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Keynesian Macroeconomics and Comparative Political Economy

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8th FMM International Summer School
Keynesian Macroeconomics and Economic Policies
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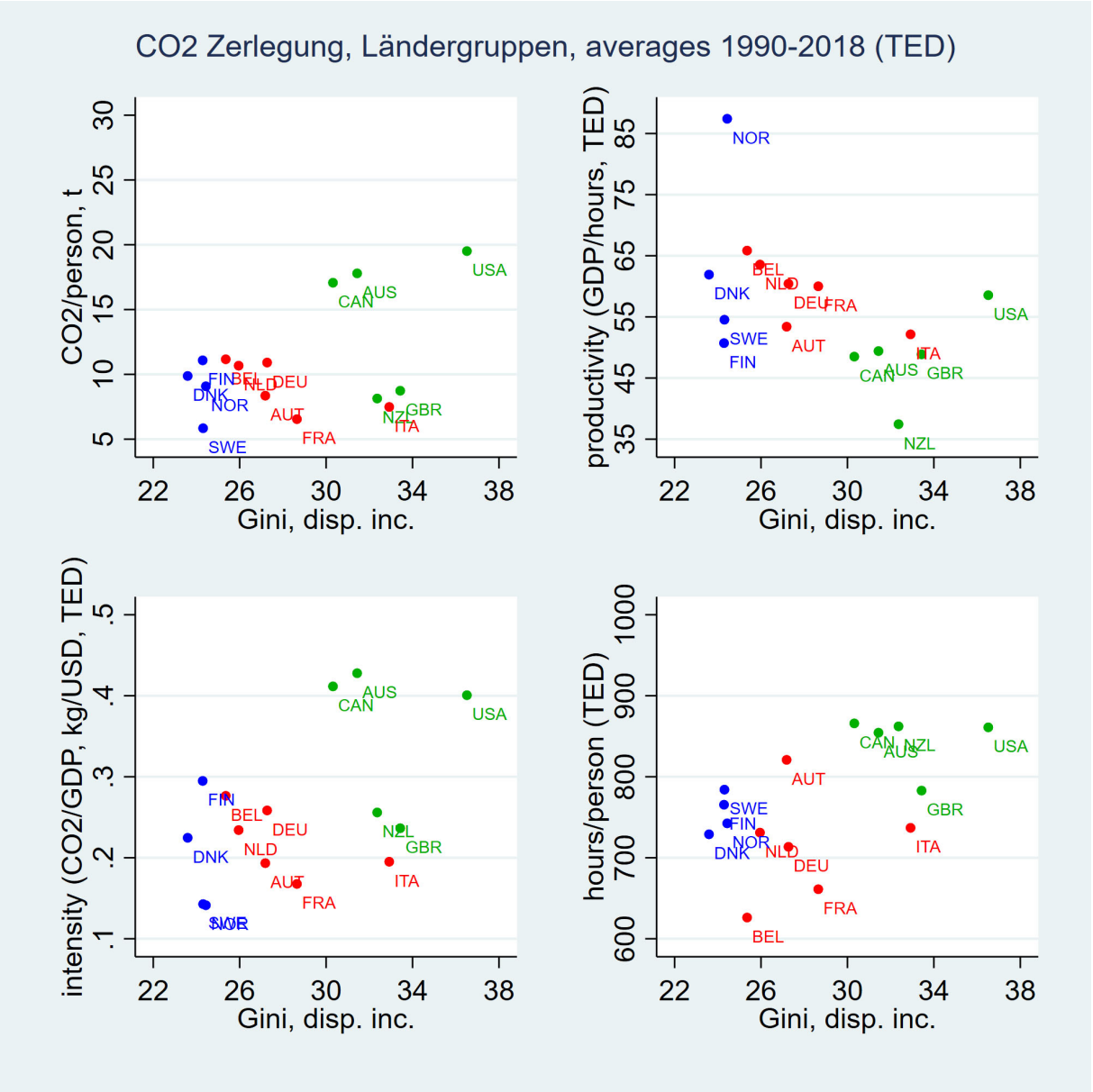
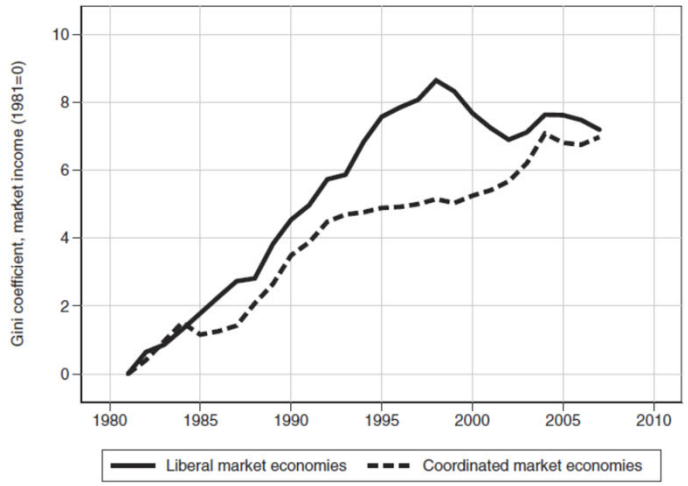
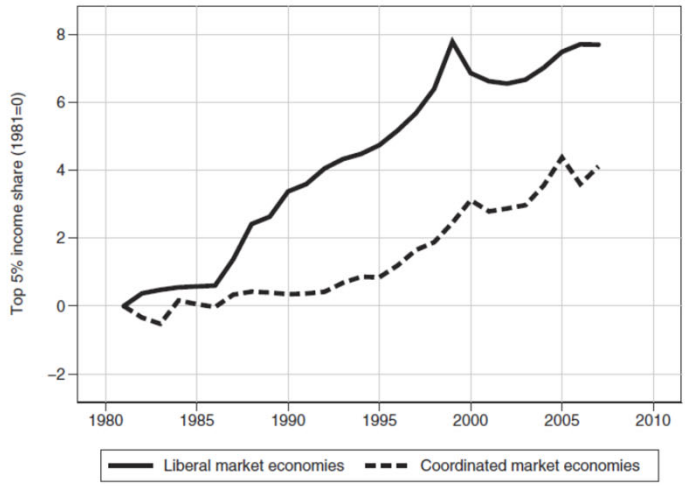
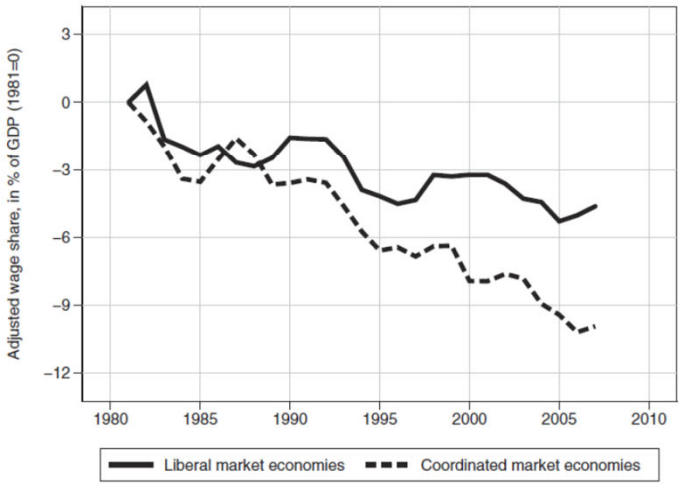
Unequal countries work more and produce more and dirtier output: CO2/POP = CO2/Y * Y/H * H/POP

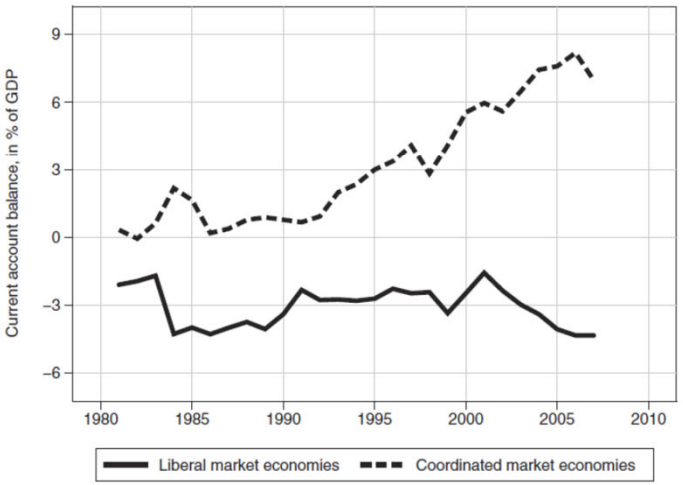


LMEs: higher top income shares and CA deficits
CMEs: lower wage shares and CA surpluses









Behringer/van Treeck (2021, Socio-Economic Review)

Contents

- **Varieties of Capitalism/New Keynesian Economics: a supply-side perspective on institutions**

- The Growth Model Perspective/Post-Keynesian Economics: a demand-side perspective on (functional) income distribution and growth

- The Economics of Social Status: an evolutionary perspective on (personal) income distribution, consumption, and leisure

- Varieties of Capitalism and Growth Models: The role of income distribution

Varieties of Capitalism: strong points

- Legitimizes “non-neoclassical” approaches to labor and financial market regulation in “coordinated market economies” (CMEs).

- Addresses the paradox that “liberal market economies” (LMEs) are more “Keynesian” (in a certain sense) than CMEs.

- Emphasizes serious institutional and political (rather than merely ideational) obstacles to more Keynesian economic policies in CMEs.

Varieties of Capitalism: blind spots

- No role for income distribution to affect aggregate demand
- Aggregate demand and macroeconomic policies matter only in the short run, in line with mainstream New Keynesian macroeconomics
- Little role for instability, international imbalances and crisis
- Little room for history
- Little room for analyzing capitalism as a transnational, global system
- Little mention of ecological challenges

Varieties of Capitalism

- A supply-side perspective on institutions…
  - Why are labor and financial markets more regulated in some countries than in others?
  - Why is the welfare state more developed in some countries than in others?
  - Why do some countries have majority voting and others proportional representation?
- …where (New Keynesian) macroeconomics enters only as an afterthought
  - Why are monetary and fiscal policies more “Keynesian” in some countries than in others?

CMEs and LMEs

- Two viable ways of organizing capitalism
- Coordinated market economies (CMEs) such as Germany, Austria, Japan, South Korea, Sweden, Norway, Finland, Denmark, Belgium, the Netherlands
  - Relatively strong regulation of labor relations and corporate governance, corporatist coordination, large welfare state, low personal inequality
  - Conservative monetary and fiscal policies
- Liberal market economies (LMEs) such as USA, UK, Ireland, Canada, Australia, New Zealand
  - Relatively weak regulation of labor and financial markets, shareholder value orientation, small welfare state, high personal inequality
  - More active/expansionary monetary and fiscal policy

CMEs

Production regime	Coordinated Market Economy (CME)	Incremental innovations. Complementarity of coordinated labor relations (specific skills, vocational training, employment protection) and coordinated corporate governance (bank-based patient finance, co-determination). Long-term corporate strategies, specialization (especially in manufacturing) requires export orientation.
Welfare state	Social democratic/ conservative	Strong welfare state protects employees with company-specific human capital and low job mobility. Dual training instead of academization. Male breadwinner model. Short-time working schemes in times of crisis.
Political system	Consensus	Consensus orientation in the political system guarantees that institutional change is slow and predictable. Coalition governments.
Aggregate demand management regime	Rules-based/ negotiated contract	Conservative monetary and fiscal policy as a disciplining device for coalition governments and powerful unions. External price competitiveness important because of export-oriented industry. Low wage and price inflation of non-tradables allows for low NULC growth in export sectors.

Adapted from Soskice (2006, p. 95)

LMEs

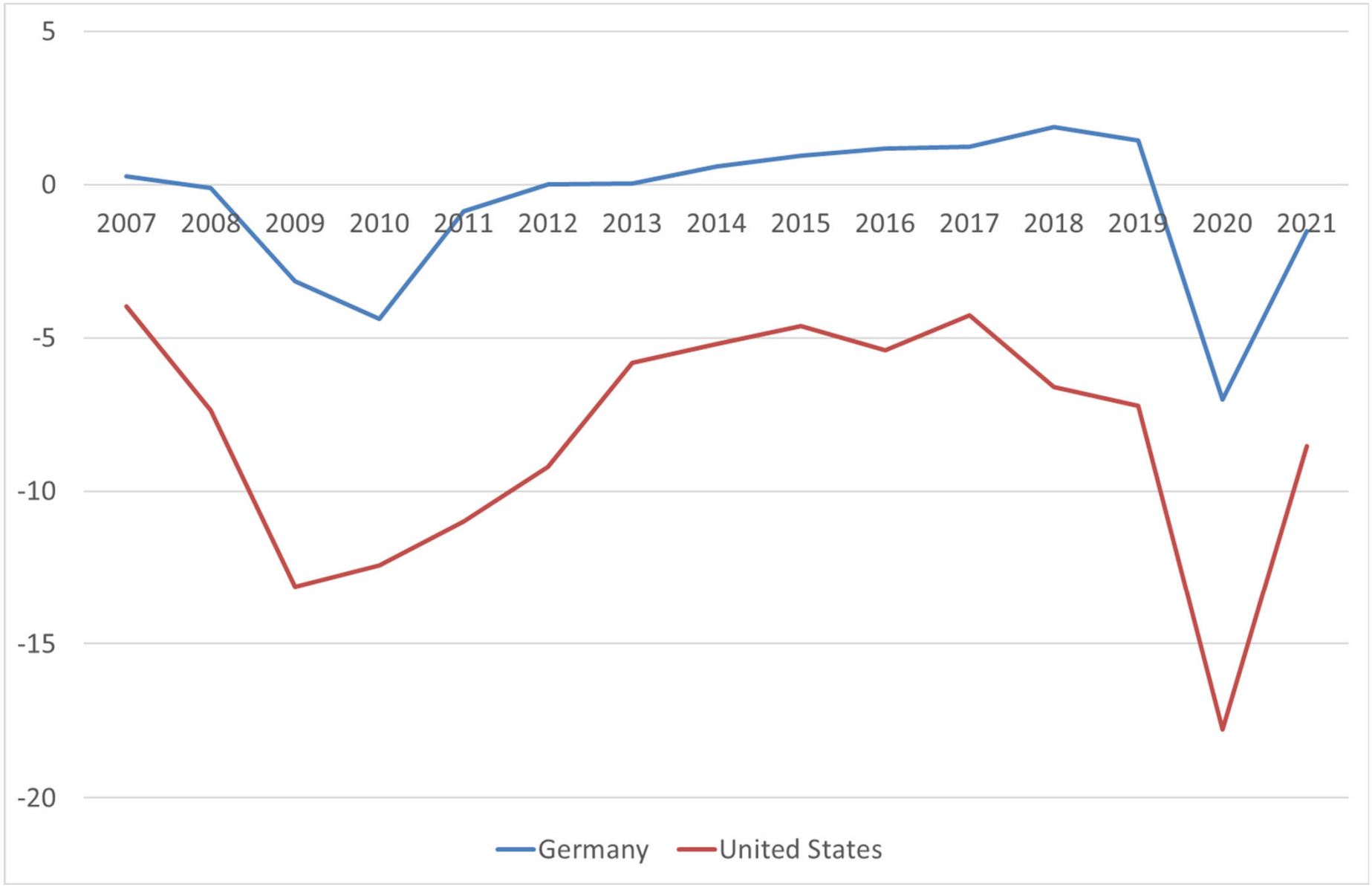
Production regime	Liberal market economy	Radical product innovations and dynamic structural change. High share of non-tradable services. Complementarity of liberal labor markets (general skills, hire & fire) and liberal corporate governance (market-based finance, shareholder value). Relatively short-term corporate strategies. Firms constantly reinvent themselves.
Welfare state	Liberal	Minimal welfare state encourages high employment mobility. College education (general skills) instead of dual training. Welfare and tax system encourage female labor force participation.
Political system	Majoritarian	Majority principle in the political system enables radical institutional change.
Aggregate demand management regime	Discretionary/ Delegated, centralised	Majority governments and weak unions need less disciplining through monetary and fiscal policy. Expansionary monetary and fiscal policy necessary in view of weak social security to avoid longer periods of unemployment. External price competitiveness less important.

