOSED INTERPRETATION: ROLE OF SOCIAL NORMS

Steep decline during WWII can be explained by war economy regulations.

Puzzling fact: top wages shares did not recover afterward

Suggests that non-market mechanisms play an important role.

Great depression and war have had profound effects on social norms regarding income inequality: new redistributive programs, high taxation, rise of unions.

New environment might have prevented high wages from recovering.

5. COMPARISON WITH OTHER COUNTRIES:

Evidence for most countries is scarce

Large decrease in top income shares during first half of 20th century happened in several European countries:

France (Piketty 2001), United Kingdom (Atkinson 2001).

Recent increase in top shares did happen in UK but not in continental Europe.

US top wages shares pattern (no recovery after WWII, recent enormous increase) different from France and UK.

6. CONCLUSIONS

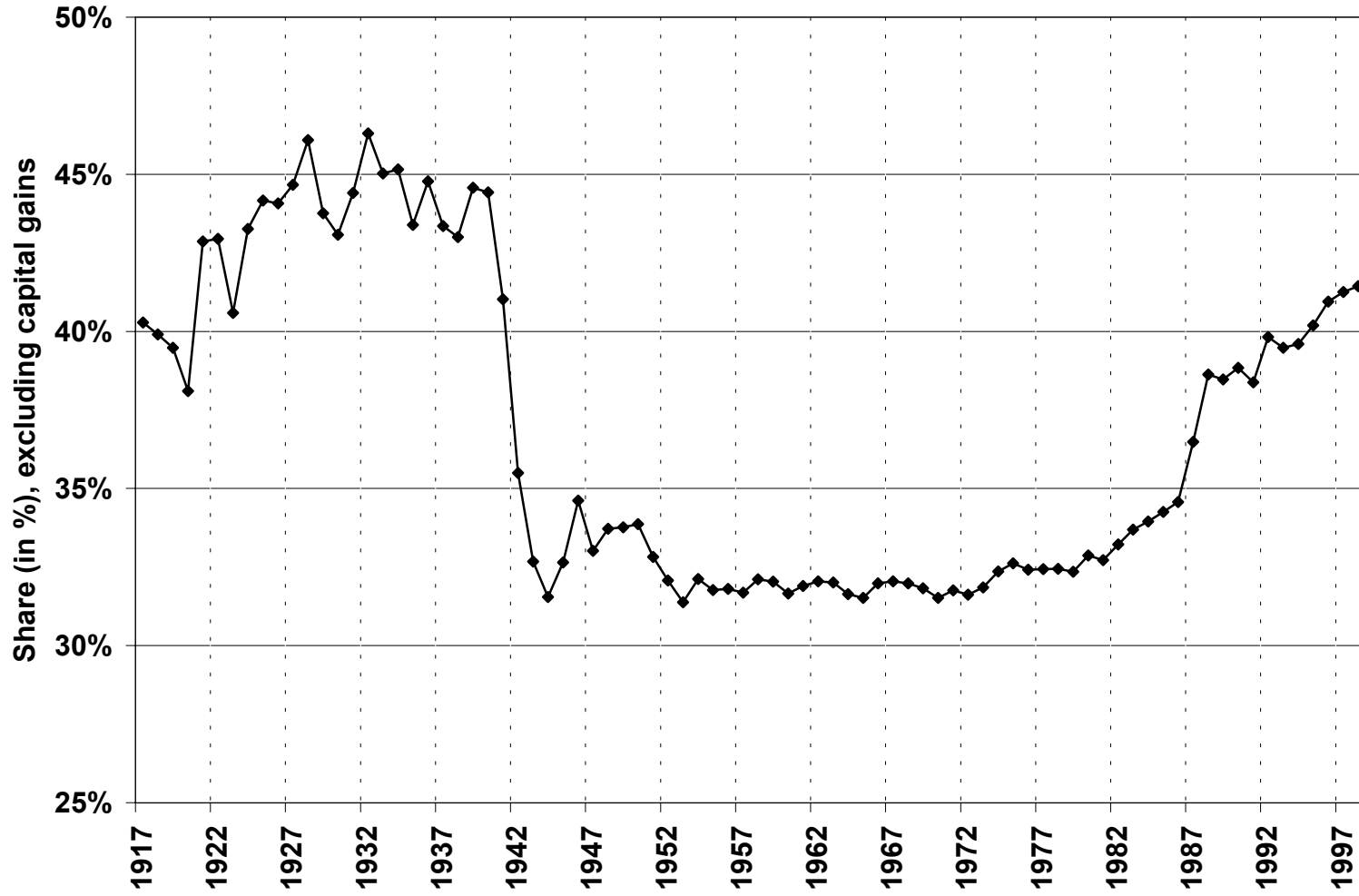
MAIN RESULTS:

- Permanent effect of 1913-1945 shocks on capital owners.
- Top wage shares after a period of compression are now higher than before WWII
- Decline of progressive taxation since the 1980s could generate higher levels of wealth inequality in the future

FUTURE WORK:

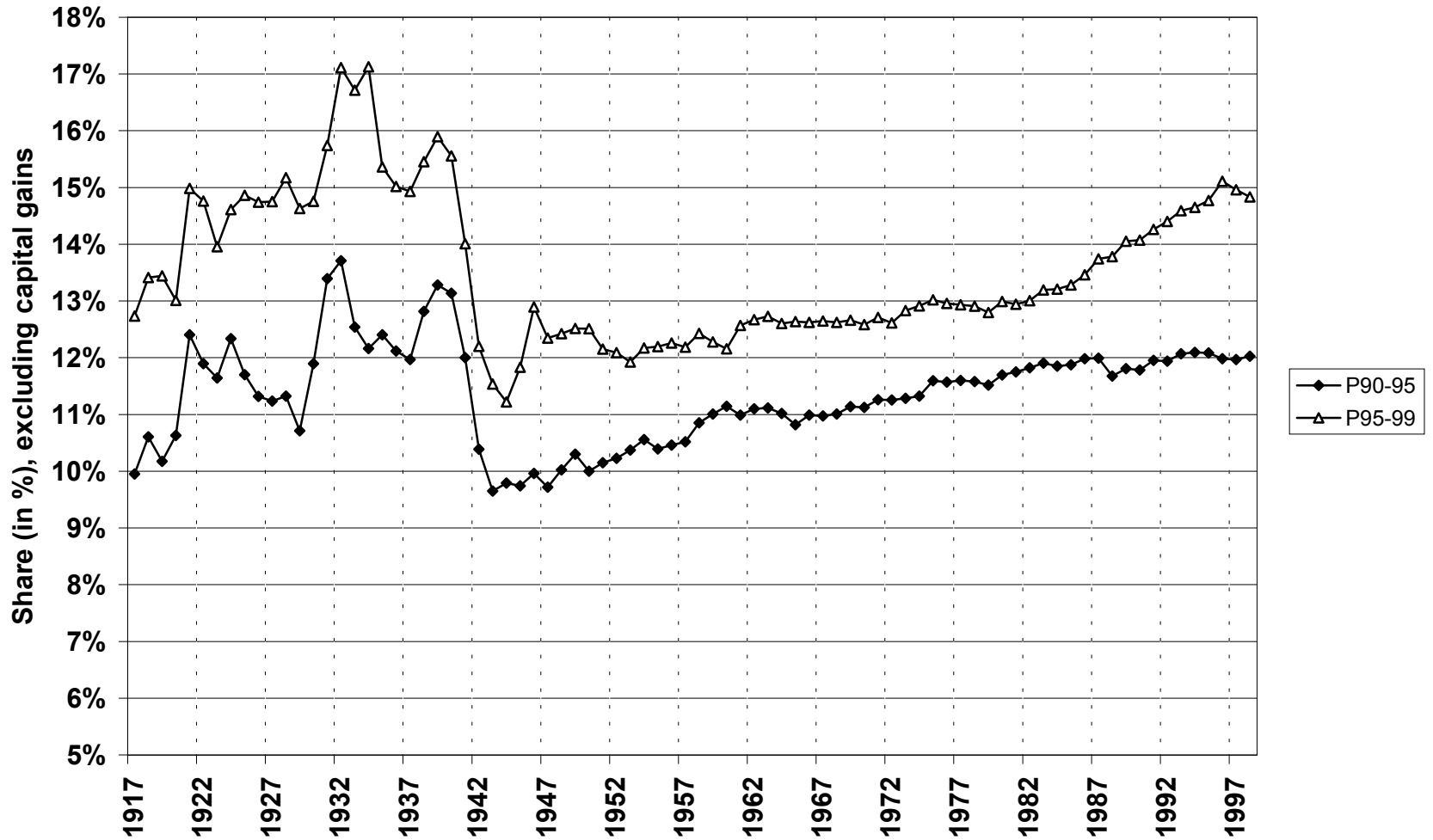
- Systematic analysis of other countries experiences
- Detailed analysis of the effects of taxation on accumulation

Figure 1: The top decile income share in the U.S., 1917-1998



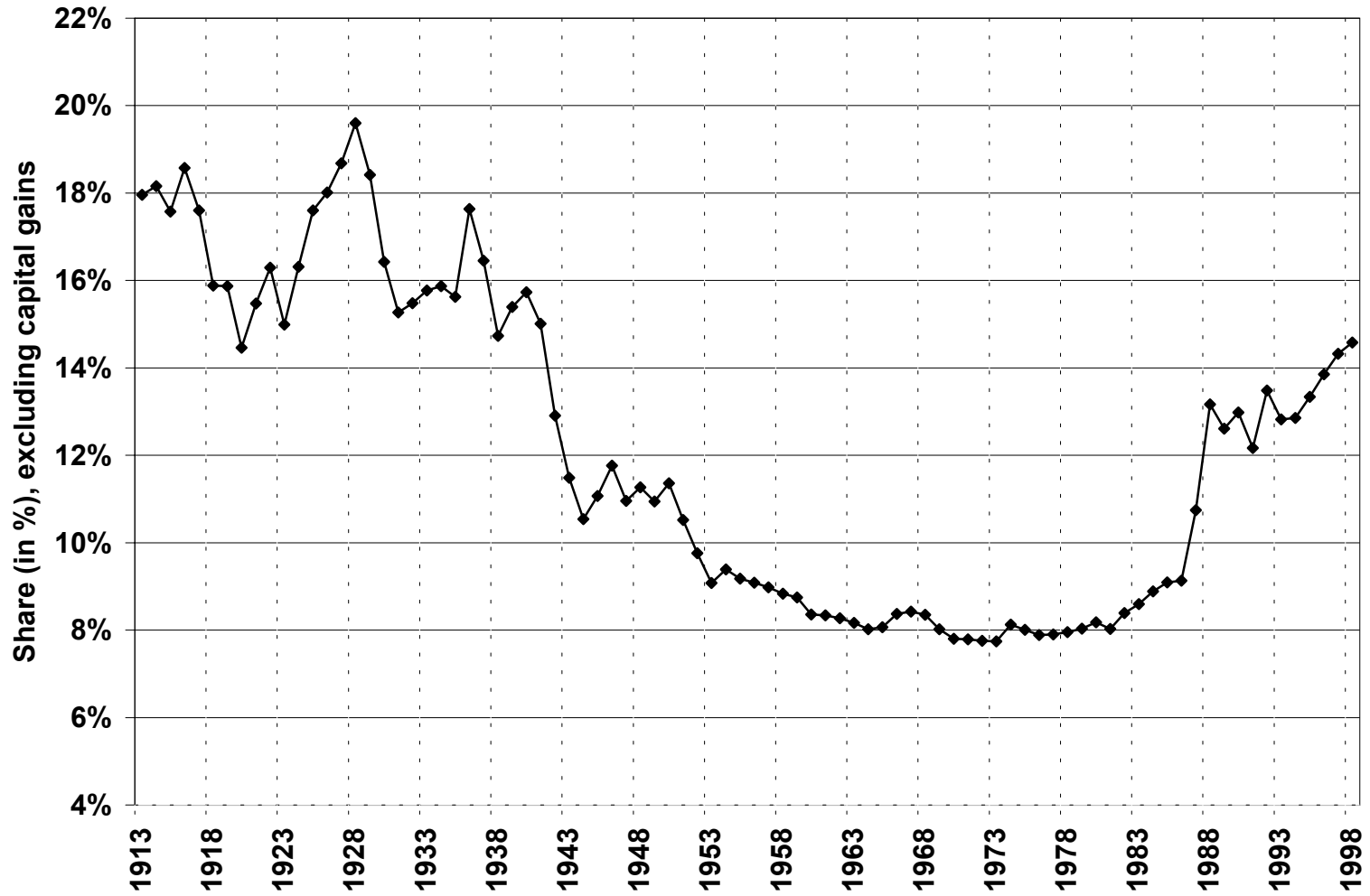
Source: Authors' computations based on income tax returns (table A1, col. P90-100)