Adapted from Soskice (2006, p. 95)

Unemployment rate

Sources: Bureau of Labor Statistics, Bundesagentur für Arbeit.

Government balance



Source: AMECO

Varieties of Capitalism, export- and consumption-oriented growth models

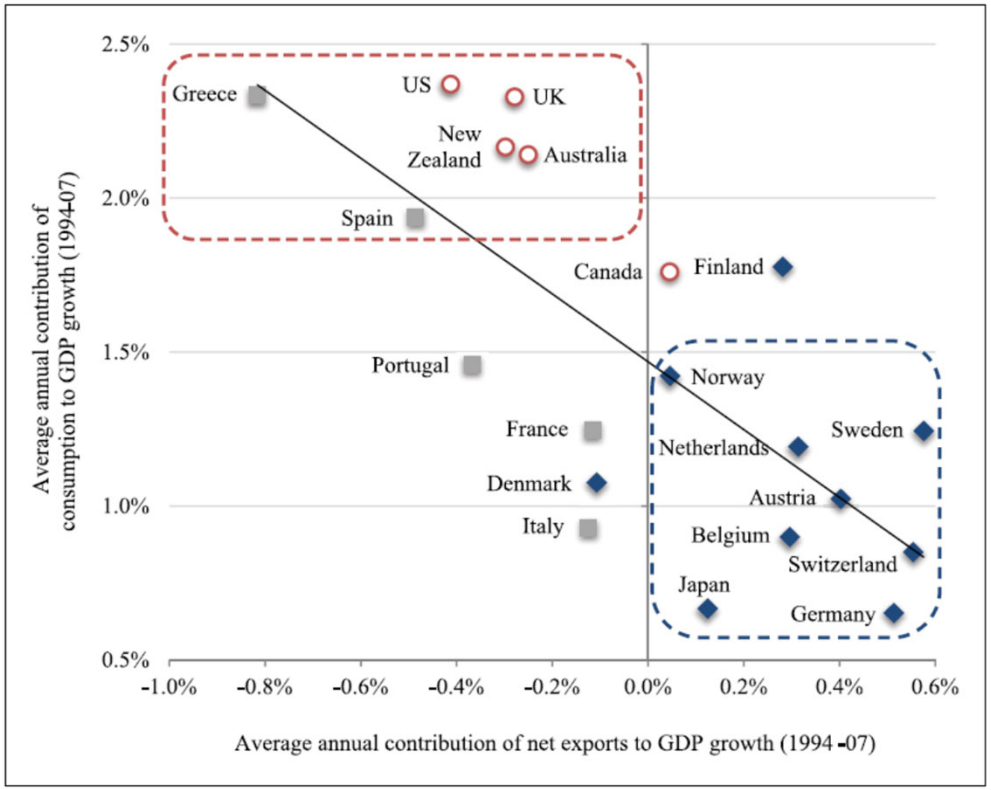


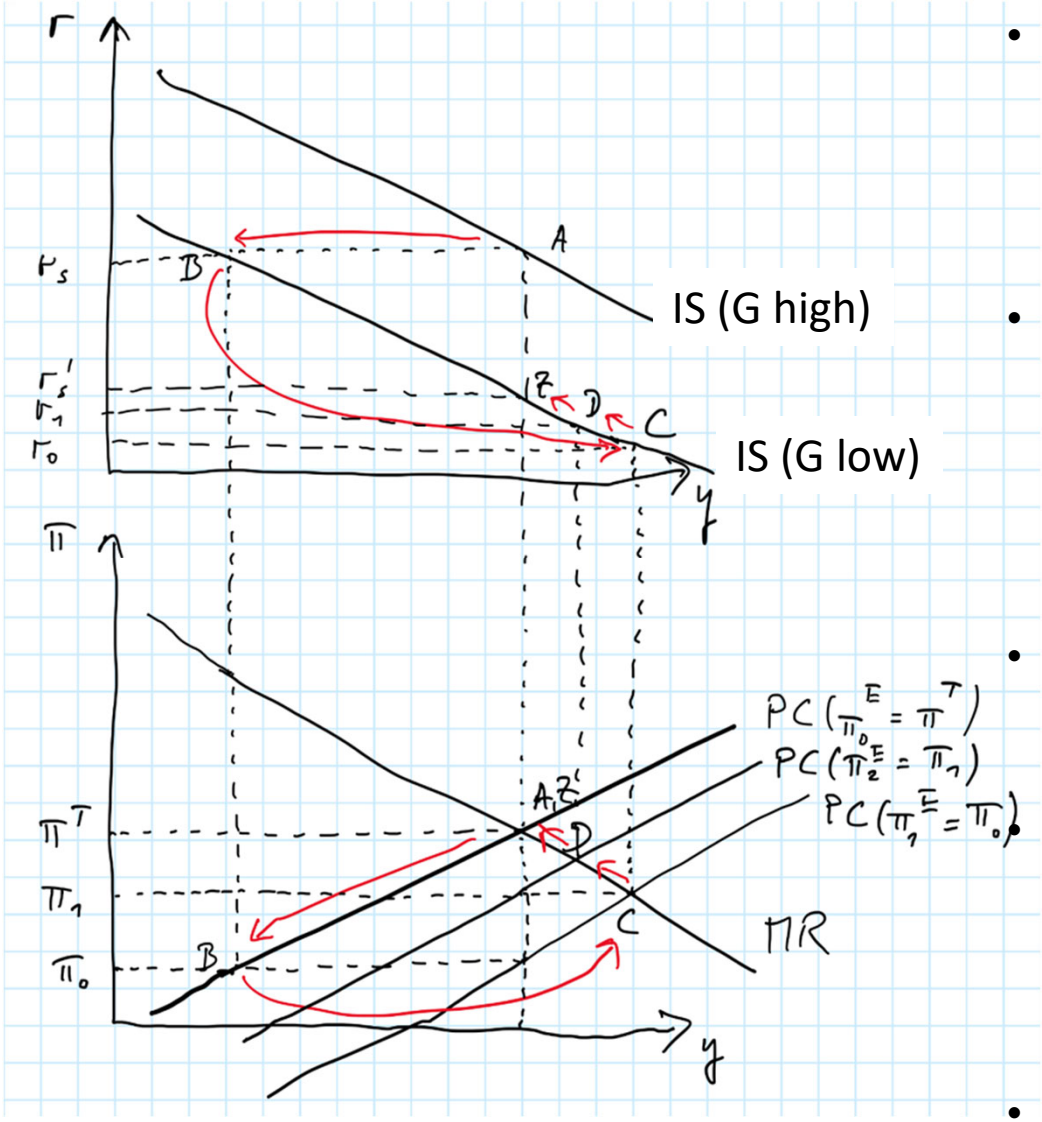
Figure 1. The Average Annual Contribution of Consumption and Net Exports to GDP Growth (1994–2007).
Note: The diagonal line is a simple linear trend line. The markers correspond to varieties of capitalism. The diamonds are CMEs and the circles are LMEs. (The squares are MMEs.)
Source: OECD Annual National Accounts; authors' calculations.

Hope/Soskice (2016, p. 212)

The New Keynesian 3-equation model

- IS Curve (Demand Side)
  - Aggregate demand is controlled by the real interest rate. A decline in the real interest rate stimulates (with a lag of one period) private investment and consumption because borrowing becomes cheaper and saving less attractive. Moreover, a decline in the real interest rate leads to a depreciation of the domestic currency, thus stimulating exports and dampening imports.
- Phillips curve (supply side)
  - Trade-off between inflation and unemployment in the short run (short-run Phillips curve)
  - NAIRU determines "structural" employment (vertical long-run Phillips curve)
- Interest rate rule (policy)
  - When inflation rises above the inflation target, the central bank increases the nominal interest rate disproportionately so that the real interest rate rises, leading to a decline in demand and an increase in unemployment until inflation returns to the inflation target.

Restrictive fiscal policy (in CMEs) leads to export orientation



- Period 0: Restrictive fiscal policy shifts the IS curve to the left. Output falls from A to B, unemployment rises, inflation falls. The central bank lowers the interest rate to reach point C in period 1.
- Period 1: The fall in the interest rate stimulates domestic demand and leads to a depreciation of the currency and higher net exports. Inflation rises again. Output rises to C. The central bank raises the interest rate again to reach point D in period 2.
- Period 2 ff: Point D reached. The central bank raises the interest rate until point Z is reached.
- In the new equilibrium, the interest rate is lower than in the old equilibrium. Currency has depreciated, net exports have increased at the expense of domestic demand (chs. 9-11 in Carlin/Soskice).

Expansionary fiscal policy with accommodative monetary policy (more likely in LMEs) leads to domestic demand orientation.

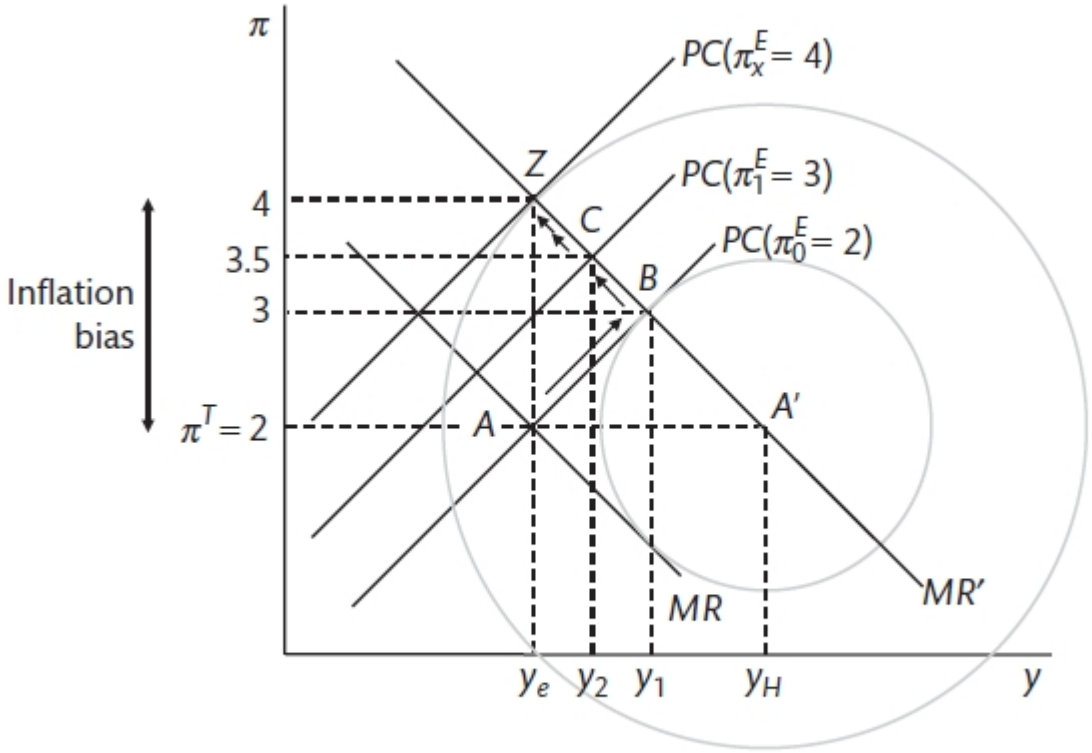


Figure 4.8 The inflation bias.

- The government could try to increase employment through expansionary fiscal policy (A→B, in the background: IS curve shifts to the right).
- A central bank that does not pursue a rigid inflation target (more likely in LMEs) could react to an inflation shock by adjusting the inflation target (MR curve shifts to the right).
- A positive output gap temporarily occurs. As a result, imports increase, causing the trade balance to fall.
- To close the output gap (at a higher inflation level), the central bank has to raise interest rates. This leads to a higher exchange rate and a loss of price competitiveness, which leads to an additional decline in the trade balance.
- In CMEs, the government knows that the central bank will not tolerate high inflation and will fight it by raising interest rates, which leads to rising unemployment, see previous slide. Therefore, the government does not even try expansionary fiscal policy.

Dimensions of coordination

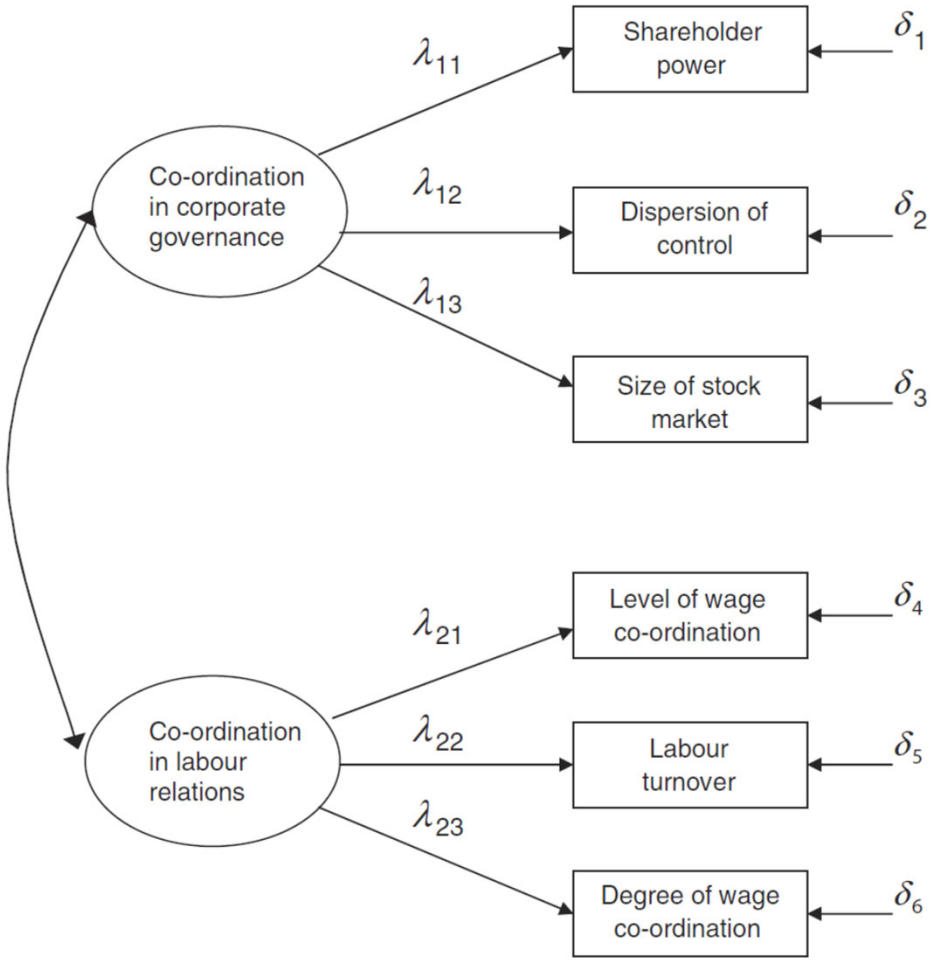


Fig. 1. Path diagram of the two-factor model for the six observed variables

Hall/Gingerich (2009)

More or less coordinated market economies

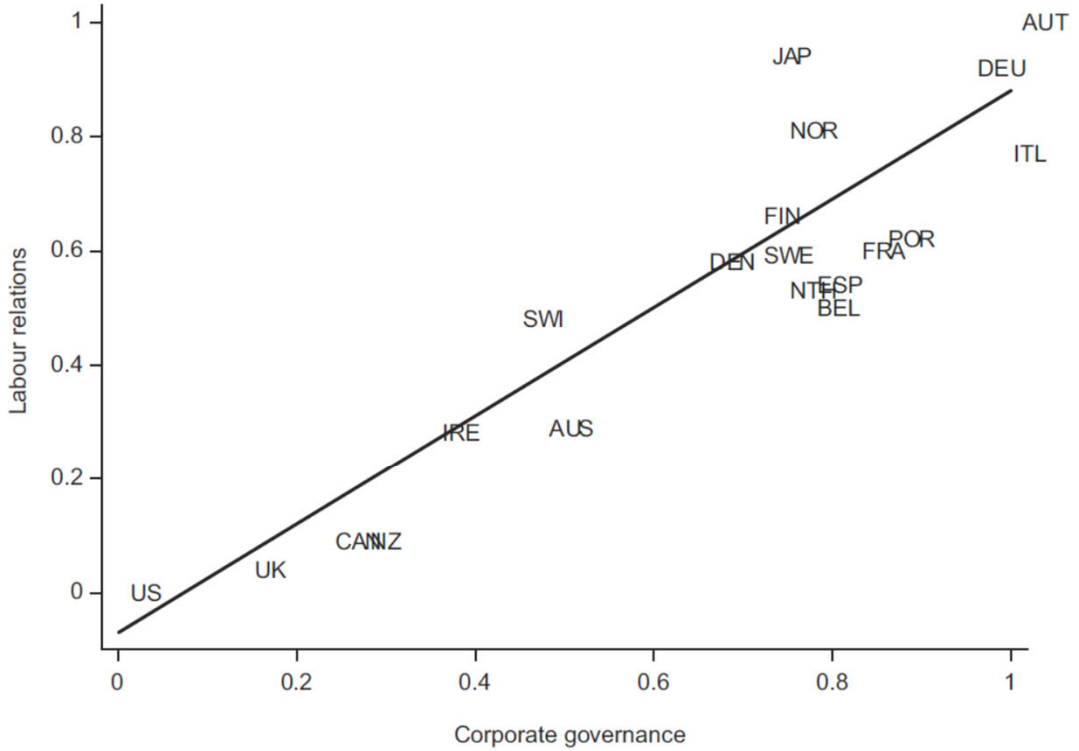


Fig. 2. The balance between market and strategic co-ordination in labour relations and corporate governance in OECD countries

Note: On each axis, movement away from the origin indicates higher levels of strategic co-ordination in the relevant sphere of the political economy and movement towards the origin indicates higher levels of market co-ordination.

Hall/Gingerich (2009)

Institutional complementarities

TABLE 4 *The Impact on Rates of Economic Growth of Interaction Between Co-ordination in Labour Relations and Corporate Governance*

	Pooled OLS w/Panel corrected standard errors†		Random effects	
	PCSE.1a	PCSE.1b	RE.1a	RE.1b
ln GDP_0 (*i*)	−1.85***	−1.54**	−2.02***	1.74***
	(0.637)	(0.728)	(0.484)	(0.472)
International demand conditions (*it*)	2.27***	2.35***	2.12***	2.17***
	(0.220)	(0.178)	(0.232)	(0.235)
Π (*it*)	−1.35	−1.06	−0.119	−0.558
	(2.41)	(1.95)	(2.21)	(2.23)
Dependency ratio (*it*)	9.66	9.06	8.11	3.22
	(13.6)	(12.7)	(11.4)	(11.4)
Exports as capacity to import (*it*)	−0.006	−0.004	0.019	0.001
	(0.051)	(0.045)	(0.060)	(0.061)
Plurality voting (*it*)	–	0.866**	–	0.793***
		(0.345)		(0.296)
District magnitude (*it*)	–	0.005	–	0.004
		(0.006)		(0.004)
Left cabinet (*it*)	–	0.582*	–	0.654**
		(0.302)		(0.291)
Co-ordination in corporate governance (*i*)	−3.09**	−3.18***	−2.38**	−2.43**
	(1.26)	(1.19)	(1.13)	(1.08)
Co-ordination in labour relations (*i*)	−0.747	0.340	−1.78**	−0.183
	(1.52)	(1.10)	(1.51)	(1.40)
Corporate × Labour (*i*)	3.18**	2.73**	4.00**	2.87*
	(1.29)	(1.19)	(1.63)	(1.50)
N	538	528	538	528
R^2	0.27	0.28	0.21	0.24
χ^2	176	308	141	160

Note: Standard errors in parentheses; (*i*) denotes panel-varying but time-invariant explanatory variable; (*it*) denotes panel-varying and time-varying explanatory variable; † model assumes panel-specific first-order autocorrelation; ***significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.1 level.

Hall/Gingerich (2009)

Institutional complementarities

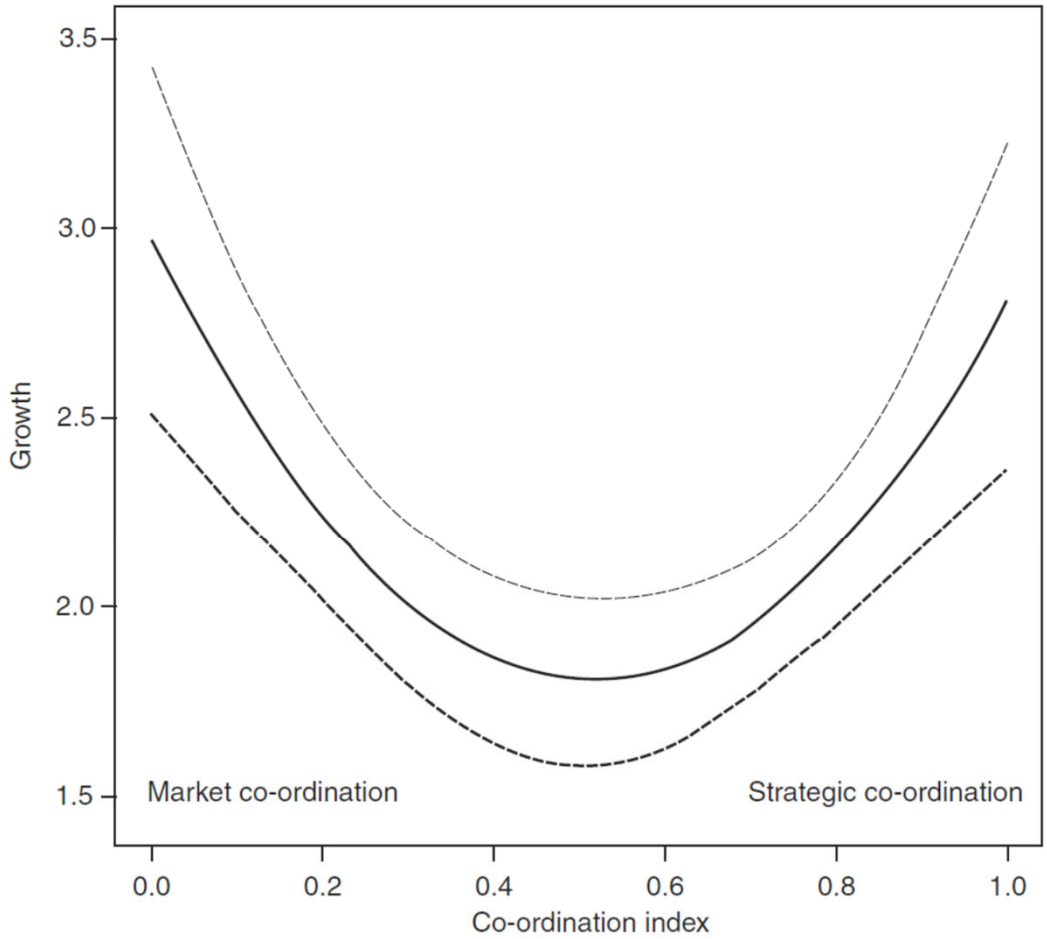


Fig. 5. The estimated relationship between co-ordination and rates of economic growth
Note: Predicted values are denoted by solid dark lines, 90 per cent confidence intervals denoted by dashed lines; simulation based on model RE.2a.

Hall/Gingerich (2009)

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The Growth Model Perspective as an attack on Varieties of Capitalism

- "Our main theoretical innovation is to return to Keynesian and Kaleckian insights neglected by CPE scholars. Borrowing from post-Keynesian economics, we emphasize the demand side of the economy and place the distribution of income, among households and between labor and capital, at the center of our analysis."
- "Our analytical framework identifies multiple growth models based on the relative importance of different components of aggregate demand—in the first instance, household consumption and exports—and relations among components of aggregate demand.
- "Our 'growth models' are more numerous and more unstable than Hall and Soskice's 'varieties of capitalism'."

(Baccaro and Pontusson, 2016, p. 176-7)

The Growth Model Perspective as an attack on Varieties of Capitalism

Baccaro and Pontusson (2016)

- „By and large, the existing literature conceives rising earnings inequality as an LME-specific phenomenon.“
- “More or less explicitly, the VoC literature has, until recently, celebrated Germany’s coordinated market economy as a “worker-friendly” and egalitarian alternative to the neoliberal model of stock-market capitalism.”
- “A number of core CME countries, including Germany, have experienced more growth of earnings inequality than New Zealand, Canada, and the United Kingdom, and Ireland stands out as one of the countries in which earnings inequality declined from 1995 to 2010.”

Table 1. Average Annual Change in 90-10 Earnings Ratios, 1975–95 and 1995–2011.

1975–95		1995–2011	
USA	.042	USA	.040
New Zealand (84–)	.033	Australia	.036
UK	.024	Norway	.035
Australia	.017	Denmark	.029
Italy (86–)	.012	Germany	.028
Sweden	.010	Switzerland	.026
Netherlands (77−94)	.001	Finland	.022
Japan	−.005	NewZealand	.020
West Germany (84−)	−.011	Canada	.013
Finland (77−)	−.017	Netherlands (−10)	.012
France	−.021	UK	.012
		Sweden	.010
		Belgium	.005
		Japan	−004
		Italy (−10)	−.010
		France (−10)	−.011
		Ireland	−.025

Note: Unless otherwise indicated in parentheses, the figures refer to change in 90-10 ratios from 1975 to 1995 and from 1995 to 2010. Total change over each period has been divided by the (country-specific) number of intervening years. For France, the data refer to net earnings (posttax) earnings from employment; for all other countries, they refer to gross (pretax) earnings.
Source: OECD relative earnings database.

The Growth Model Perspective as an attack on Varieties of Capitalism

Baccaro and Pontusson:

"One striking feature of Figure 2 is that the wage share has held up better in the United Kingdom than in the other countries, all characterized by more coordinated systems of wage bargaining and by less dramatic declines of union membership."

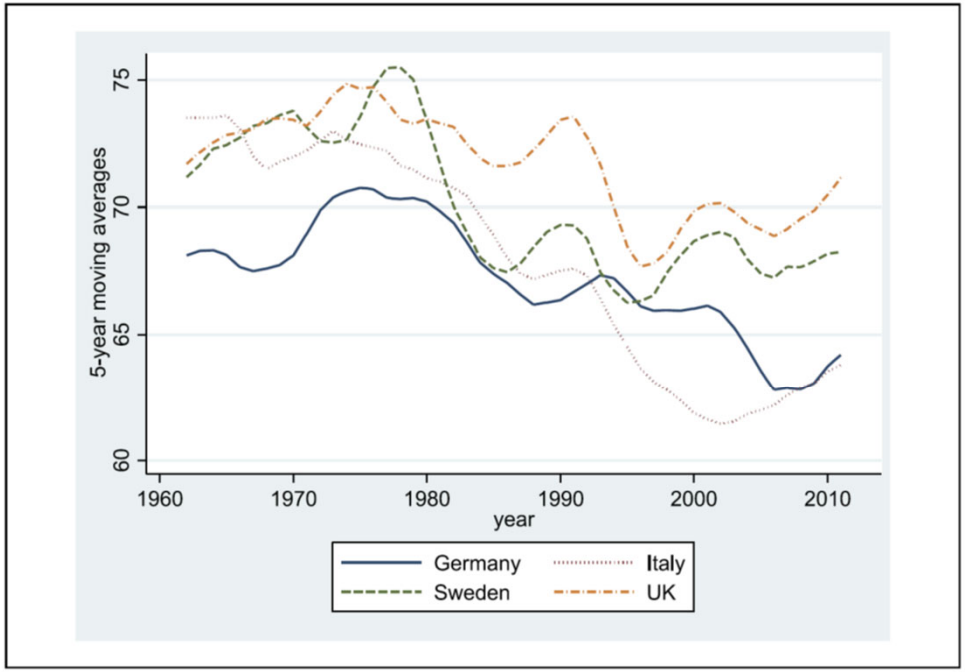

Figure 2. Labor Compensation in Percentage of GDP ("Wage Share"), Five-Year Moving Averages: 1960–2010.
Source: AMECO Database.

Contemporary growth models as solutions to the crisis of wage-led growth

- "In all four countries, the Fordist model of wage-led growth ground to a halt as the institutional channels whereby productivity growth fed into household consumption and investment—most obviously, collective bargaining based on strong unions—eroded in the 1970s and 1980s." (Baccaro and Pontusson, 2016, p. 176)
- Basically, two solutions to the crisis of wage-led growth
  - "Export-led growth" (Germany)
  - "Consumption-led growth financed by credit" (U.S., U.K.)
- Gramscian theory of "social bloc" is invoked to explain why different countries pick different growth models to respond to the crisis of Fordism.