Figure 2: The income shares of fractiles P90-95 and P95-99 in the U.S., 1917-1998



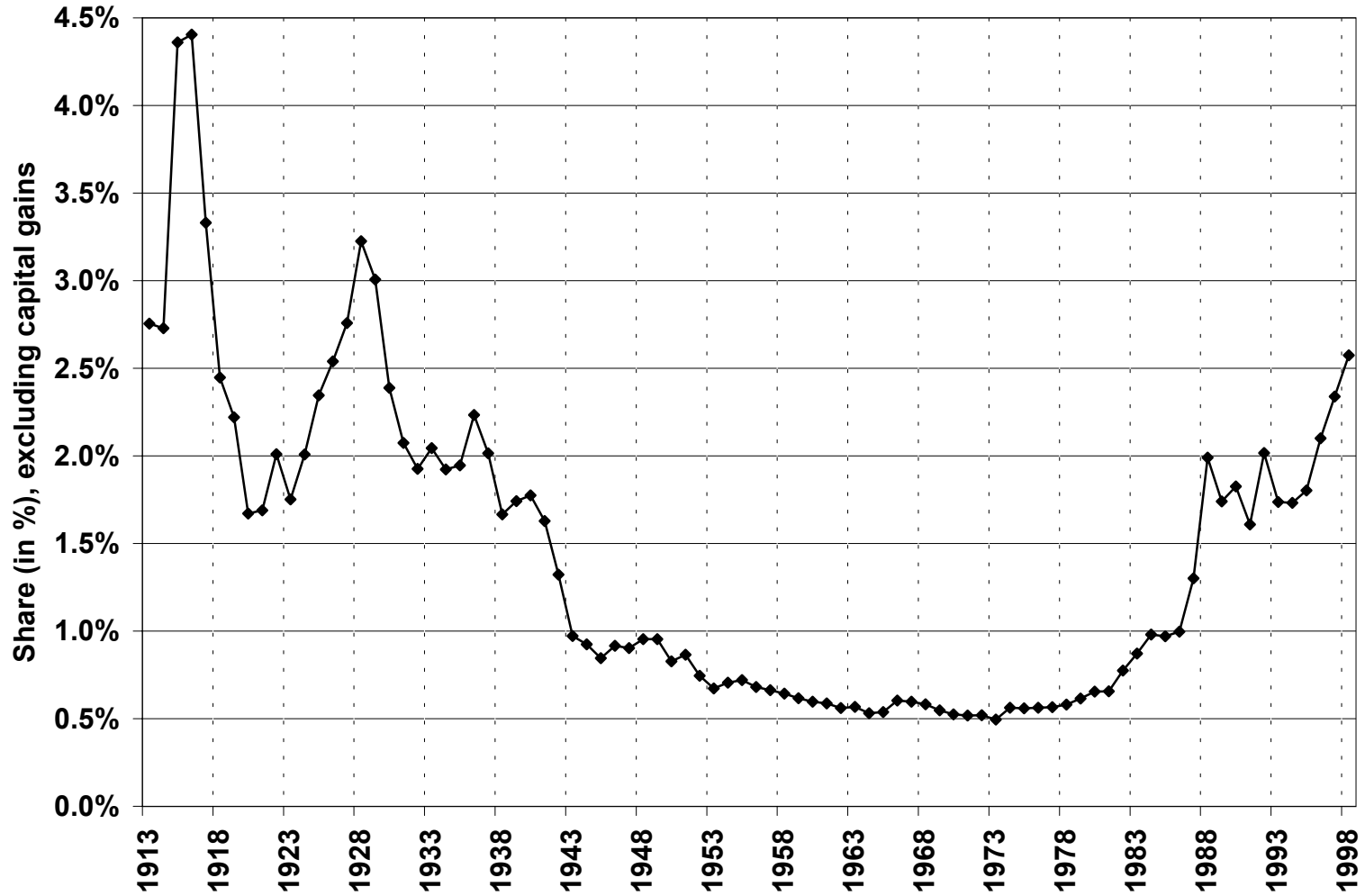
Source: Authors' computations based on income tax returns (table A1, col. P90-95, P95-99)

Figure 3: The top centile income share in the U.S., 1913-1998



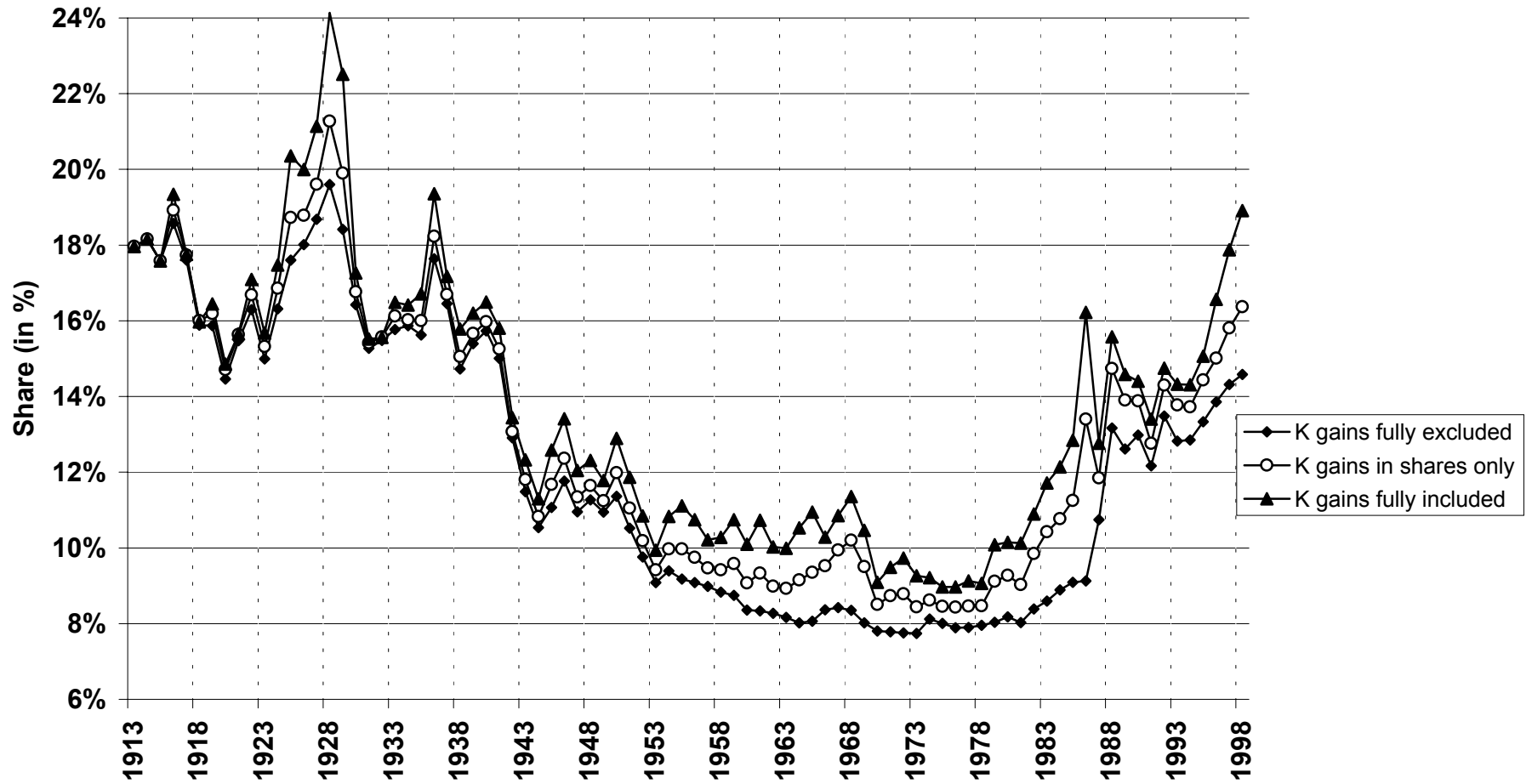
Source: Authors' computations based on income tax returns, table A1, col. P99-100)

Figure 4: The top 0.01% income share in the U.S., 1913-1998



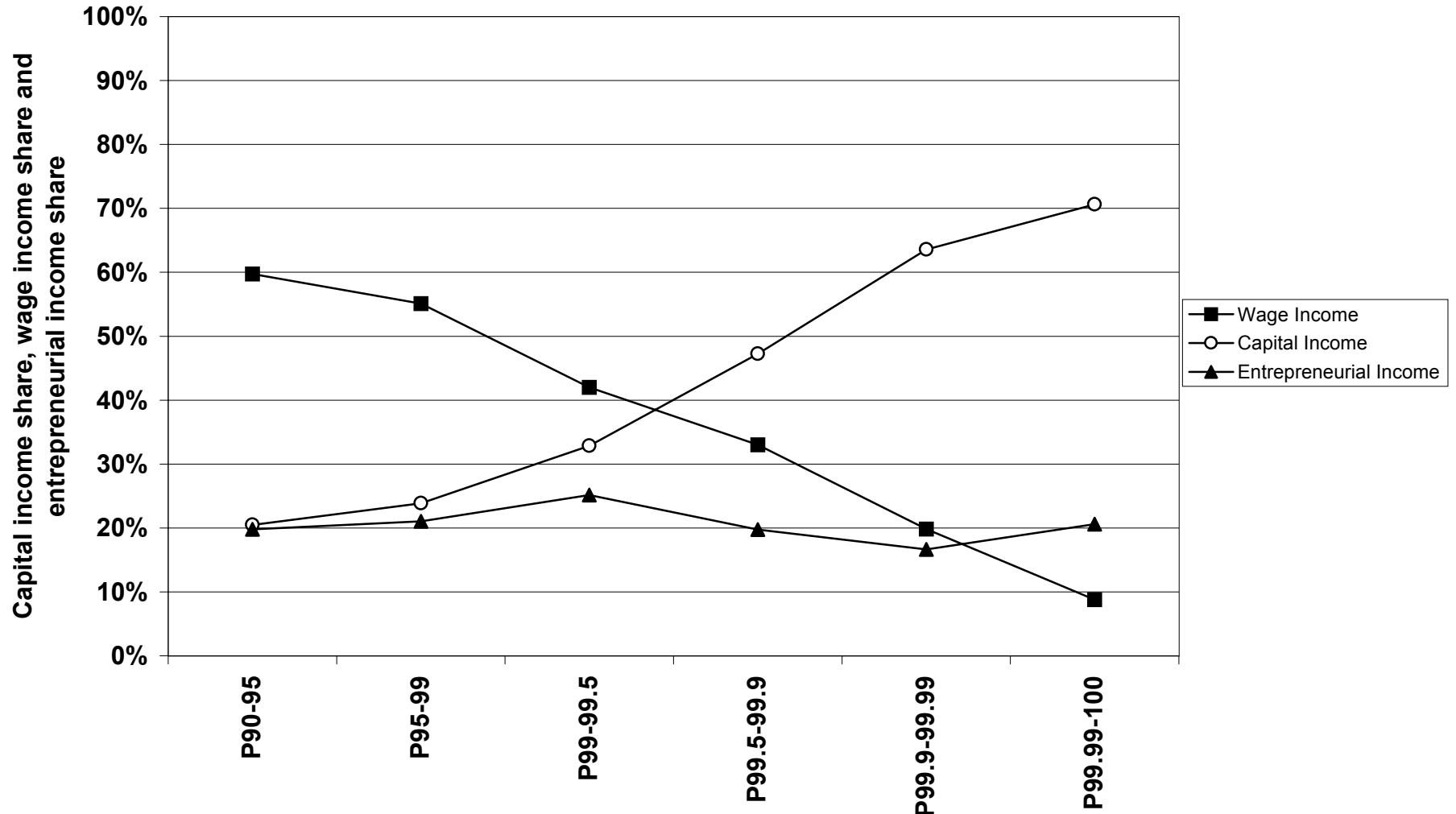
Source: Authors' computations based on income tax returns (table A1, col. P99.99-100)