Growth models and Kalecki‘s profit equation

Consider an open economy with a government:

$$\mathrm{Y} = C_W + C_\Pi + I + G + (\mathrm{X} - \mathrm{M}),$$
$$\mathrm{Y} = W^{net} + \Pi^{net} + \mathrm{T},$$

W^{net}= Net wages
Π^{net} = Net profits

- Under the simplifying assumption: Y = GDP = GNI (no international flows of market incomes):

$$\Pi^{net} = C_\Pi + I + \left(C_W - W^{net}\right) + (G - T) + (X - M)$$

oder

$$\mathrm{r} - \mathrm{g} = \frac{\Pi^{net}}{K} - \frac{I}{K} = \frac{C_\Pi}{K} - \frac{S_W}{K} + \frac{G - T}{K} + \frac{\mathrm{X} - \mathrm{M}}{K}$$

r > g (or “profits without investment) in debt-led and export-led growth models

$$\Pi^{net} = C_{\Pi} + I + \left(C_L - W^{net}\right) + (G - T) + (\mathrm{X} - \mathrm{M})$$

$$\mathrm{r} - \mathrm{g} = \frac{\Pi^{net}}{K} - \frac{I}{K} = \frac{C_{\Pi}}{K} - \frac{S_W}{K} + \frac{G - T}{K} + \frac{\mathrm{X} - \mathrm{M}}{K}$$

- Starting point for post-Keynesian growth and distribution models

- "Profits without investment" in the neoliberal era: r-g can increase if
  - the distribution of profits and thus consumption from profits increases (shareholder value orientation, USA)
  - savings from wages fall or become negative (debt-led growth, USA)
  - net exports increase (export-led growth, Germany)

(Hein/Dünhaupt/van Treeck, 2007; van Treeck, 2015, https://www.ifo.de/DocDL/forum1-15-focus4.pdf)

The growth model perspective: loose ends & blind spots

- Macroeconomics: Need to distinguish effects of functional income distribution (wages vs. profits) and personal distribution of income in determining aggregate demand.
- Political economy: Need to explain why different countries display different patterns of (functional and personal) income distribution. Gramsci is not enough.
- Little room for Little room for analyzing capitalism as a transnational, global system
- Little mention of ecological challenges

In a nutshell…

Growth models are…	…complex and unstable	…explained by institutions	…explained by ideology
VoC	NO	YES	NO
GMP	YES	NO	YES
Behringer/v. Treeck (2021)	YES	YES	NO

Income distribution…	…affects aggregate demand	…is explained by institutions	…is explained by ideology
VoC	NO	YES	NO
GMP	YES	NO	YES
Behringer/v. Treeck (2021)	YES	YES	NO

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Post-Keynesian macroeconomics and the economics of social status

- Post-Keynesian macroeconomics traditionally has focused on the functional distribution of income and the class aspect of capitalism (workers vs. capitalists, wages vs. profits).
- “Although there have been few contributions, even few comments, about consumer behavior by Post Keynesian authors, there is a certain degree of coherence among the few contribution.” (Lavoie, 1994)
- More recently: synthesis of Post-Keynesian theory of wage-led/profit-led growth and status-theoretical models of consumer choice? (e.g. Cynamon/Fazzari, Setterfield/Kim, Kapeller/Schütz)

The “principle of non-independence“ in Post-Keynesian theories of consumer choice

- “(A household’s pattern of needs) may be influenced by the consumption structure of the households that are of equal or higher standing in the socioeconomic ladder.” (Lavoie, 1994)
- “There is a kind of competition in consumption, induced by the desire to impress the Joneses, which makes each family strive to keep up at least an appearance of being as well off as those that they mix with, so that outlay by one induces outlay by others.” (J. Robinson)
- “The consumption of each class will be guided by a conception of its appropriate lifestyle, given its place in the social pyramid.” (E. Nell)
- “A household's consumption pattern, at any given point in time, thus reflects the lifestyle of the households that constitute its social reference group.” (A. Eichner)

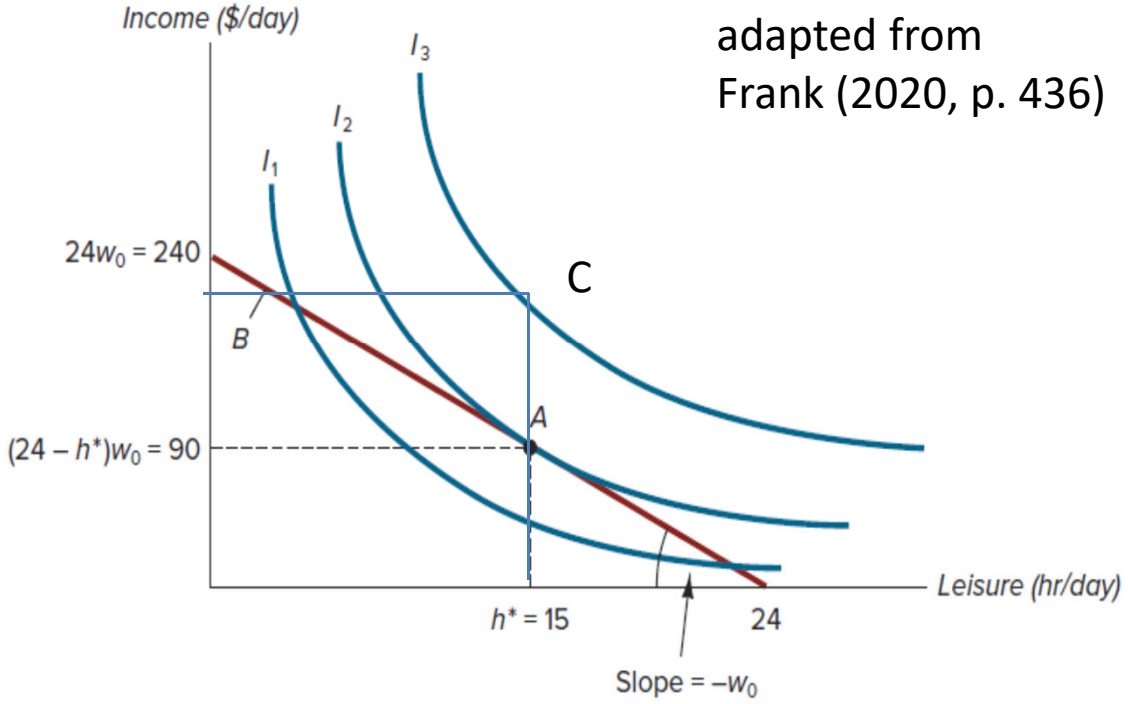
How stable are your preferences?

- We are supposed to prefer higher income to lower income (holding leisure constant), to prefer C over A

FIGURE 14.4

The Optimal Choice of Leisure and Income

The optimal amount of leisure is $h^* = 15$ hr/day, which corresponds to a point of tangency between the budget constraint (B) and the indifference curve I_2. The corresponding amount of paid labor is $24 - h^* = 9$ hr/day, which yields a daily wage income of $(24 - h^*)w_0 = \$90$/day.



adapted from Frank (2020, p. 436)

Thought experiment 1

- Which world would you prefer to live in?
  - World 1: You have a disposable income of 3,000 euros per month, and everyone else has a disposable income of 2,000 euros
  - World 2: You have a disposable income of 5,000 euros per month, and everyone else has a disposable income of 8,000 euros

Thought experiment 2

- Which world do you want to live in?
  - World 1: You have 3 weeks of vacation per year, and everyone else has 2 weeks of vacation per year
  - World 2: You have 5 weeks of vacation per year, and everyone else has 8 weeks of vacation per year

Thought experiment 3

- Which world do you want to live in?
  - World 1: You have a fatal accident at work with a probability of 5%, and everyone else has a probability of 8%.
  - World 2: You have a fatal accident at work with a probability of 3%, and everyone else has a probability of 2%.

Social dilemmas and positional goods

Income/consumption

= positional goods

Leisure/saving/workplace security etc.

= non-positional goods

Robert H. Frank, "The Demand for Unobservable and Other Nonpositional Goods." *American Economic Review, 75,* March, 1985, pp. 101-116.

Positional externalities and social dilemmas: Leisure and saving versus income and consumption

	B works and consumes less	**B works and consumes more**
A works and consumes less	Both have a good life with a lot of leisure, financial safety, and a clean environment.	A improves social status against B, which more than compensates for the disadvantage of stress.
A works and consumes more	A improves social status against B, which more than compensates for the disadvantage of stress.	Both have a stressful life with little leisure, financial fragility and ecological degradation.

Collective action (redistribution, collective wage bargaining, universal public services) is superior to "rational" individual behavior.

The Relative Income Hypothesis: "expenditure cascades"

Review of Behavioral Economics, 2014, 1: 55–73

Expenditure Cascades

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ABSTRACT

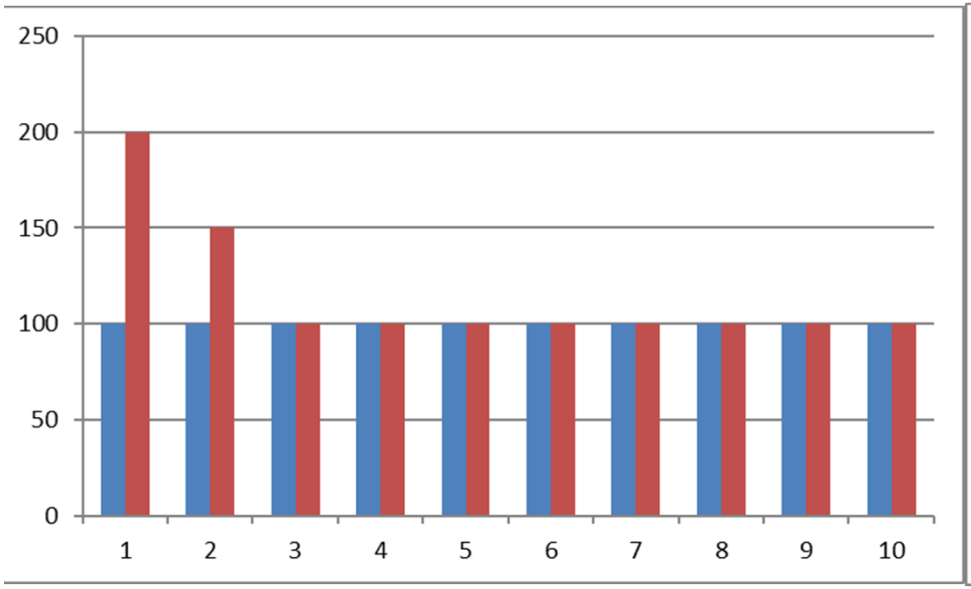
Prevailing economic models of consumer behavior completely ignore the well-documented link between context and evaluation. We propose and test a theory that explicitly incorporates this link. Changes in one group's spending shift the frame of reference that defines consumption standards for others just below them on the income scale, giving rise to expenditure cascades. Our model, a descendant of James Duesenberry's relative income hypothesis, predicts the observed ways in which individual savings rates respond to changes in both own and others' permanent income, as well as numerous other stylized fact patterns that are difficult to reconcile with prevailing models.

The Relative Income Hypothesis: "expenditure cascades"

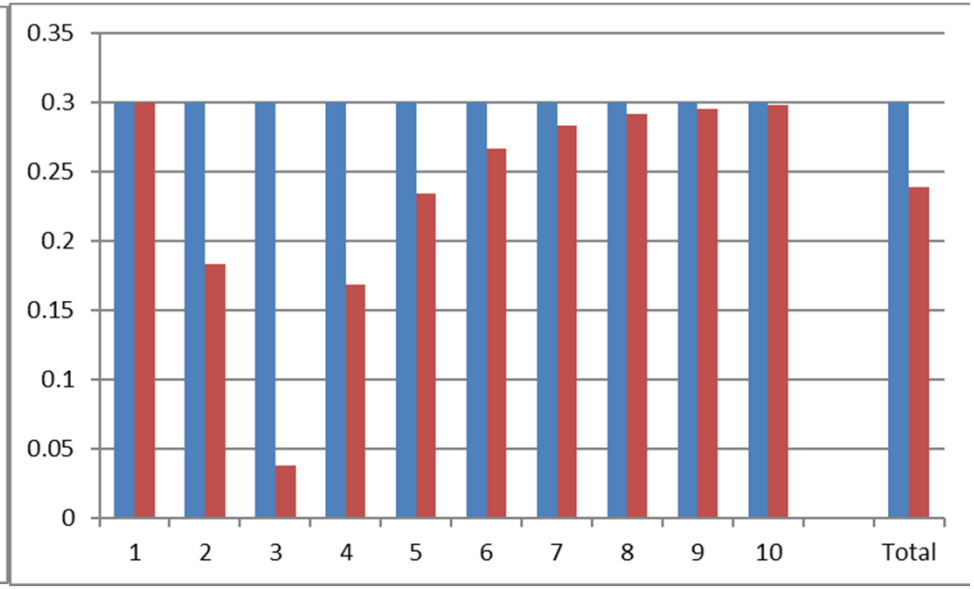
- Individuals base their consumption desires on the consumption of their social reference group
- Status comparisons are usually upward looking
- Expenditure cascades model (Robert Frank)
  - $C_N = kY_N$, where N stands for the top income group.
  - $C_i = k(1-\alpha)Y_i + \alpha C_{i+1}$, where i = 1,…,N-1 represent the lower income groups and $\propto$ depends on institutions with $0 < \propto < 1$
- Longer working hours and more private consumption in LMEs compared to CMEs because of
  - Higher (increase in) top-end income inequality (expenditure cascades begin at higher income percentiles)
  - easier access to credit; decentralized, market-based, private provisioning of positional goods (education, housing, health, etc.)

“Expenditure cascades” with top-end income inequality

Income inequality



Unequal saving rates

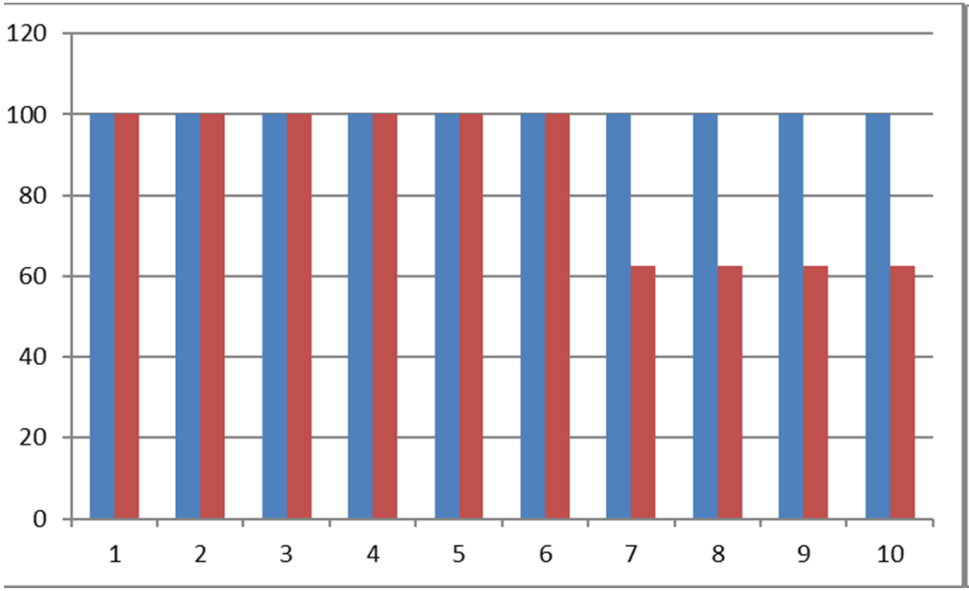


Blue: Equal distribution
Red: Unequal distribution

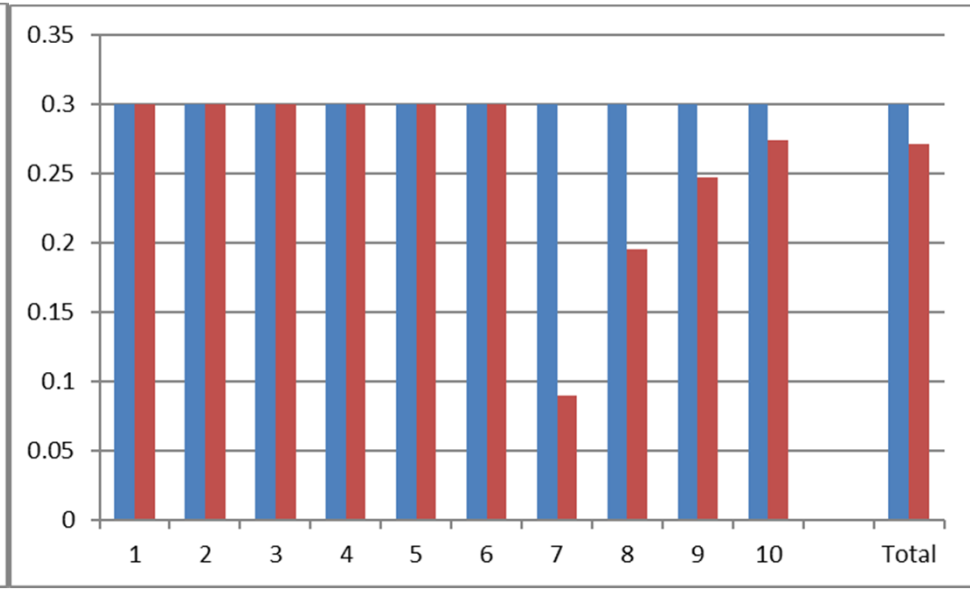
- $C_N = kY_N$
- $C_i = k(1-\alpha)Y_i + \alpha C_{i+1}$
- $k = 0.7$, $\alpha = 0.5$

“Expenditure cascades” with bottom-end income inequality

Income inequality



Unequal saving rates



Blue: Equal distribution
Red: Unequal distribution

- $C_N = kY_N$
- $C_i = k(1-\alpha)Y_i + \alpha C_{i+1}$
- $k = 0.7$, $\alpha = 0.5$

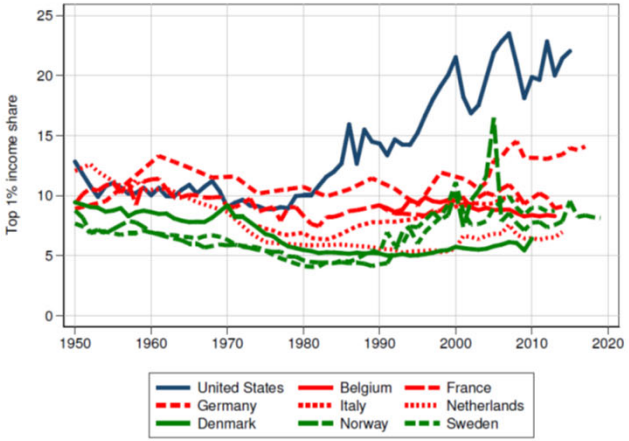
(1) Why haven't working hours decreased (more) since 1980, and (2) why do they vary so much across rich countries?

- Veblen effects (upward-looking status comparisons causing positional externalities in consumption) in a context of
  - rising inequality
  - more or less centralized wage bargaining
  - more or less comprehensive public provision of universal services (public education in particular)

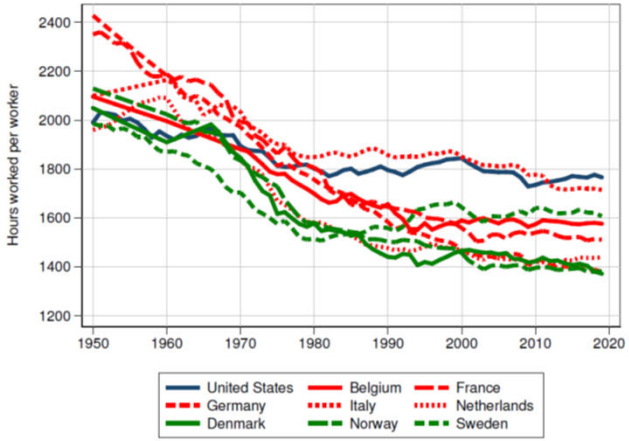
Veblen effects

- The desire, or subjectively perceived need, to work long hours depends positively on top-end income inequality, as a result of upward-looking status comparisons (Veblen, 1899; Bowles and Park, 2005; Oh et al., 2012).
- Public provision of positional goods, such as education, may limit the scope of "expenditure cascades" (Frank et al., 2014).
- Centralized bargaining over wages and working time may allow for partial internalization of positional externalities (see Oh et al., 2012 for a related argument).

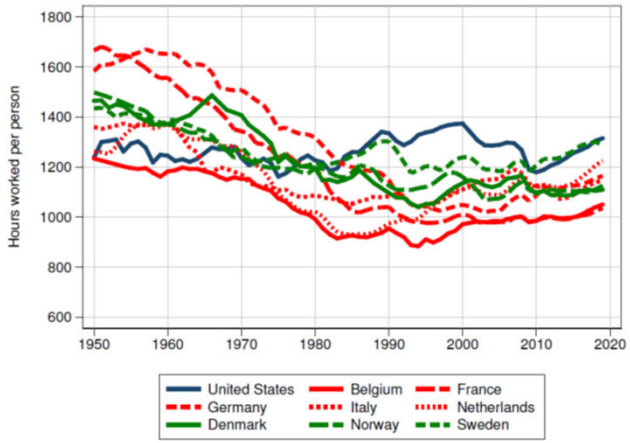
Decrease in work hours ends with rise in inequality, more unequal countries have longer work hours



(a) Top 1% income share



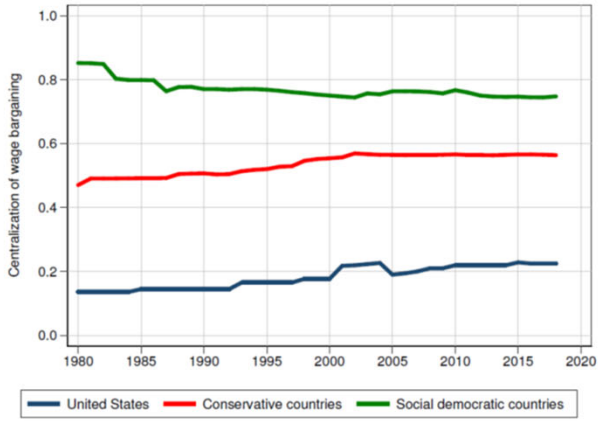
(b) Hours worked per worker



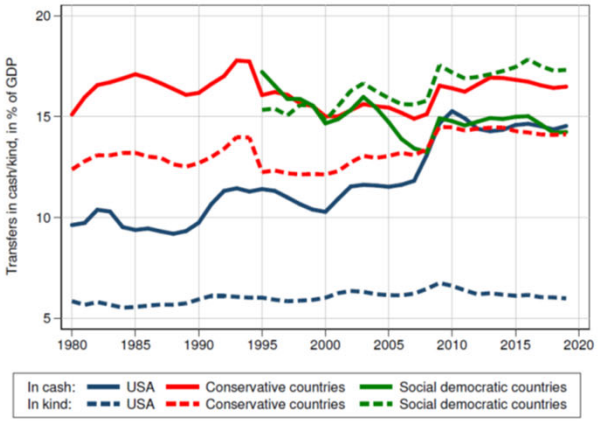
(c) Hours worked per person

Figure 2: Long-run trends in top-end income inequality and working hours

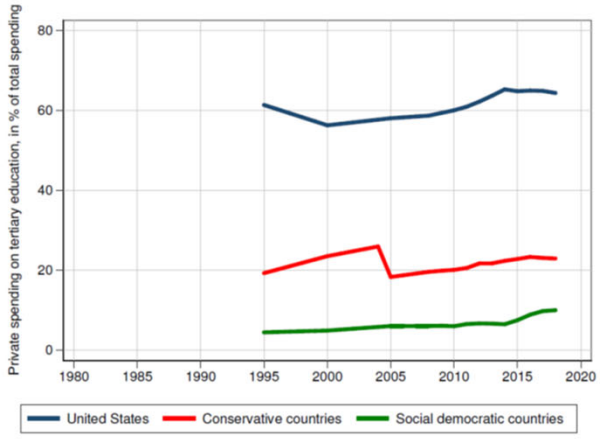
Persistent institutional differences across varieties of capitalism/worlds of welfare capitalism



(a) Centralization of wage bargaining



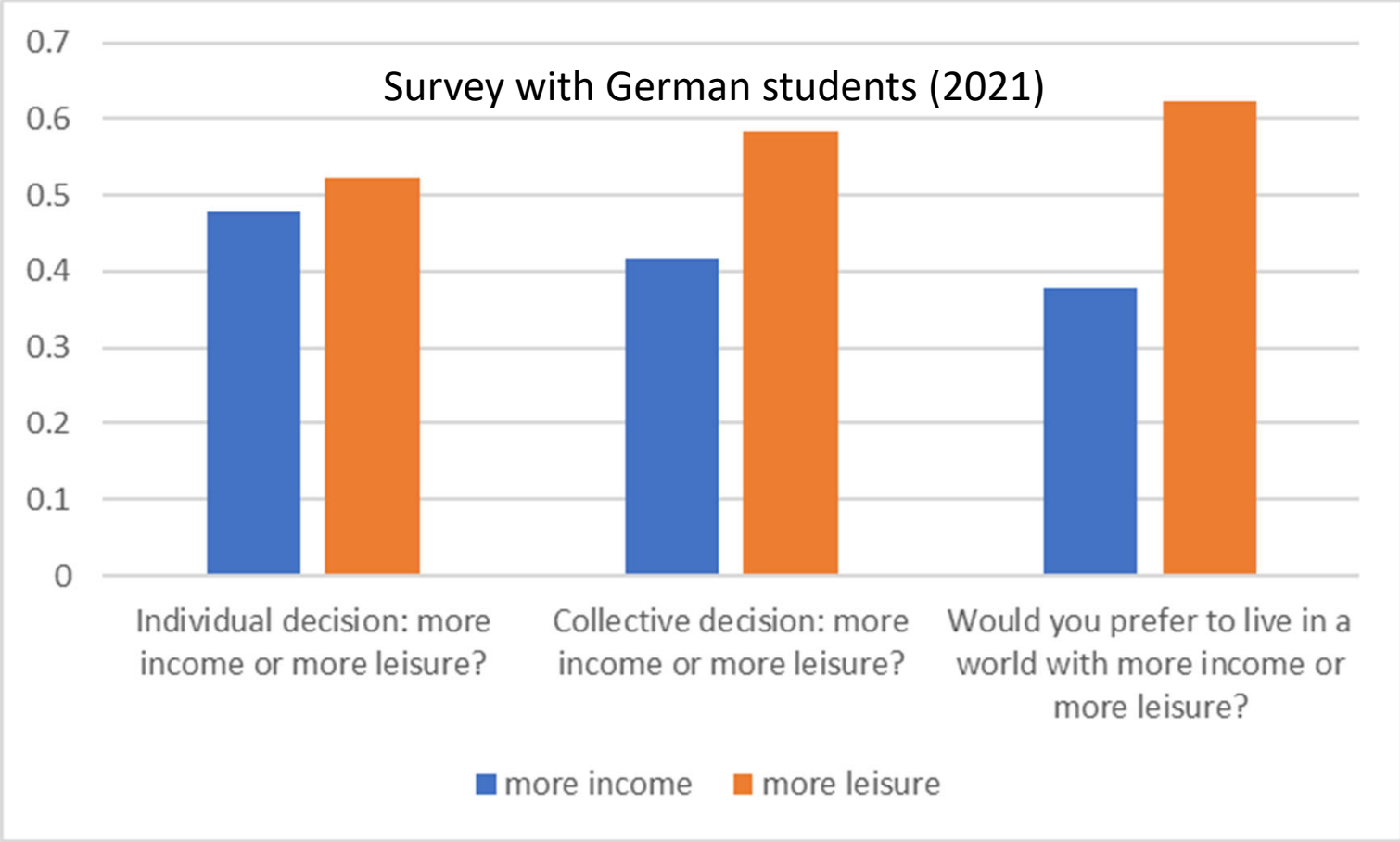
(b) Social transfers in kind and in cash



(c) Private education expenditures

Note: Conservative countries: Belgium, France, Germany, Italy, Netherlands. Social democratic countries: Denmark. Norway, Sweden.

People prefer more leisure and less income, when decisions are taken collectively



Obst/van Treeck (work in progress)

Contents

- Varieties of Capitalism/New Keynesian Economics: a supply-side perspective on institutions
- The Growth Model Perspective/Post-Keynesian Economics: a demand-side perspective on (functional) income distribution and growth
- The Economics of Social Status: an evolutionary perspective on (personal) income distribution, consumption, and leisure
- **Varieties of Capitalism and Growth Models: The role of income distribution**

Varieties of capitalism and growth models: the role of income distribution

(Behringer/van Treeck, 2019, 2021; Behringer/Gonzalez/van Treeck, 2022)

- Combine VoC, GMP & status theory to look at income distribution and institutions
  - LMEs: higher inequality of household incomes + "flexible" labor and financial markets + low in-kind social transfers → longer work hours, expenditure cascades and CA deficits
  - CMEs: lower wage/household income share, lower inequality of household incomes, more strongly regulated labor and financial markets → shorter work hours, lower consumption, CA surpluses

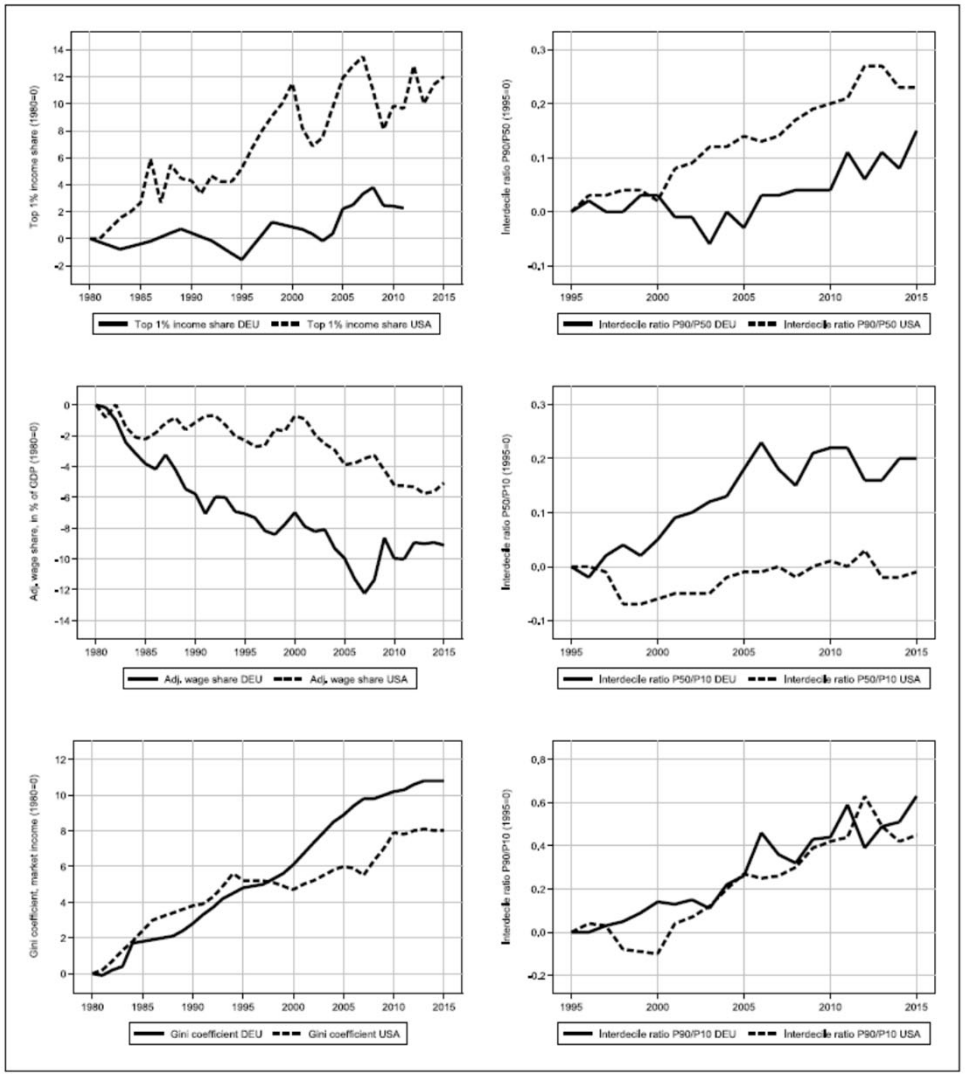


Figure 1. Different Measures of Income Distribution.
Source: See App. A.