Figure 4B: The top percentile income share in the U.S., 1913-1998



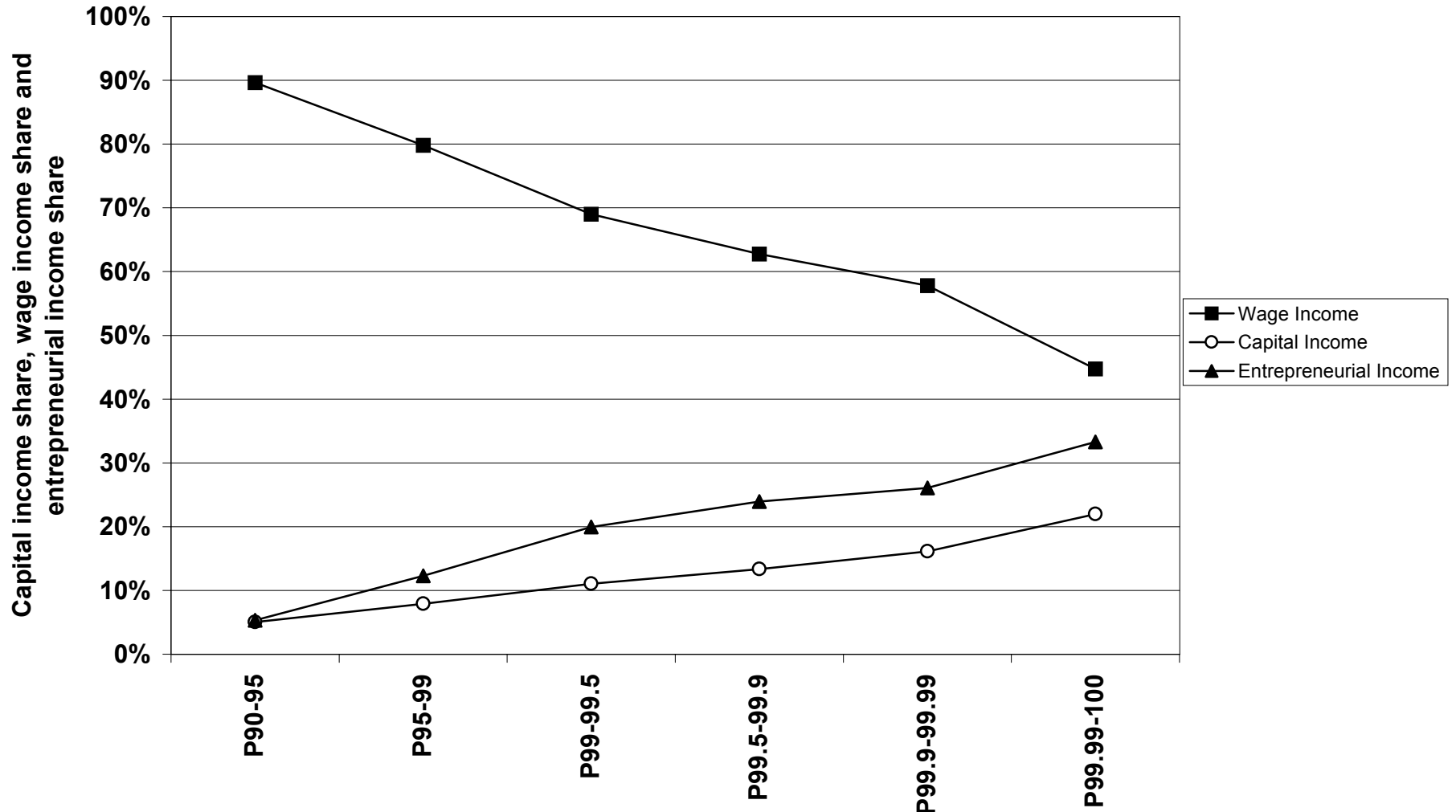
Source: Authors' computations based on income tax returns (see tables A1, A2 and A3, col. P99-100 for the corresponding series)

Figure 5: The income composition of the top fractiles in the U.S. in 1929



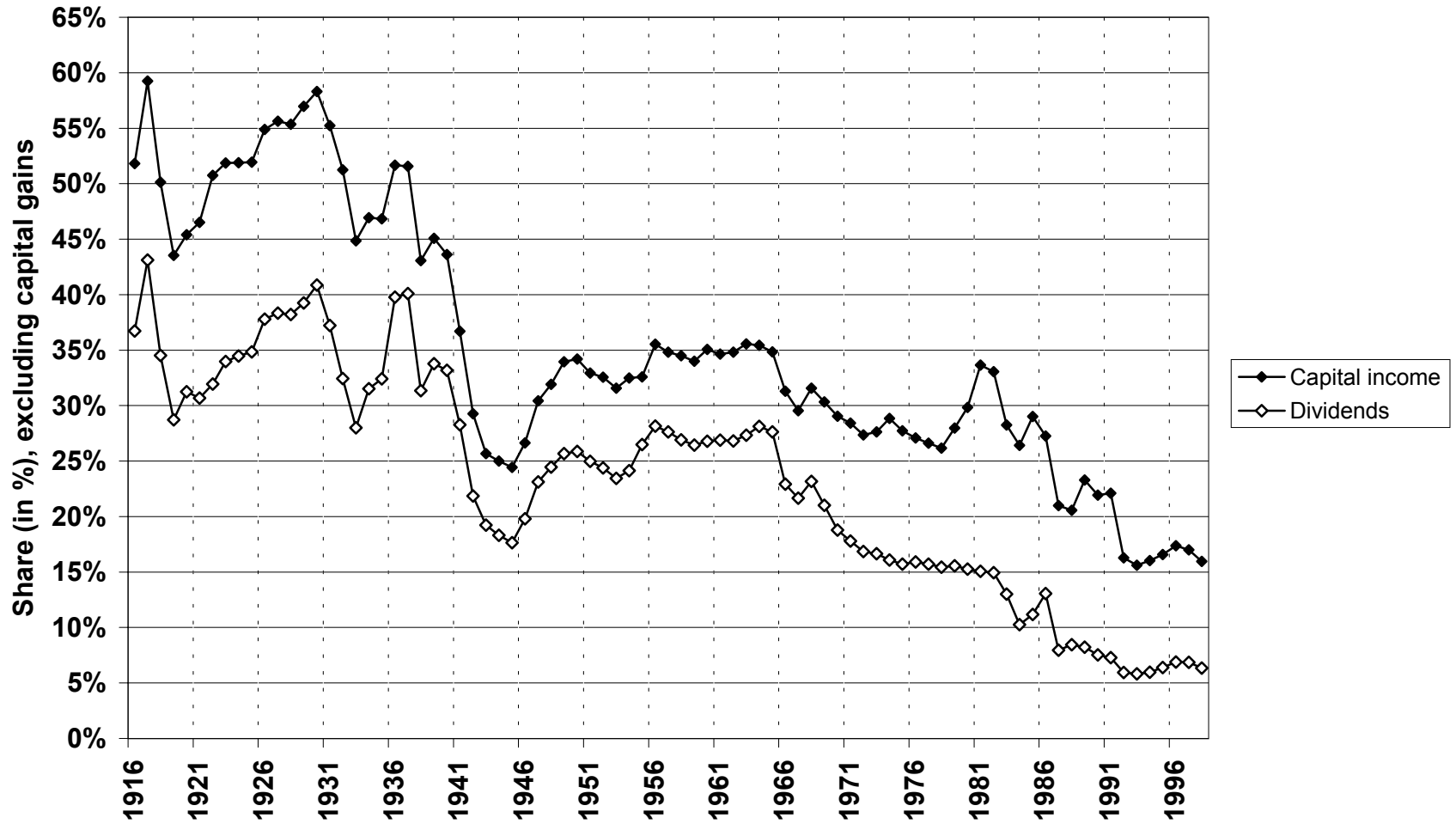
Source: Authors' computations based on income tax returns (Table A7, year 1929, capital gains excluded)

Figure 6 : The income composition of the top decile in the U.S. in 1998



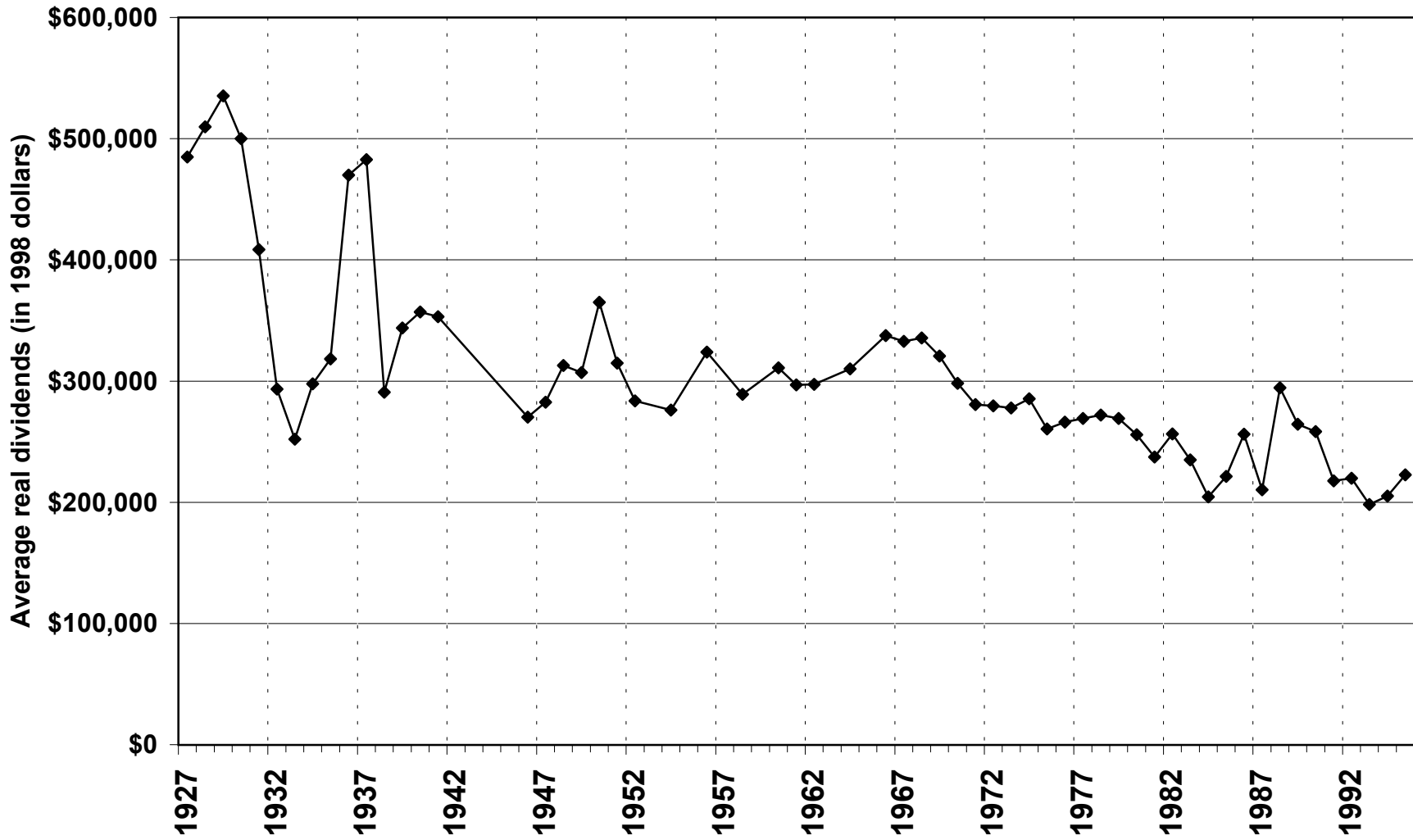
Source: Authors' computations based on income tax returns (Table A7, year 1998, capital gains excluded)