- Interaction between functional and personal income distribution key to understanding growth models

- Rise in top wages in the U.S.
  - stabilizes the wage share
  - causes expenditure cascades (long work hours, low saving, high debt)

- Rise in profits in Germany
  - implies falling wage share
  - boosts corporate retained earnings, while preventing/hiding rise in top-end personal income inequality
  - weakens domestic demand

Income distribution and the current account

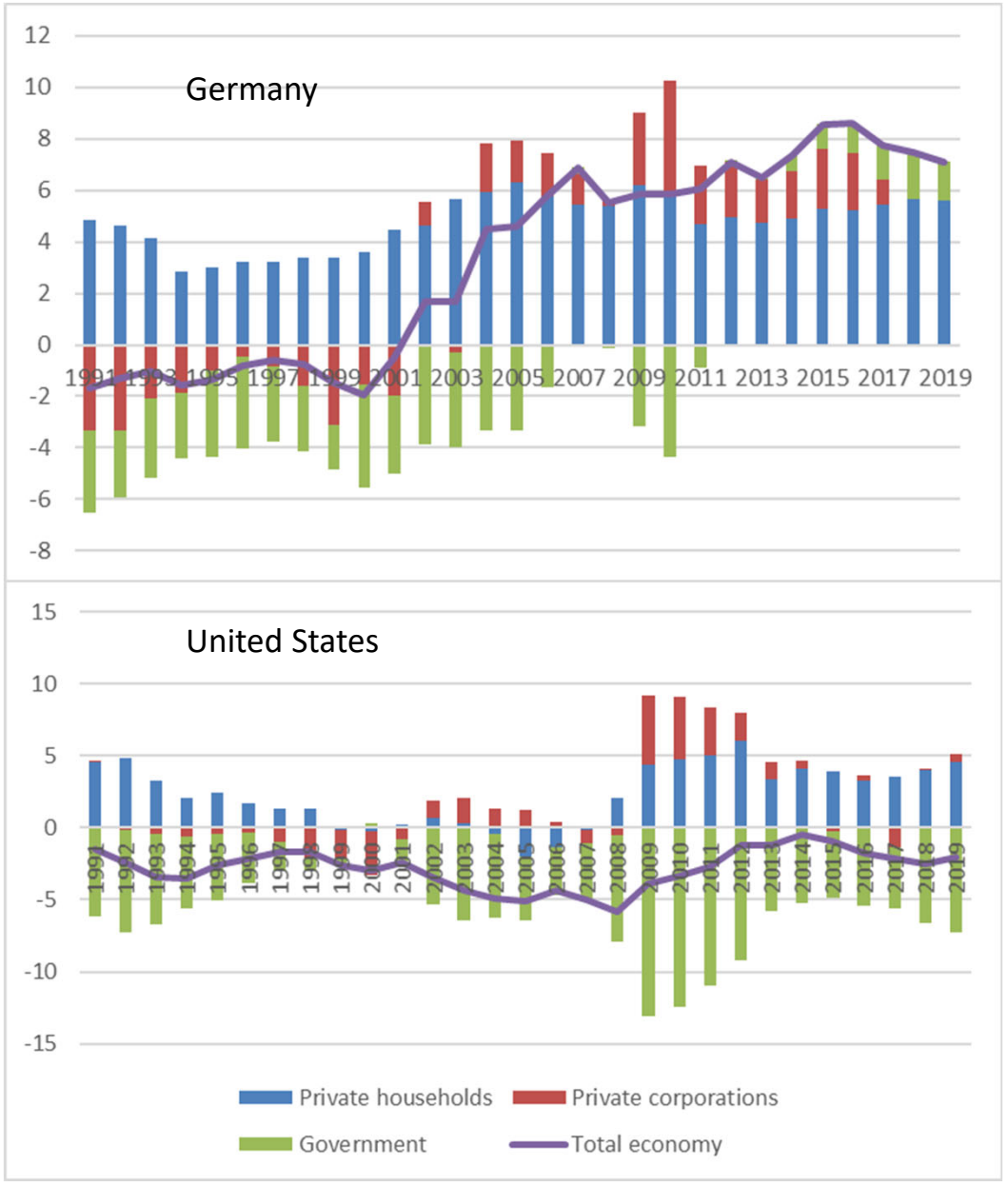
(Behringer and van Treeck, 2018)

Table 1
Pooled OLS, non-overlapping four-year averages, 1972–2007.

Regressors	(1) CA	(2) CA	(3) CA	(4) CA	(5) CA	(6) CA	(7) CA	(8) CA	(9) CA	(10) CA
Net foreign assets (% of GDP)	0.070***	0.075***	0.074***	0.075***	0.076***	0.082***	0.063***	0.085***	0.083***	0.089***
	(0.010)	(0.010)	(0.010)	(0.008)	(0.009)	(0.010)	(0.015)	(0.010)	(0.010)	(0.008)
Output per worker (rel. to top 3 economies)	0.008	0.018	0.011	−0.005	0.002	0.002	0.034*	0.012	0.006	−0.014
	(0.015)	(0.014)	(0.013)	(0.013)	(0.015)	(0.013)	(0.019)	(0.011)	(0.010)	(0.009)
Output growth	−0.170	−0.281**	−0.367**	−0.169	−0.390***	−0.411***	−0.528***	−0.484***	−0.523***	−0.441***
	(0.115)	(0.109)	(0.129)	(0.157)	(0.114)	(0.102)	(0.125)	(0.103)	(0.122)	(0.152)
Dependency ratio	−0.236*	−0.309***	−0.337***	−0.369***	−0.263**	−0.290***	−0.146	−0.350***	−0.362***	−0.448***
	(0.123)	(0.101)	(0.095)	(0.102)	(0.105)	(0.091)	(0.109)	(0.079)	(0.079)	(0.075)
Population growth	−2.492***	−2.128***	−2.189***	−2.036**	−2.639***	−2.585***	−3.077***	−2.248***	−2.314***	−2.082***
	(0.771)	(0.726)	(0.698)	(0.801)	(0.667)	(0.640)	(0.611)	(0.540)	(0.582)	(0.589)
Terms of trade gap * Trade openness	0.614	0.615	0.570	0.730	0.390	0.345	0.651	0.374	0.366	0.440
	(0.496)	(0.509)	(0.484)	(0.494)	(0.490)	(0.492)	(0.452)	(0.500)	(0.475)	(0.457)
Private credit (% of GDP)	−0.076***	−0.071**	−0.073***	−0.074***	−0.071***	−0.067**	−0.071**	−0.064**	−0.066**	−0.064**
	(0.026)	(0.026)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
Fiscal balance (% of GDP)	0.392***	0.306***	0.308***	0.282***	0.363***	0.341***	0.376***	0.269***	0.283***	0.210***
	(0.083)	(0.078)	(0.070)	(0.098)	(0.072)	(0.063)	(0.099)	(0.051)	(0.048)	(0.056)
Top 1% income share	–	−0.442***	–	–	–	–	–	−0.397**	–	–
		(0.147)						(0.140)		
Top 5% income share	–	–	−0.291***	–	–	–	–	–	−0.242**	–
			(0.095)						(0.089)	
Gini coefficient	–	–	–	−0.210***	–	–	–	–	–	−0.237***
				(0.064)						(0.056)
Total economy wage share	–	–	–	–	−0.181**	–	–	–	–	–
					(0.071)					
Private sector wage share	–	–	–	–	–	−0.201***	–	−0.180***	−0.158**	−0.228***
						(0.057)		(0.057)	(0.059)	(0.053)
Manufacturing sector wage share	–	–	–	–	–	–	−0.170***	–	–	–
							(0.039)			
Observations	128	128	128	128	128	128	113	128	128	128
Countries	20	20	20	20	20	20	20	20	20	20
Adj. R-squared	0.588	0.636	0.644	0.636	0.608	0.634	0.594	0.672	0.670	0.697
Root mean squared error	0.027	0.026	0.025	0.026	0.027	0.026	0.026	0.024	0.024	0.023

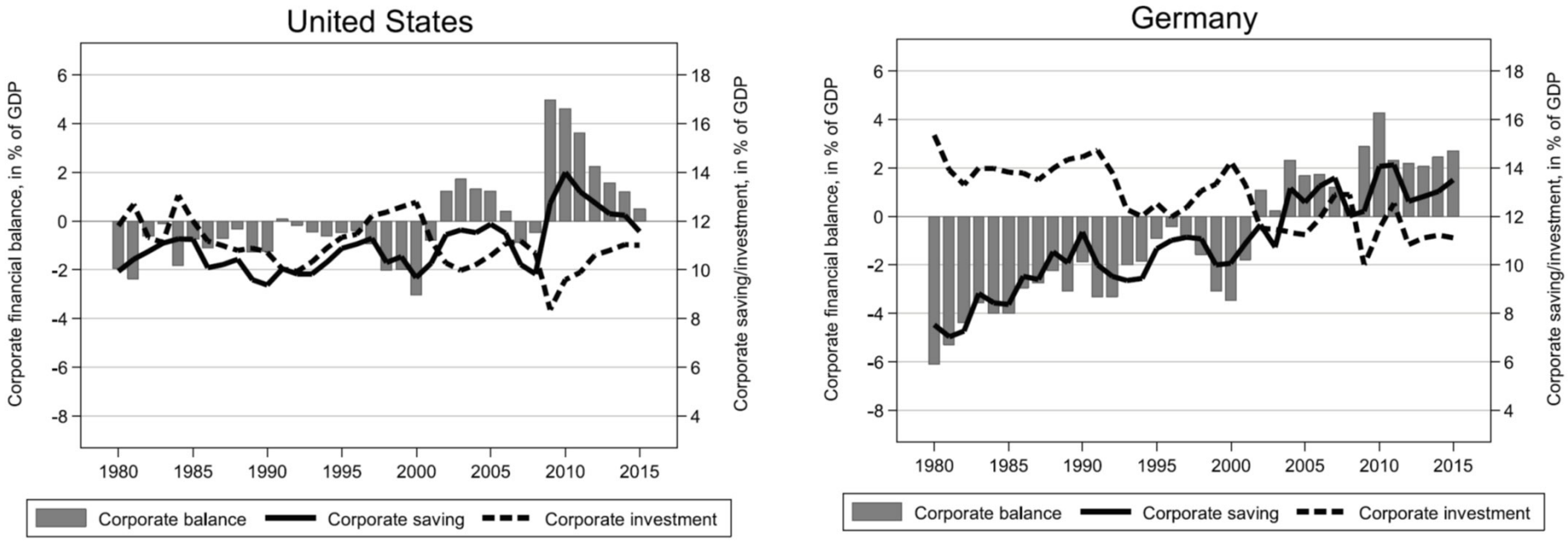
Note: CA is the current account balance in % of GDP. All regressions are estimated by pooled OLS. Standard errors in parantheses are corrected for heteroskedasticity and autocorrelation of the error term. All estimations include a constant term. *, **, and *** denotes significance at 10%, 5%, and 1% levels, respectively. See Appendix A.1 for a detailed description of the data.

Sectoral financial balances, in % of GDP



Behringer/van Treeck (2019)

Why has corporate saving increased so much more strongly in Germany?



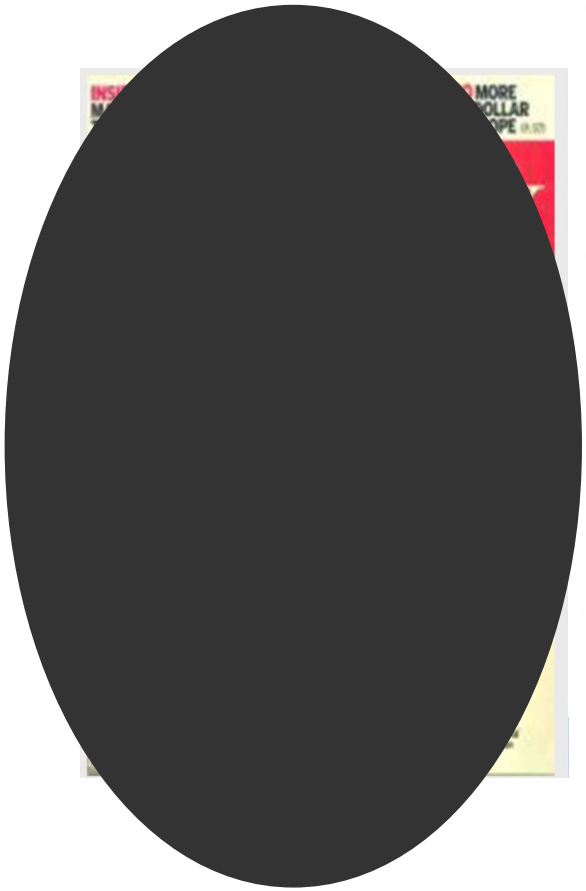
Behringer/van Treeck (2019)

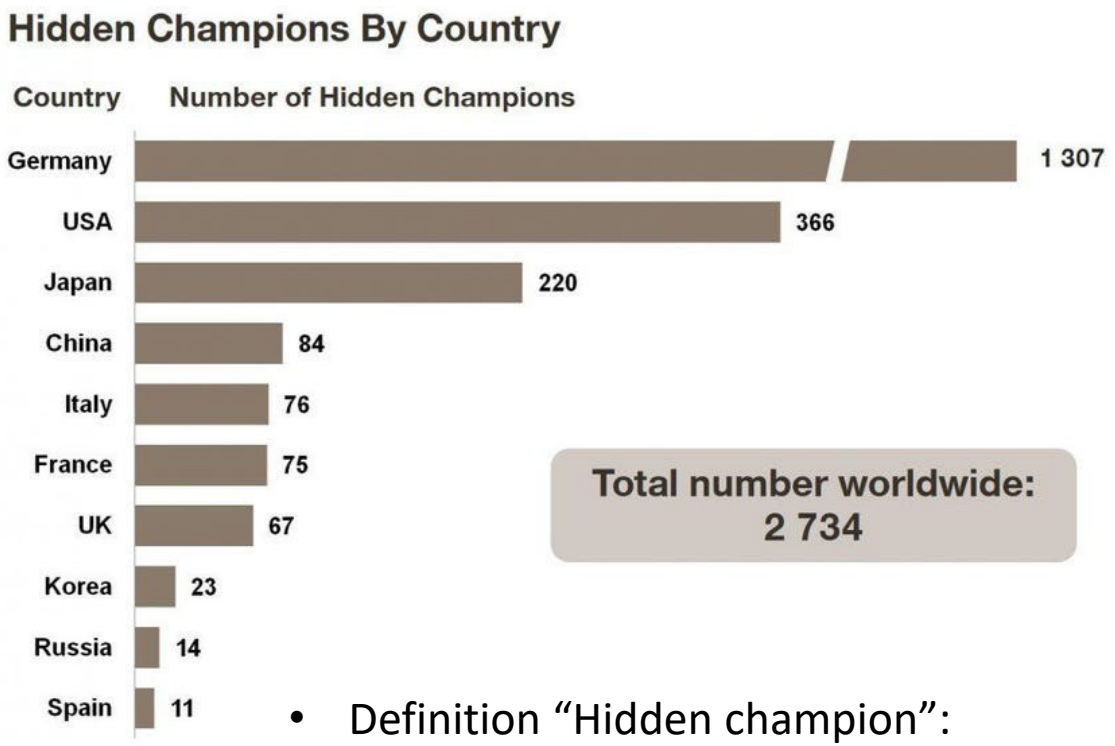
- Candidate explanations:
  - Lower overall wage share
  - Lower top executive pay
  - Lower dividends and share buybacks

  → Importance of family firms, co-determination

Aminadav/Papaoiannou (2019, The Journal of Finance)