Figure 7: The capital income share in the top 0.5% in the U.S., 1916-1998



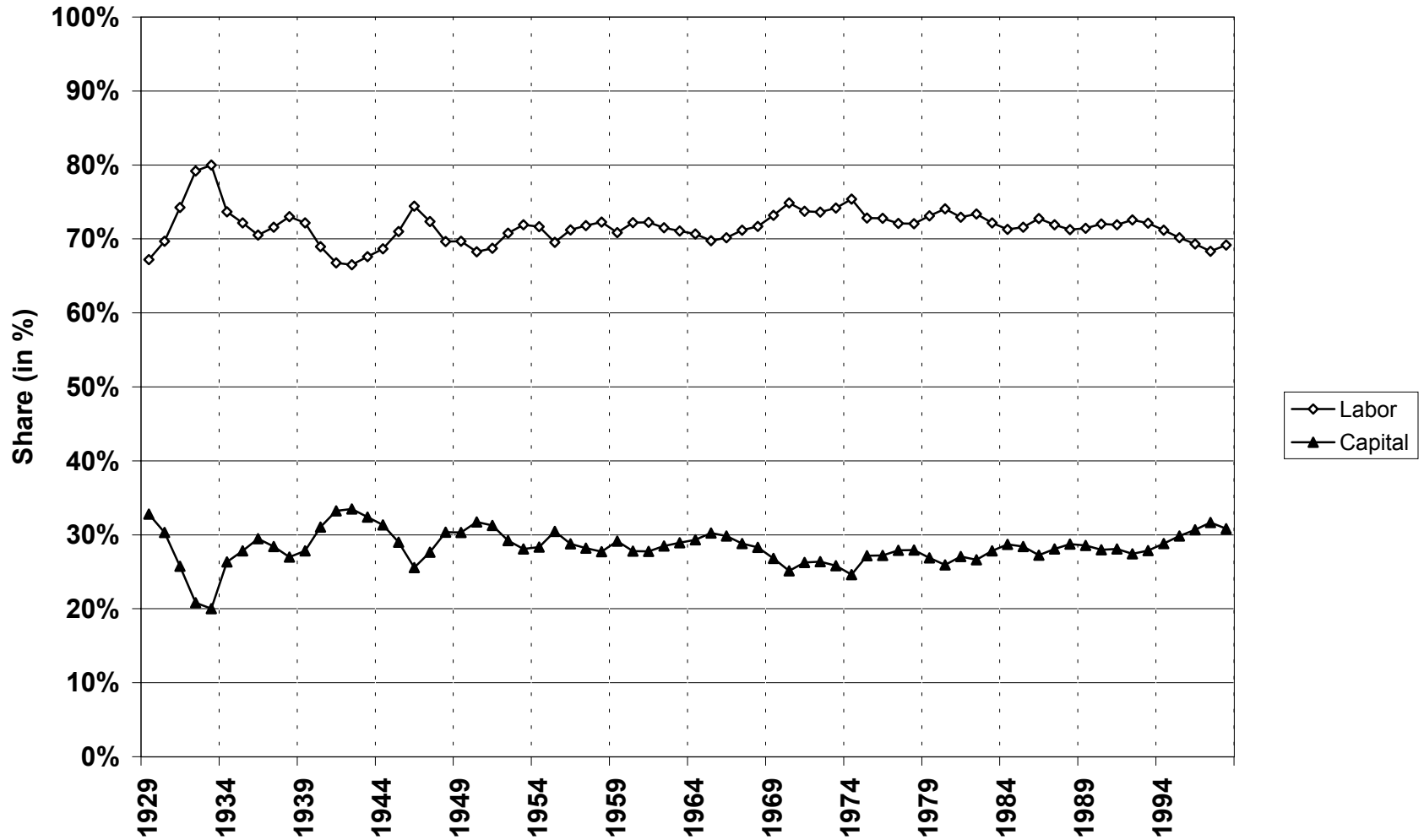
Source: Authors' computations based on income tax returns (Table A4, col. P99.5-100)

Figure 8: Average real dividends of top 0.1% dividend earners, 1927-1995



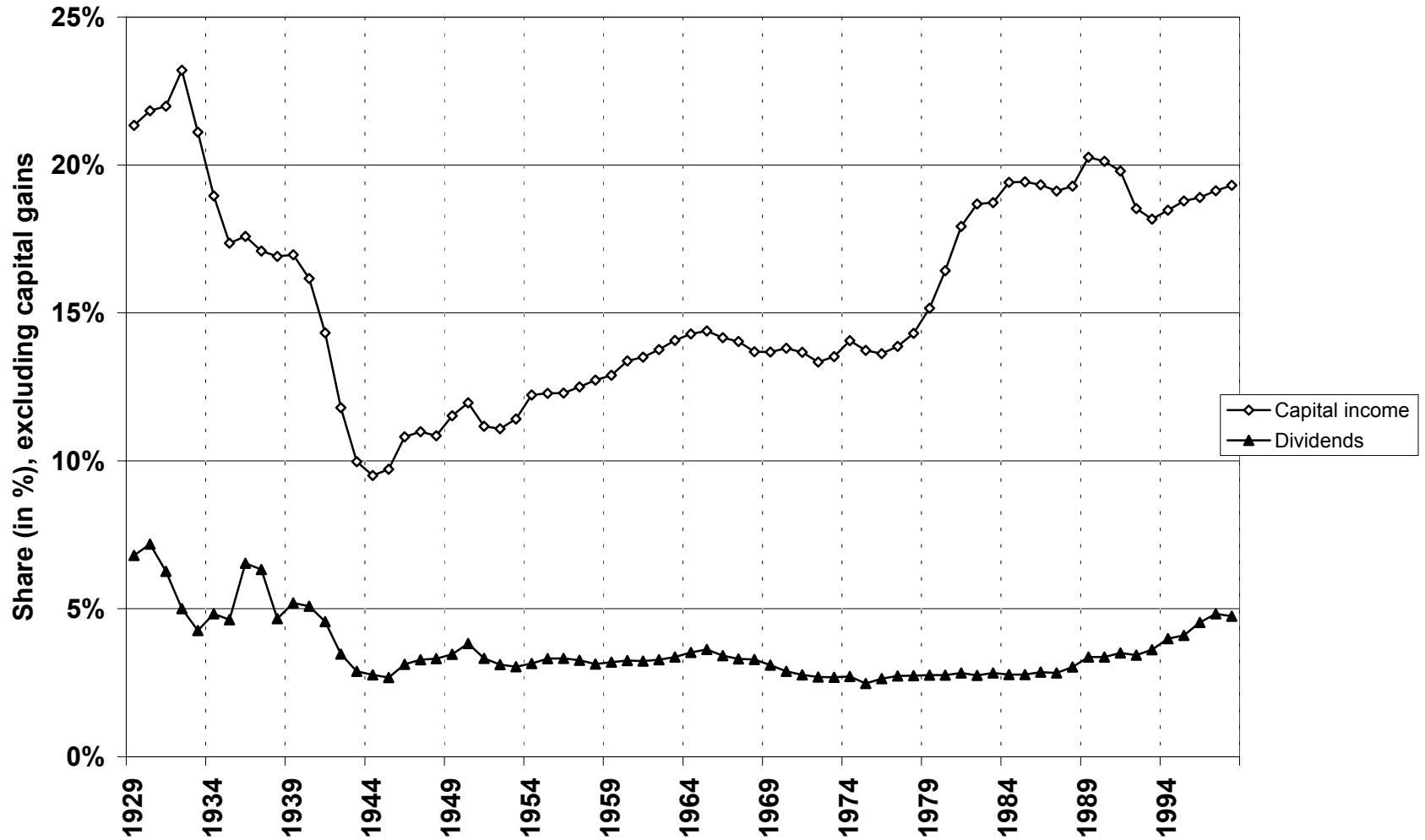
Source: Authors' computations based on income tax returns (Table C1, col. P99.9-100)