Germany: The „Hidden Champions“ phenomenon…

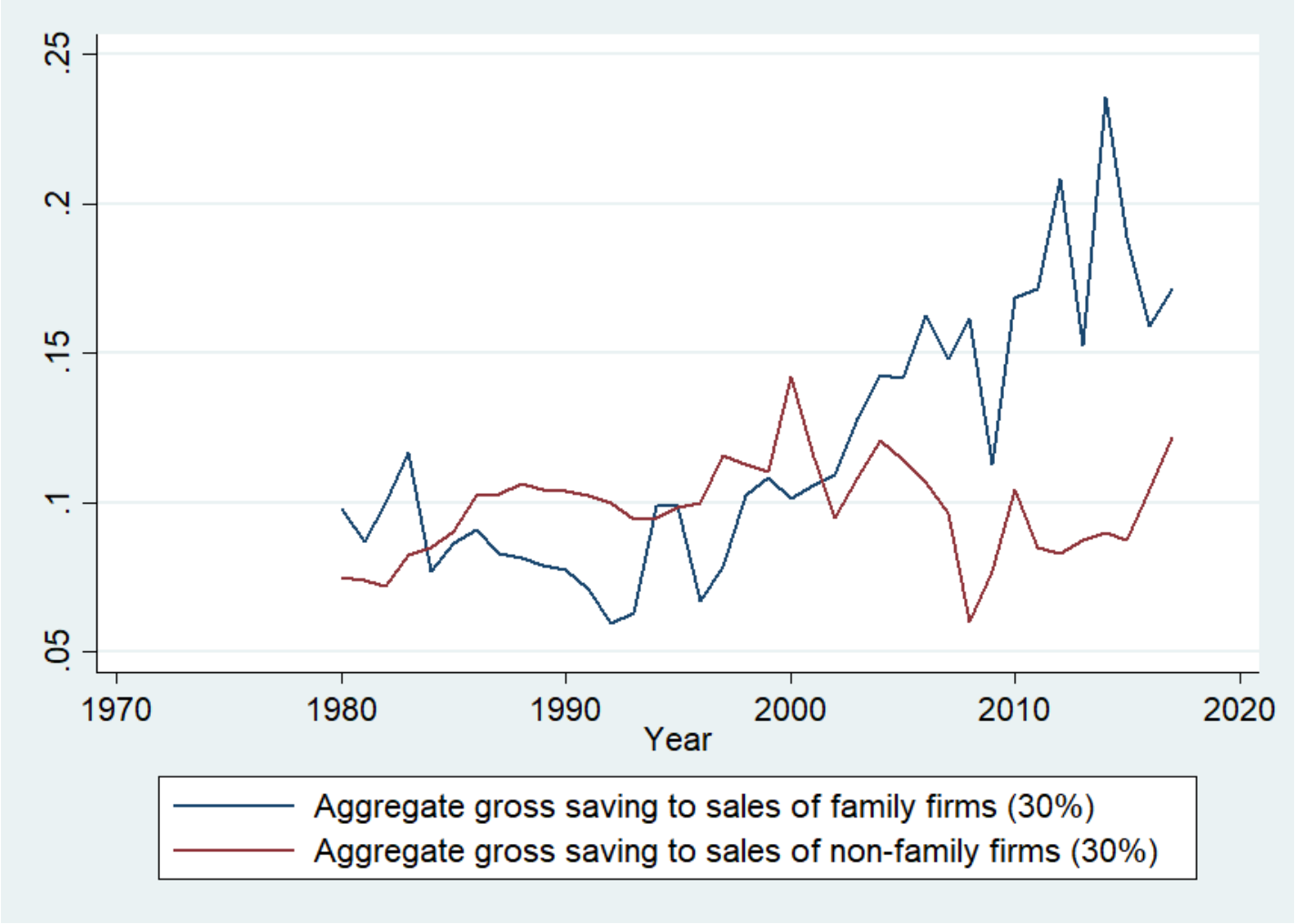




- Definition “Hidden champion”:
  - Global (continental) Market share: top 3 (1)
  - Operating revenue < $5 billion
  - Low level of public awareness

Simon (2021)

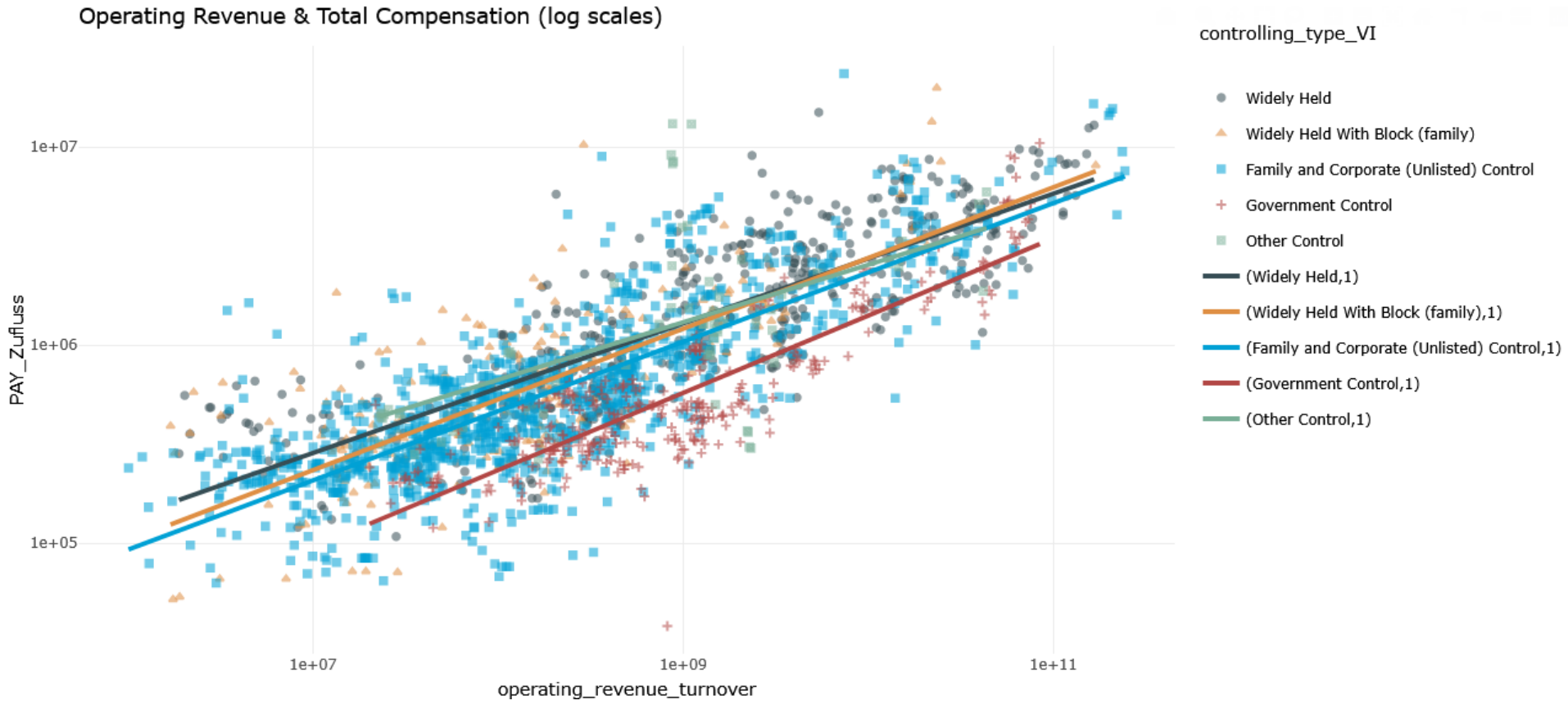
…top family incomes hidden behind the corporate veil…



Behringer/van Treeck/Victor, work in progress

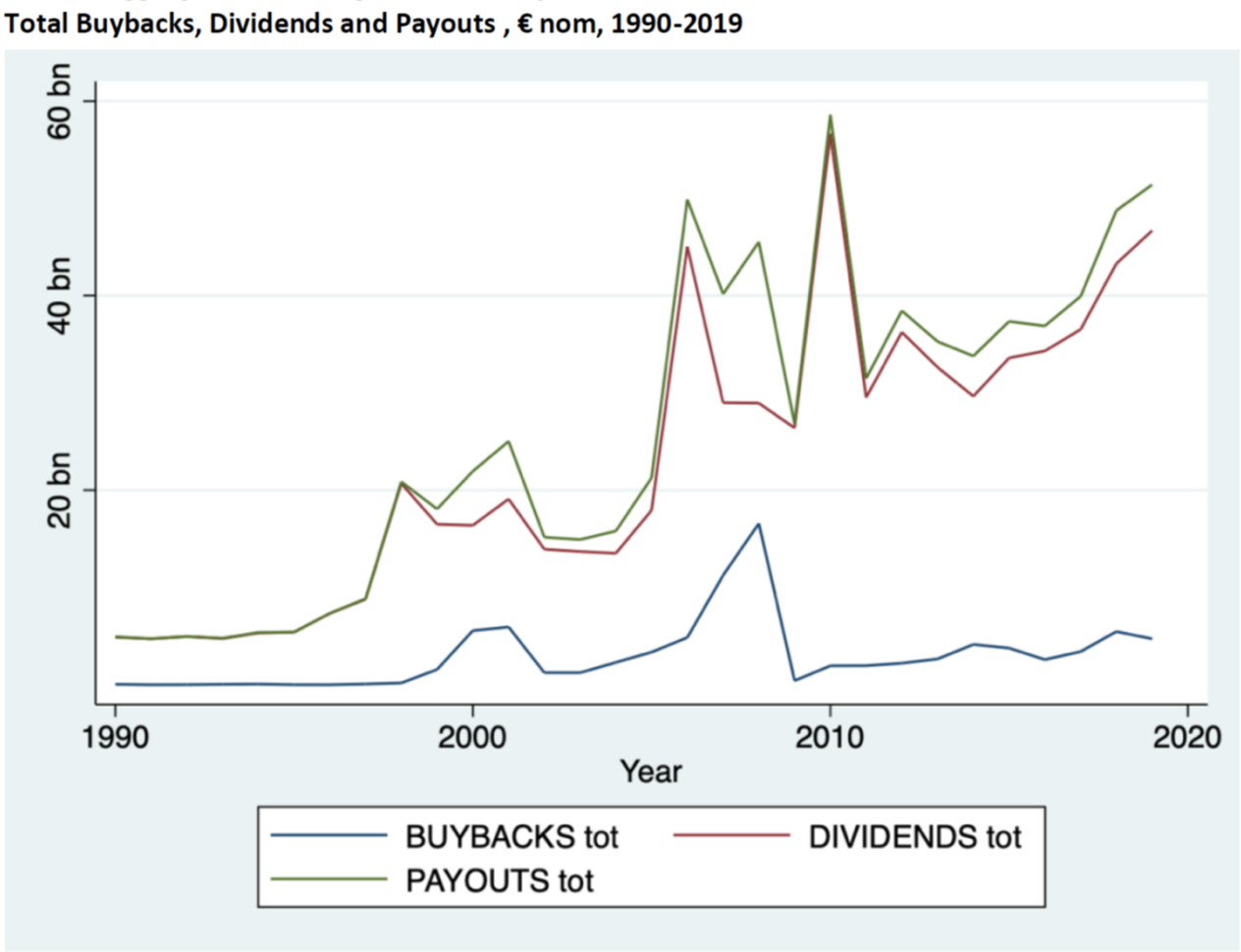
…comparatively low top executive pay, especially in family firms…

Realized annual compensation for CEOs at approx. 400 listed and unlisted German firms



Behringer/List/van Treeck (work in progress)

…almost non-existent share buybacks.



Behringer, Giovanazzi, van Treeck (work inprogress)

Why has household saving decreased so much more strongly in the U.S.?

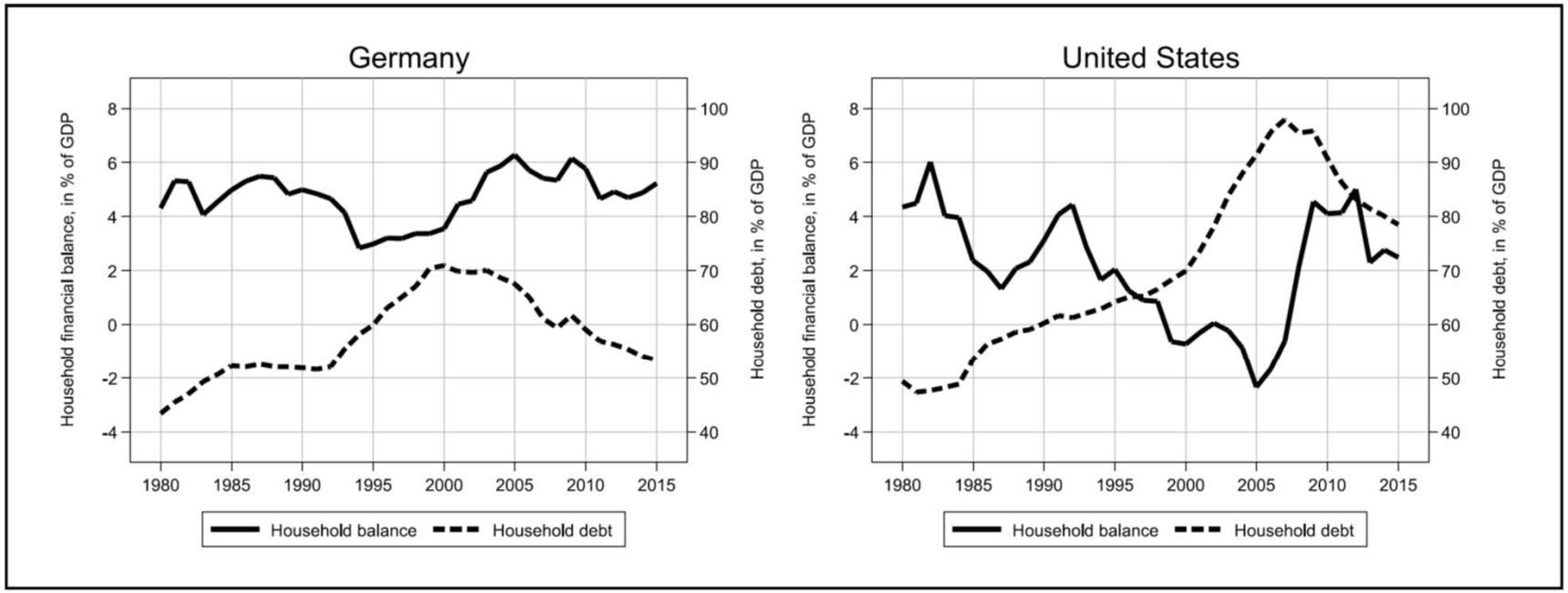
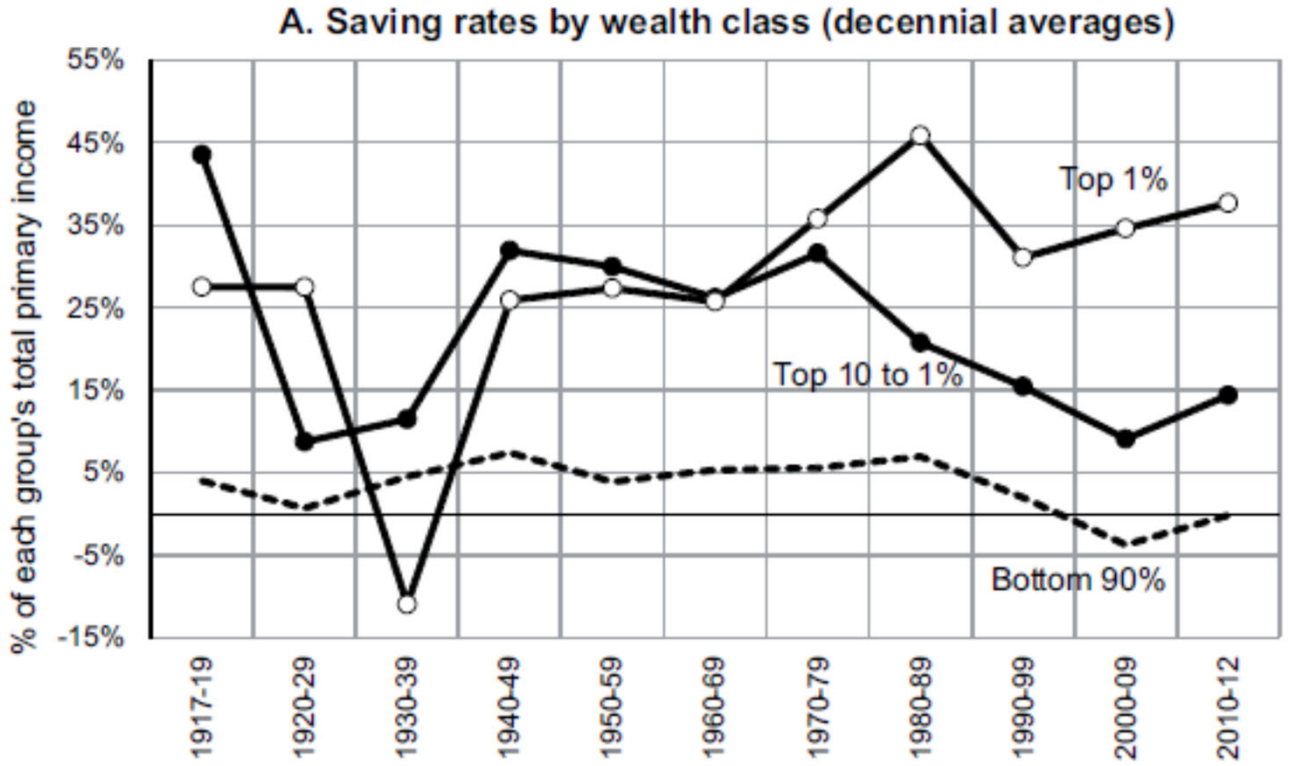


Figure 7. Household Balance and Debt.
Source: See App. A.

Behringer/van Treeck (2019)

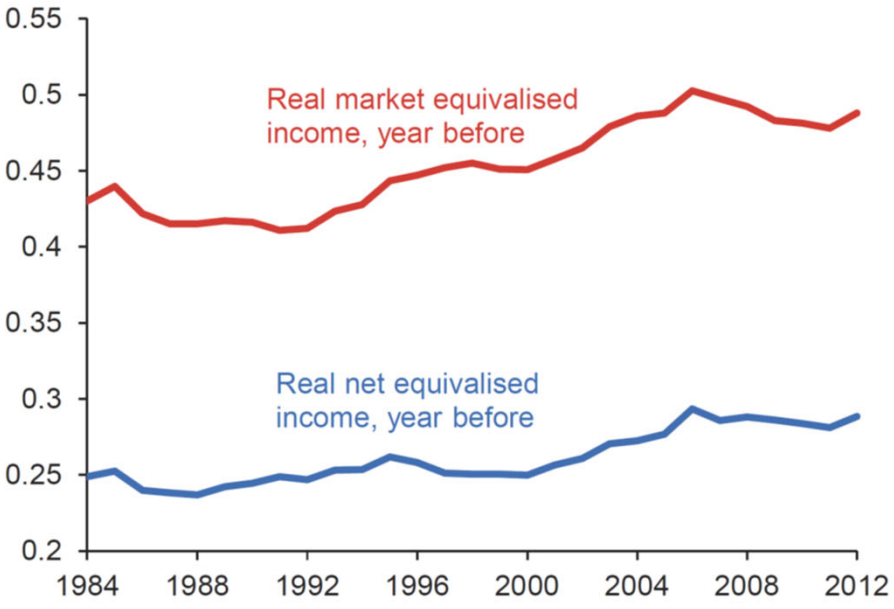
The fall in the U.S. aggregate saving rate is driven by the dissaving of the upper middle/lower upper class



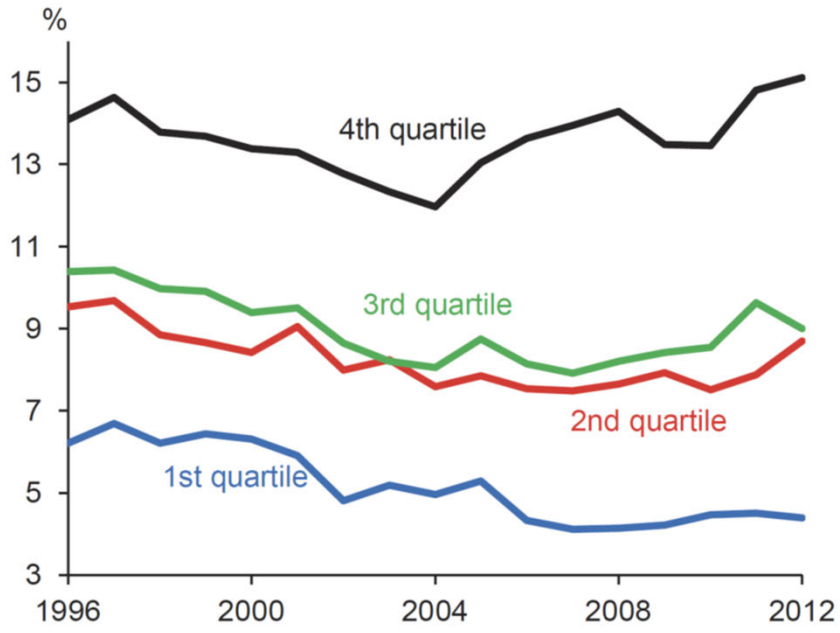
Saez and Zucman (2016)

Neoliberalism in Germany did not affect (upper) middle income groups as much, as the top household income share remained stable despite a strong increase in Gini coefficients and the social safety net for the core workforce (not for lower income groups) remained more or less intact

a) Gini income coefficients Germany[1]



b) SOEP savings rates by income quartiles[2]



Quelle: Behringer/Theobald/van Treeck (2014)

Why do Americans work so much more than Germans?

The Great Reversal: Today high-wage workers more often work very long hours than low-wage workers

Table 1
Fraction of Men Usually Working Long (≥ 50) Hours

	1979	1989	2000	2006
All men	.161	.193	.190	.178
Full-time men (≥ 30 hours)	.164	.199	.207	.195
Salaried	.244	.312	.320	.301
Hourly	.086	.094	.105	.096
Ages 25–34	.171	.197	.196	.167
Ages 35–44	.185	.221	.222	.208
Ages 45–54	.154	.193	.216	.213
Ages 55–64	.128	.154	.178	.191
Less than high school	.124	.121	.116	.099
High school graduates	.137	.155	.149	.153
Some college	.166	.190	.194	.182
College graduate	.240	.303	.312	.278
Average hourly earnings quintile:				
1 (highest wage)	.151	.243	.297	.268
2	.137	.193	.214	.219
3	.132	.176	.199	.189
4	.176	.202	.184	.172
5 (lowest wage)	.217	.186	.151	.133

NOTE.—Sample is employed men who are not self-employed, ages 25–64.

Kuhn and Lozano (2008)

…but not for college-graduates!

TABLE V
MEANS OF TIME-USE CATEGORIES BY EDUCATIONAL ATTAINMENT

	Means of time use							
	Men				Women			
Year/Category	<12[a]	12	13–15	16+	<12	12	13–15	16+
Panel 1: Total market work								
1965	51.10	52.91	52.44	49.37	17.87	22.91	21.65	26.63
1985	43.79	42.84	46.13	41.65	18.22	23.60	25.61	25.93
2003	33.08	39.22	39.81	44.96	15.44	24.94	28.17	30.89
Change 1965–2003	−18.02	−13.69	−12.63	−4.41	−2.43	2.03	6.52	4.26
Panel 2: Total nonmarket work								
1965	9.49	9.11	9.71	10.61	36.28	33.42	32.01	29.33
1985	13.76	13.39	14.04	14.89	28.89	27.54	26.84	24.79
2003	12.92	13.59	13.26	13.73	26.18	22.61	20.56	20.82
Change 1965–2003	3.43	4.48	3.55	3.12	−10.10	−10.81	−11.45	−8.51
Panel 3: Leisure 2								
1965	104.12	101.66	99.21	101.64	105.70	101.82	102.47	101.77
1985	106.94	107.53	105.03	107.02	113.16	108.66	107.09	105.99
2003	116.34	108.94	105.42	101.44	113.58	108.13	105.20	103.10
Change 1965–2003	12.22	7.28	6.21	−0.20	7.88	6.31	2.73	1.33

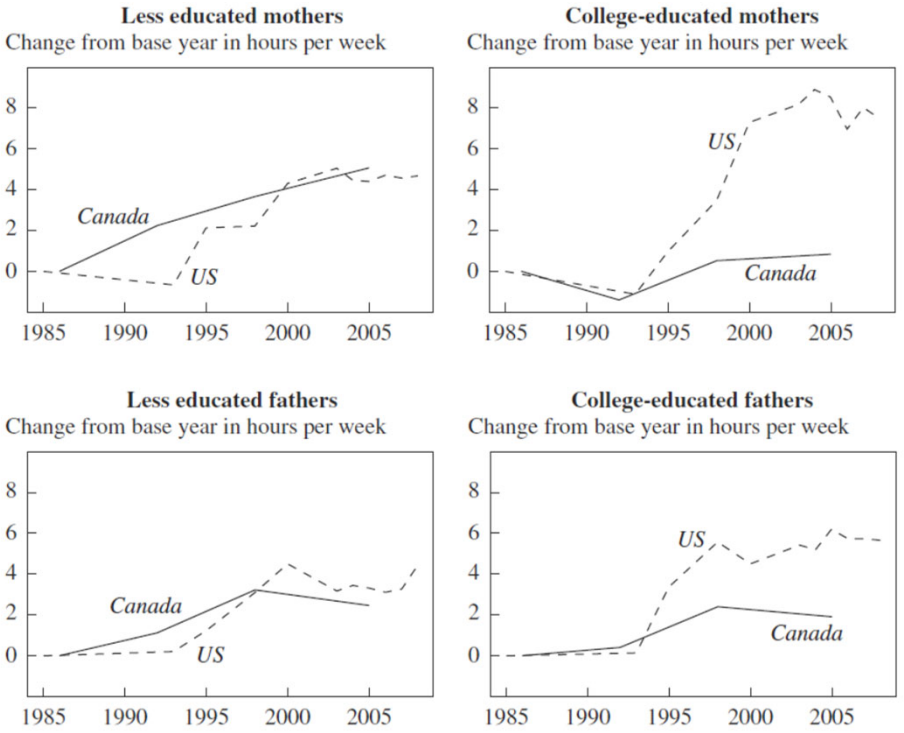
This table reports the hours per week spent in different activities by education and sex category for 1965, 1985, and 2003. All means are calculated using fixed demographic weights, as described in the text. See Table I for sample restrictions and Table IX for definitions of activity categories.

a <12, 12, 13–15, and 16+ indicate years of schooling.

Aguiar and Hurst (2007)

The rise of helicopter parenting among college-educated U.S. Americans

Figure 9. Cumulative Changes in Time Spent on Care in Canada and the United States, 1985–2008[a]



Source: Authors' estimates from regression results reported in table 1, columns 1-1 and 1-3, and table 4, columns 4-1 and 4-3.

a. Care is childcare in the United States, total family care (care of children and adults) in Canada. Hours are normalized to zero for each group in the initial year, 1985 for the United States and 1986 for Canada.

College-educated mothers (fathers) in the U.S. have increased time spent on child care by about 8 (6) hours per week in 1985-2008.

Ramey and Ramey (2010)

Table 1: Hours worked

	Dependent variable: Ln(Hours worked per worker)					
	(1)	(2)	(3)	(4)	(5)	(6)
Ln(GDP per hour worked)	-0.132***	-0.131***	-0.143***	-0.071***	-0.140***	-0.098***
	(0.013)	(0.011)	(0.013)	(0.017)	(0.014)	(0.029)
GDP growth	0.087***	0.101***	0.111***	0.094***	0.100**	0.123***
	(0.030)	(0.032)	(0.032)	(0.029)	(0.042)	(0.043)
Union density	-0.049***	-0.074***	-0.062***	0.052	-0.039**	0.029
	(0.018)	(0.016)	(0.018)	(0.038)	(0.018)	(0.038)
Female employment rate	-0.239***	-0.216***	-0.190***	-0.235***	-0.283***	-0.267***
	(0.028)	(0.026)	(0.028)	(0.029)	(0.030)	(0.041)
Labor income tax rate	-0.308***	-0.361***		-0.035	-0.319***	-0.032
	(0.045)	(0.045)		(0.060)	(0.044)	(0.062)
Top 1% income share	0.298***		0.349***	0.166***	0.268***	0.132**
	(0.068)		(0.075)	(0.058)	(0.070)	(0.059)
Constant	8.161***	8.199***	8.080***	7.804***	8.190***	7.930***
	(0.047)	(0.043)	(0.046)	(0.080)	(0.053)	(0.130)
Country fixed effects	No	No	No	Yes	No	Yes
Year fixed effects	No	No	No	No	Yes	Yes
Observations	429	429	429	429	429	429
Countries	18	18	18	18	18	18
R-squared	0.743	0.706	0.644	0.957	0.760	0.960
RMSE	0.043	0.045	0.050	0.017	0.041	0.017

Note: The dependent variable is the natural logarithm of hours worked per worker. All regressions are estimated by GLS with a panel-wide AR(1) correction. Heteroskedasticity robust standard errors are reported in parentheses. All explanatory variables are lagged by one period. *, **, and *** denotes significance at 10%, 5%, and 1% levels, respectively.

Table 2: Hours worked, wage bargaining and government transfers

	Dependent variable: Ln(Hours worked per worker)				
	(1)	(2)	(3)	(4)	(5)
Ln(GDP per hour worked)	-0.121***	-0.131***	-0.133***	-0.128***	-0.119***
	(0.013)	(0.012)	(0.012)	(0.013)	(0.013)
GDP growth	0.084***	0.056*	0.090***	0.050	0.056*
	(0.031)	(0.034)	(0.035)	(0.031)	(0.034)
Union density	-0.028	-0.028	-0.043**	-0.011	0.008
	(0.019)	(0.019)	(0.017)	(0.021)	(0.021)
Female employment rate	-0.232***	-0.296***	-0.298***	-0.265***	-0.252***
	(0.027)	(0.029)	(0.030)	(0.030)	(0.032)
Labor income tax rate	-0.287***	-0.286***	-0.359***	-0.254***	-0.254***
	(0.044)	(0.056)	(0.055)	(0.051)	(0.056)
Top 1% income share	0.246***	0.277***	0.297***	0.224***	0.178***
	(0.067)	(0.069)	(0.068)	(0.067)	(0.066)
Centralization of wage bargaining	-0.048***				-0.041***
	(0.015)				(0.015)
Social transfers in % of GDP		-0.159**			
		(0.068)			
Social transfers in cash in % of GDP			0.008		0.070
			(0.115)		(0.127)
Social transfers in kind in % of GDP				-0.473***	-0.476***
				(0.122)	(0.135)
Constant	8.130***	8.226***	8.217***	8.199***	8.168***
	(0.047)	(0.046)	(0.045)	(0.048)	(0.046)
Fixed effects	No	No	No	No	No
Observations	429	372	372	372	372
Countries	18	18	18	18	18
R-squared	0.749	0.804	0.793	0.825	0.828
RMSE	0.042	0.039	0.040	0.037	0.037

Note: The dependent variable is the natural logarithm of hours worked per worker. All regressions are estimated by GLS with a panel-wide AR(1) correction. Heteroskedasticity robust standard errors are reported in parentheses. All explanatory variables are lagged by one period. *, **, and *** denotes significance at 10%, 5%, and 1% levels, respectively.

Some conclusions

- The interaction of LME-/CME-specific institutions and shifts in income distribution has produced very different (but equally unsustainable) macroeconomic growth models since the 1980s
  - Debt-led/-burdened growth in the U.S.
  - Export-led/-dependent growth in Germany
- Both varieties of capitalism/growth models are exhausted. We are in an interregnum.
- It will take massive but different government actions to correct the dysfunctionalities in the corporate and household sectors in the U.S. (LMEs) and Germany (CMEs).
- Studying preconditions and effects of shorter working hours (in different growth models) could be an important contribution of the social sciences to the climate debate.