Figure 9: Factor shares in the U.S. corporate sector, 1929-1999



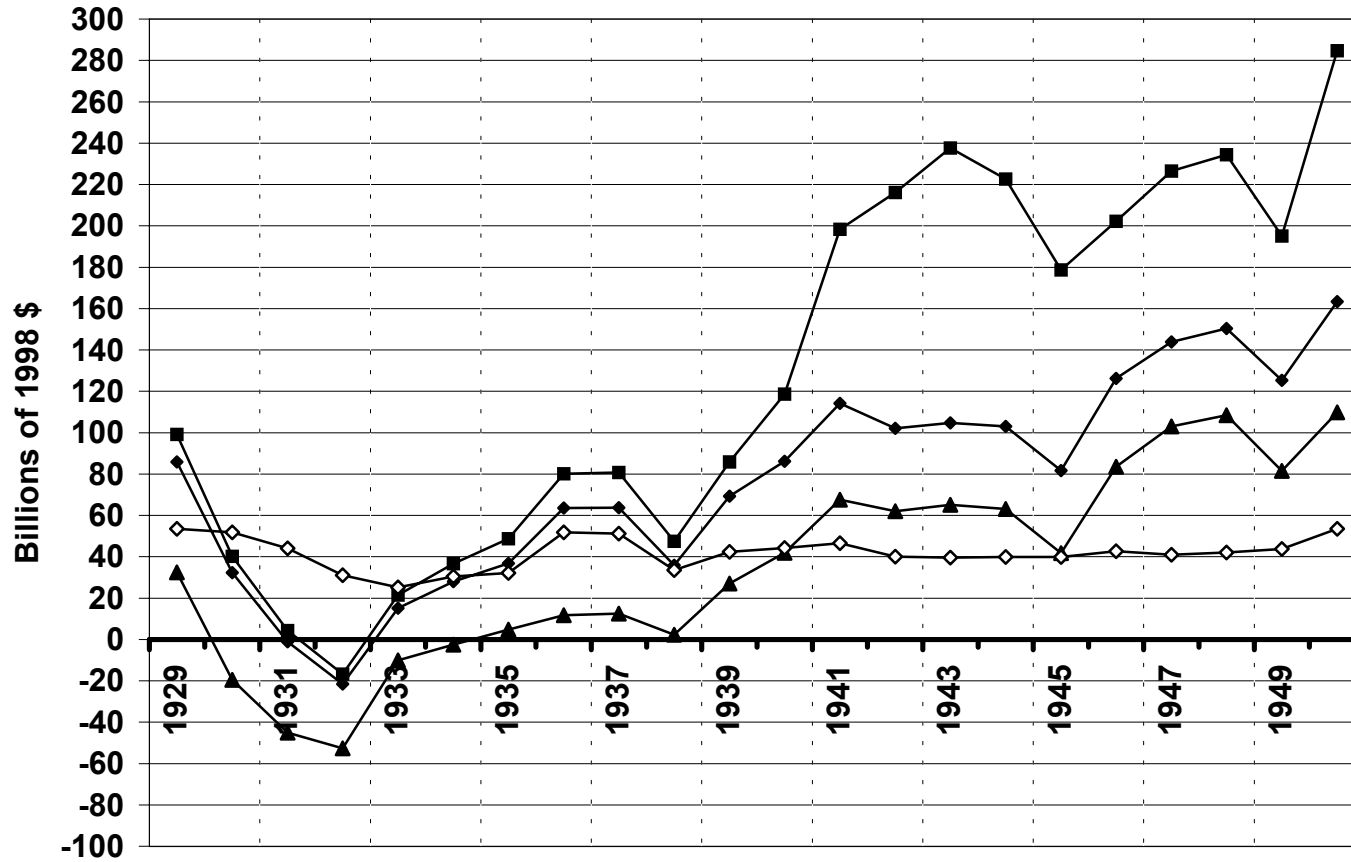
Source: Authors' computations based on National Accounts
(NIPA Table 1,16; CFC and net interest have been included in the capital share)

Figure 10: The capital income share in the U.S. personal income, 1929-1998



Source: Authors' computations based on National Accounts
(NIPA table 2.1; capital income includes dividends, interest and rents)

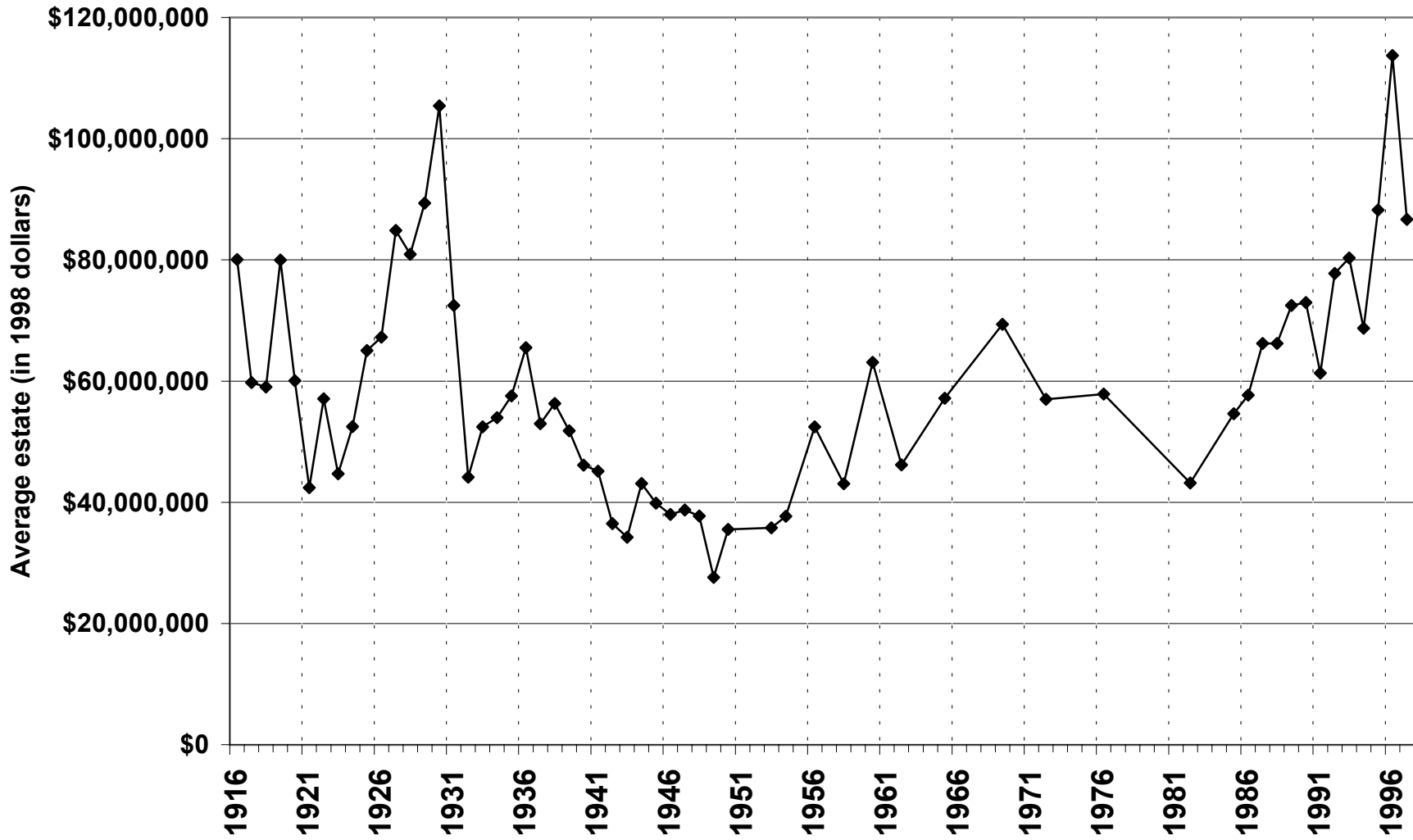
Figure 10B: Dividends, retained earnings and corporate tax in the U.S., 1929-1950



Source: Authors' computations based on National Accounts
(NIPA Table 1,16)

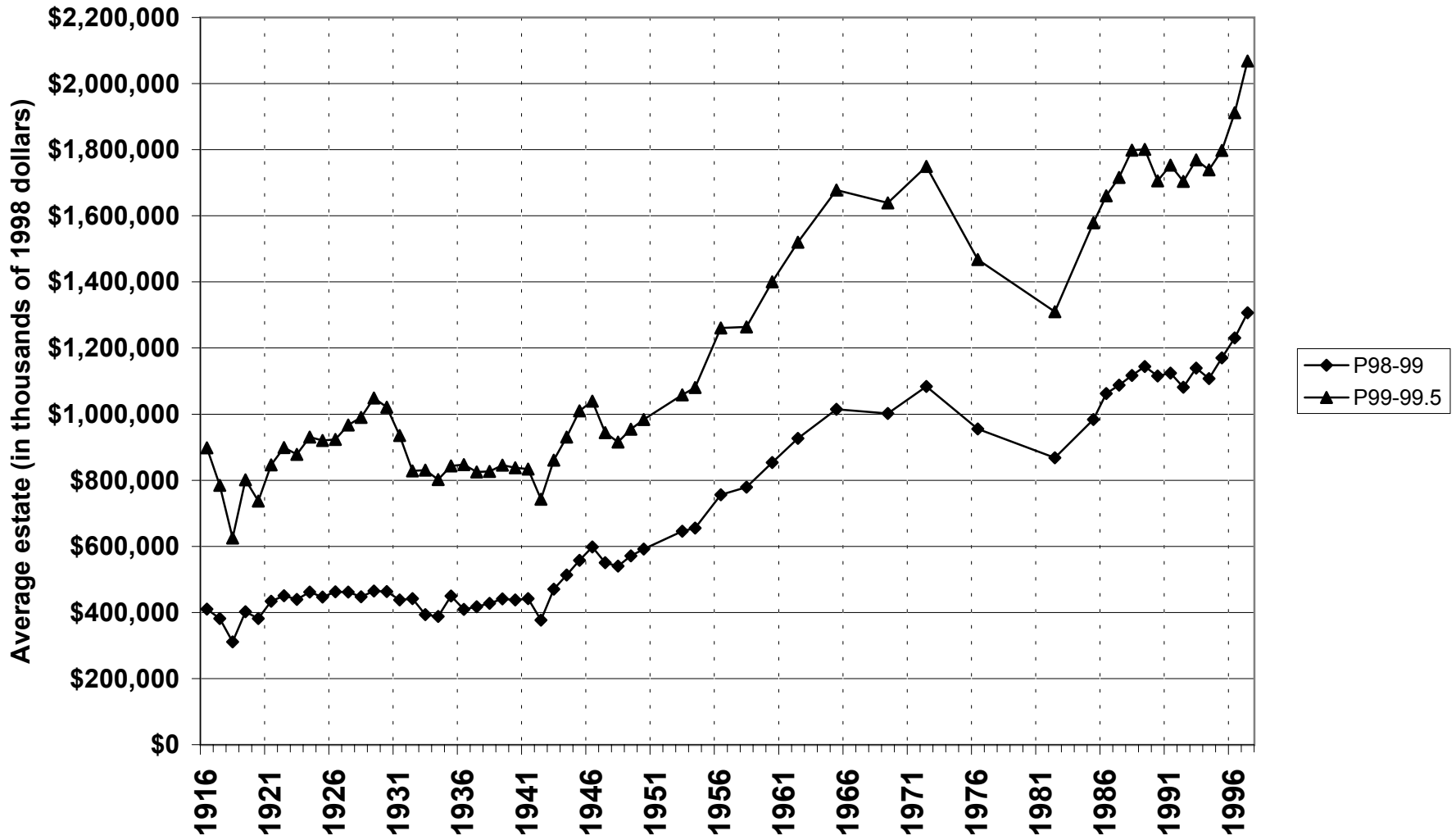
■ Total Profits ◆ After-tax profits ▲ Retained earnings ◇ Dividends

Figure 11: Average estate of top 0.01% decedents, 1916-1997



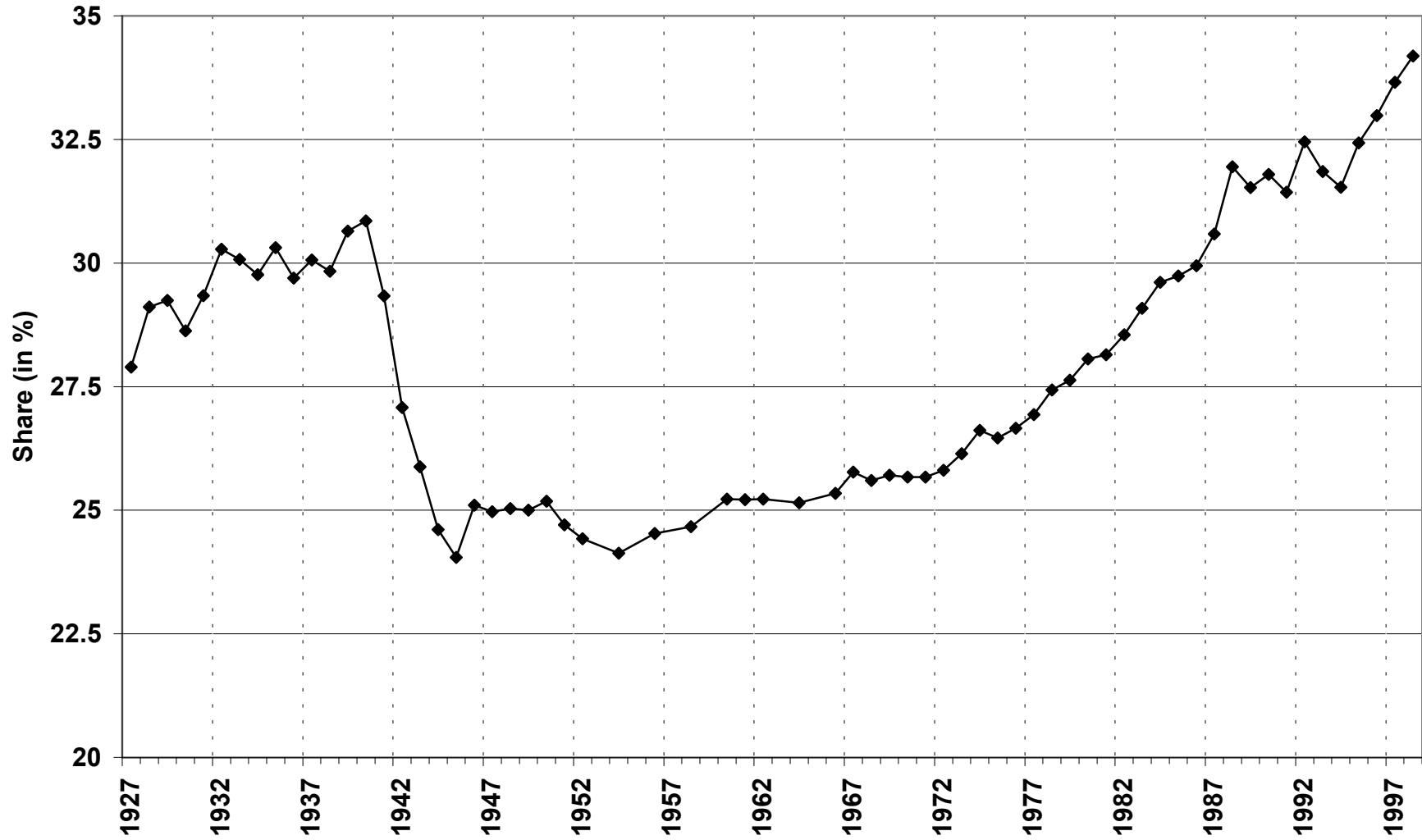
Source: Authors' computations based on income tax returns (Table C3, col. P99.99-100)

Figure 12: Average estate of P98-99, and P99-99.5 decedents, 1916-1997



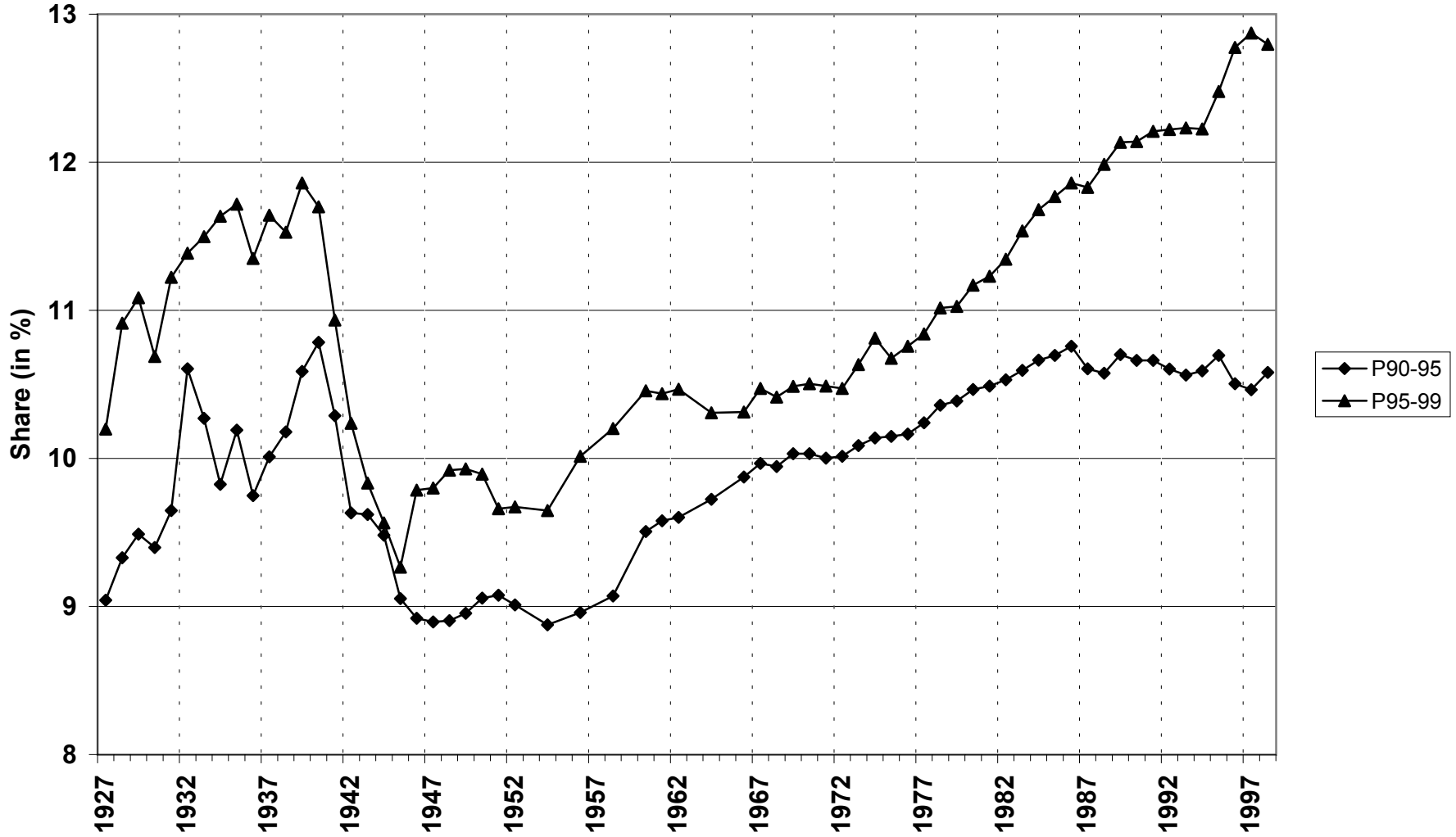
Source: Authors' computations based on income tax returns (Table C3, col. P98-99, and P99-99.5)

Figure 13: Share of top 10% salary earners, 1927 to 1998



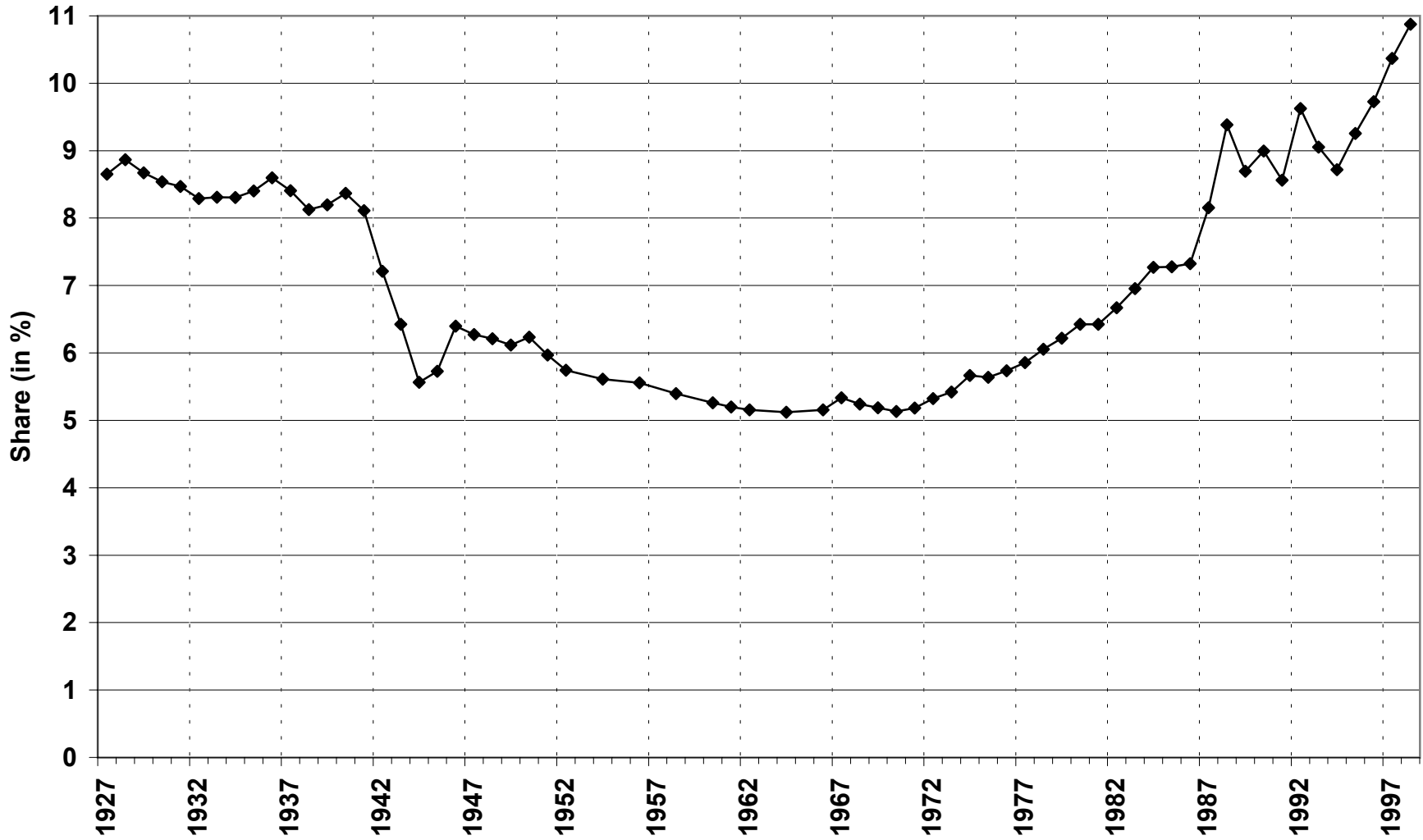
Source: Authors' computations based on income tax returns (Table B2, col. P90-100)

Figure 14: Shares of P90-95 and P95-99 salary earners, 1927 to 1998



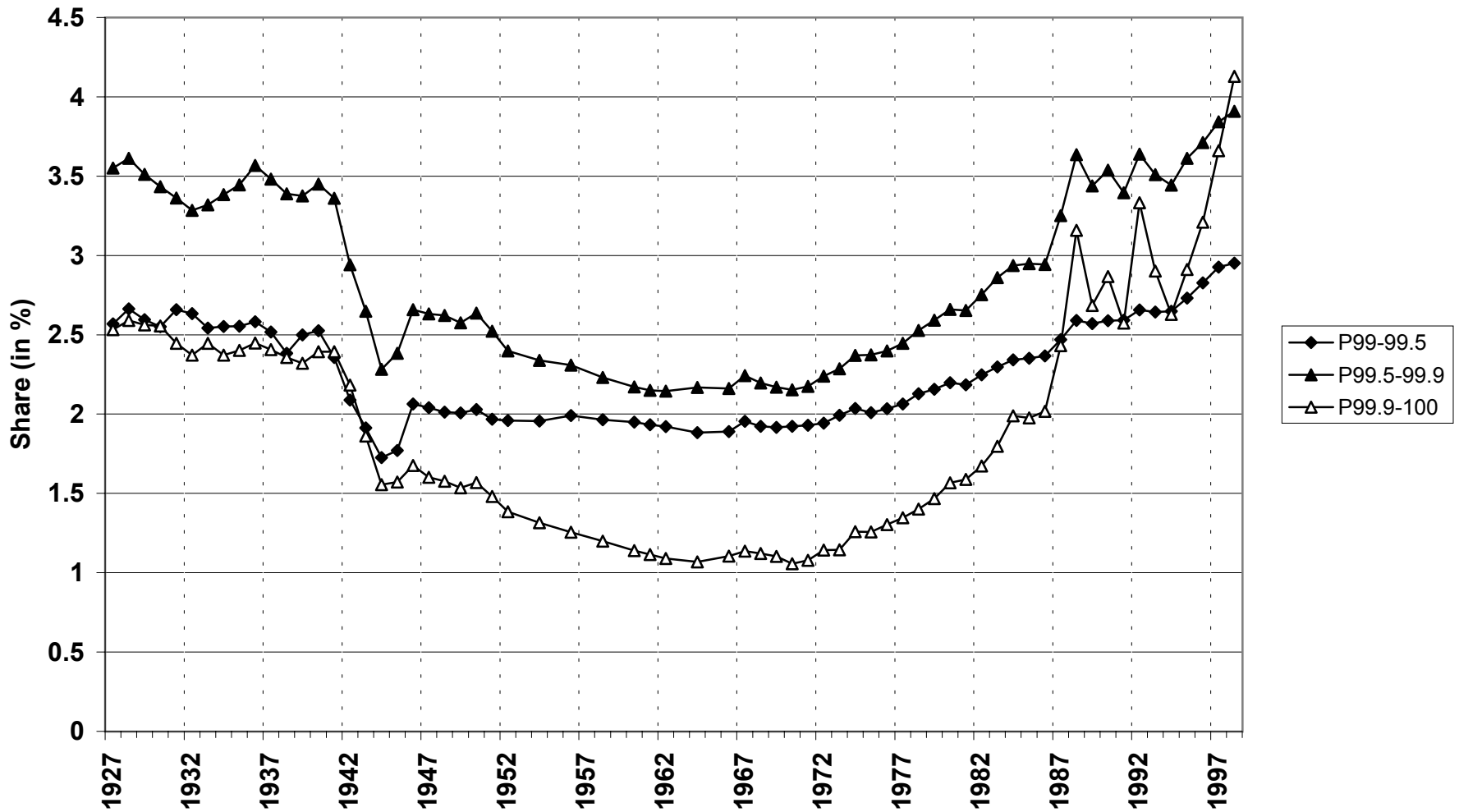
Source: Authors' computations based on income tax returns (Table B2, col. P90-95, and P95-99)

Figure 15: Share of top 1% salary earners, 1927 to 1998



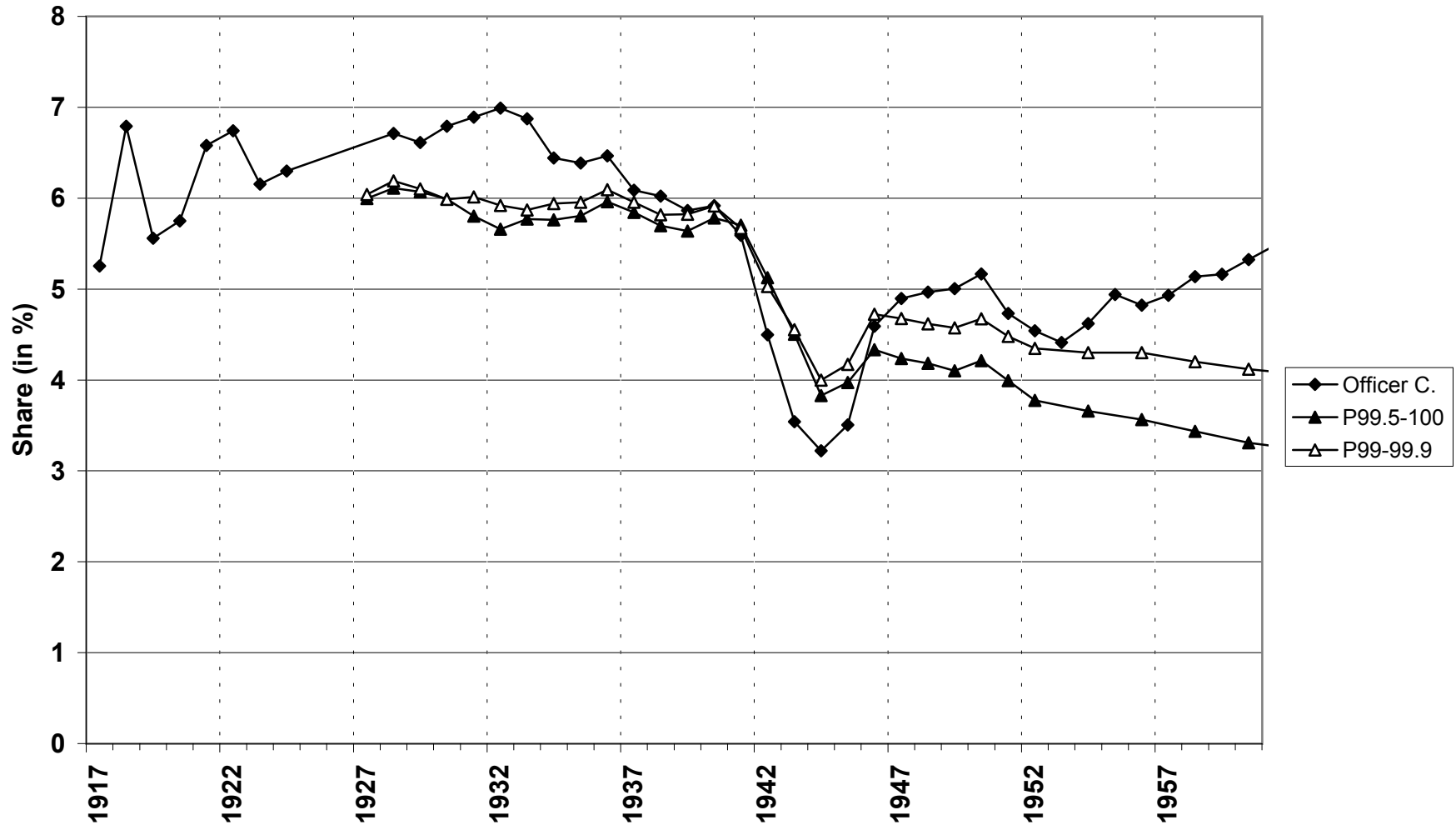
Source: Authors' computations based on income tax returns (table B2, col. P99-100)

Figure 16: Shares of P99-99.5, P99.5-99.9, and P99.9-100 salary earners, 1927 to 1998



Source: Authors' computations based on income tax returns (table B2, col. , P99-99.5, P99.5-99.9, and P99.9-100)

Figure 17: Shares of Officer Compensation, P99.5-100 and P99-99.9 salary earners, 1917-1960



Source: Authors' computations based on income tax returns (table B1, col. Officer comp., and Table B2, col. P99.5-100, and P99-99.5+P99.5-99.9)

Figure 18: CEOs Pay versus Average Salary, 1970–1999

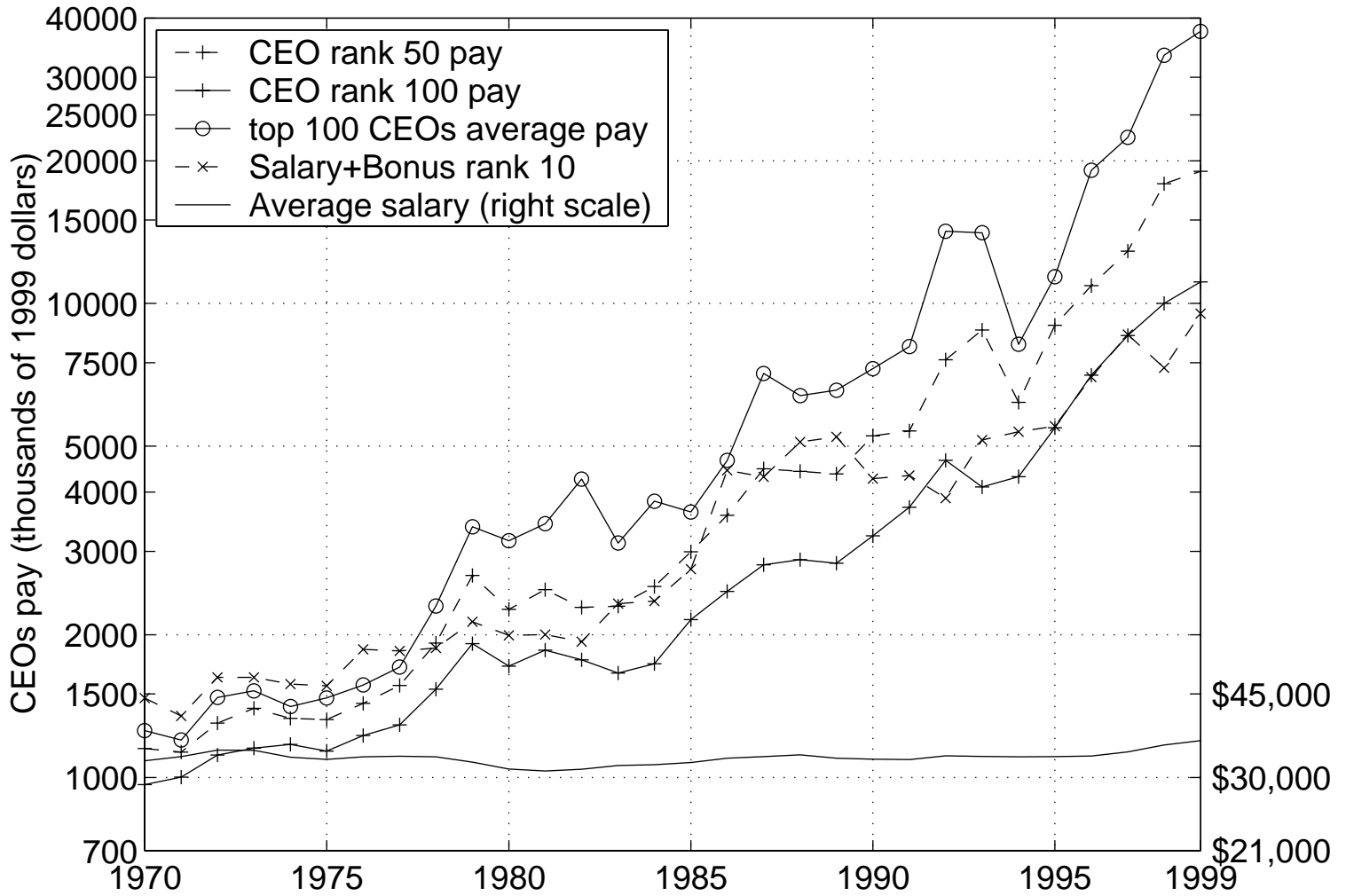
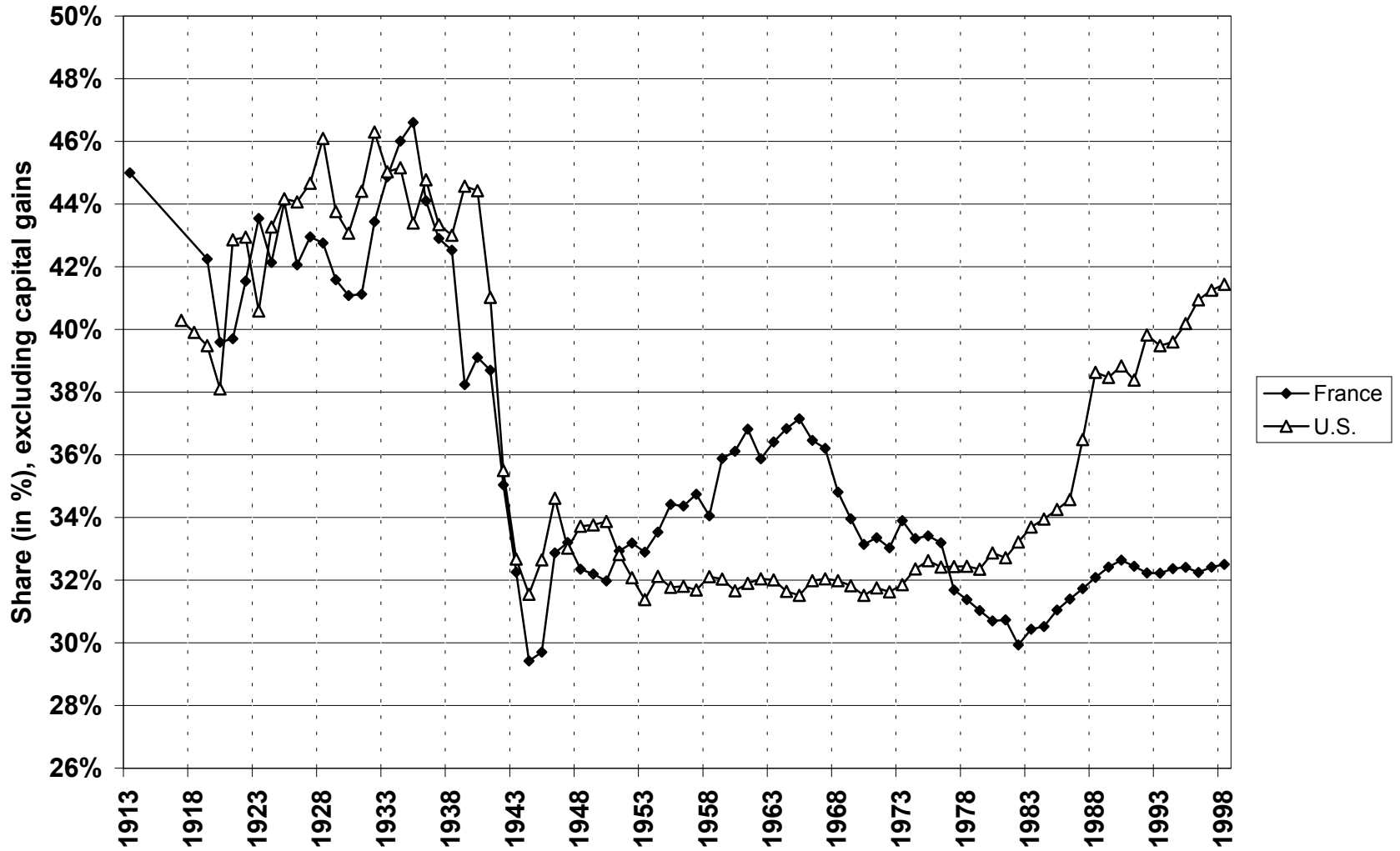
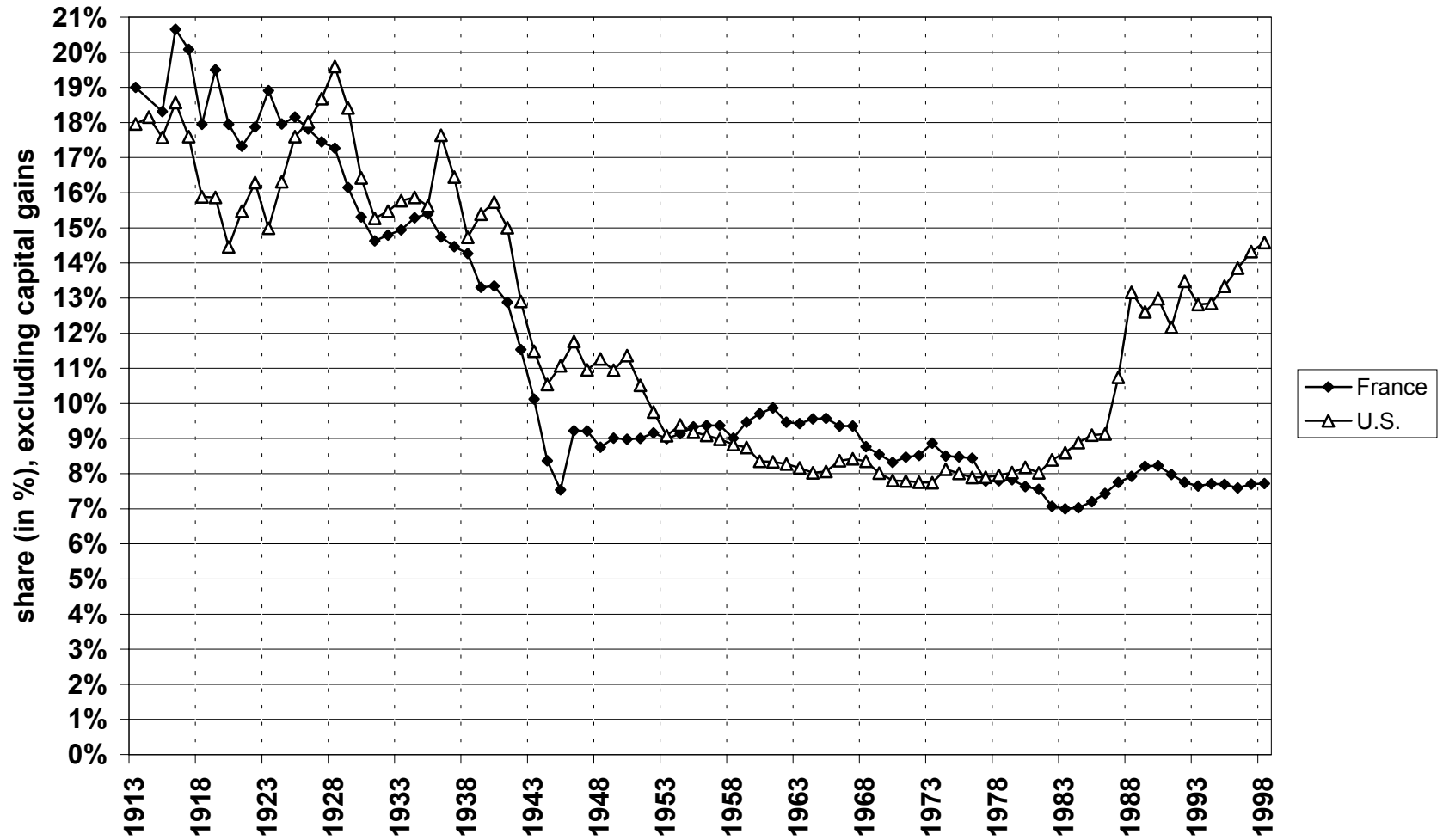


Figure 19: The top decile income share in France and in the U.S., 1913-1998



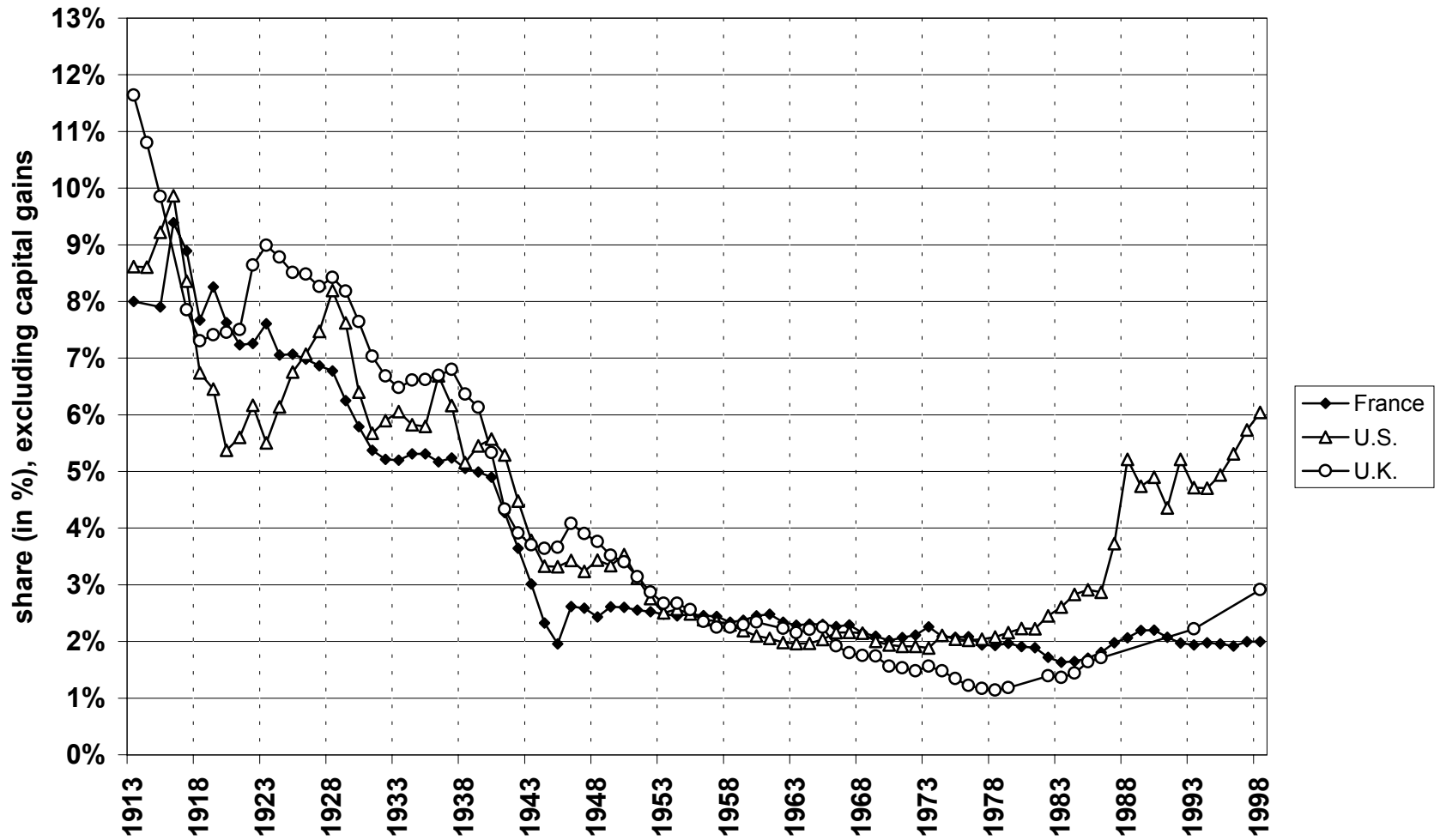
Source: Authors' computations based on income tax returns (France: see Piketty (2001b, table A1, col. P90-100); U.S.: see this paper, table A1, col. P90-100)

Figure 20: The top 1% income share in France and in the U.S., 1913-1998



Source: Authors' computations based on income tax returns (France: see Piketty (2001b, table A1, col. P99-100); U.S.: see this paper, table A1, col. P99-100).

Figure 21: The top 0.1% income share in France, the U.S. and the U.K., 1913-1998



Source: Authors' computations based on income tax returns (France: see Piketty (2001b, table A1, col. P99-100); U.S.: see this paper, table A1, col. P99-100); U.K. See Atkinson (2001).