The Historical-Accounting Approach to Empirical Macroeconomics

Joshua William Mason and Arjun Jayadev

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"What is the most convincing evidence for monetary nonneutrality? When we ask prominent macroeconomists this question, the three most common answers have been: . . . the role of monetary policy in the severity of the Great Depression; the Volcker disinflation of the early 1980s and accompanying twin recession; and the sharp break in the volatility of the US real exchange rate accompanying the breakdown of the Bretton Woods system. . .

It is interesting that . . . **these pieces of evidence . . . are large historical events often cited without reference to modern econometric analysis**. . . Conspicuous by its absence is any mention of evidence from vector autoregressions, even though such methods have dominated the empirical literature for quite some time. Clearly, **there is a disconnect between what monetary economists find convincing and what many of them do in their own research**."

(Nakamura and Steinsson 2020)

"Formal econometric work has had little impact on the growth of economic knowledge... successful pieces of pragmatic empirical work have three elements in common...

First and foremost, in each case, **the bottom line was a stylized fact or collection of stylized facts** characterizing an aspect of how the world worked rather than parameter estimates or formal tests of a point hypothesis. ...

Second, pragmatic pieces of empirical work produce regularities of a kind that theory can seek to explain. ...

Third, successful pieces of pragmatic empirical work have no scientific pretense...

Friedman and Schwartz's treatment of the 1937 downturn is surely more convincing as a demonstration that financial disturbances have important effects on real economic activity than any Granger causality test."

(Summers 1991)

Historical accounting approach

Object of inquiry is concrete historical development

- may be purely descriptive - this is ok!
- causal questions are "reverse" rather than "forward" causal

Uses explicit accounting framework

- necessary to fully partition causal space
- decomposition is core technique

Framed in terms of observable variables

- always aggregates, usually monetary
- rules out microfoundations and welfare analysis
- calls for deep familiarity with definition and measurement of variables

Object of inquiry is concrete development

Describing *what happened* is essential part of social science

- specific outcome *or* variation over defined universe
- no notion of underlying data generating process
- quantitative material may be descriptive or *reverse-causal*

“Causes of effects” rather than “effects of causes”

“why did y occur?” rather than “what would happen as a result of a change in x?”

- requires complete partition of causal space
  - no ceteris paribus conditions
- requires explicit counterfactual or baseline
  - want to explicitly say how much of relevant variaiton is attributable to each cause

avoids “piranha problems” (Tosh et al 2022)

Uses accounting relationships

- National accounting as core paradigm for macroeconomics
  - consistent measurement and classification is critical
- Decomposition as key empirical technique
  - need identity in right form that splits variation in interesting way
- Decompositions may be based on:
  - statistical relationship (e.g. variance decomposition)
  - accounting relationship
  - simple classification
  - previously established forward-causal relationship (e.g. Oaxaca decomposition)
- As preliminary to forward-causal questions, decomposition tells us *where* to look
  - otherwise, danger of explaining non-existent facts

Framed in terms of observable variables

Lucas (1980):

- explicitly rejects the idea that economic theory is "a collection of assertions about the actual economy."
- should be seen as "the provision of fully articulated, artificial economic systems that can serve as laboratories"

Alternative is to treat observables themselves as object

In a sense, question is what social process led person at statistical agency to enter this particular number in a form

Local, reduced-form, partial-equilibrium relationships are useful

- Phillips curve
- Okun's law
- etc.

What problems are we trying to solve?

1. Macroeconomics can be historical without being mere chronology
2. Need to better articulate case for descriptive and decomposition-based work - production of facts is undervalued!
3. Constructing a coherent narrative is another way to validate theory
4. A broader range of empirical approaches should be part of economics training; regression should be taught sample-first rather than population first, as generalization of scatterplot
5. National accounting should be central to macroeconomics

Goal is to be more conscious about what we already do!

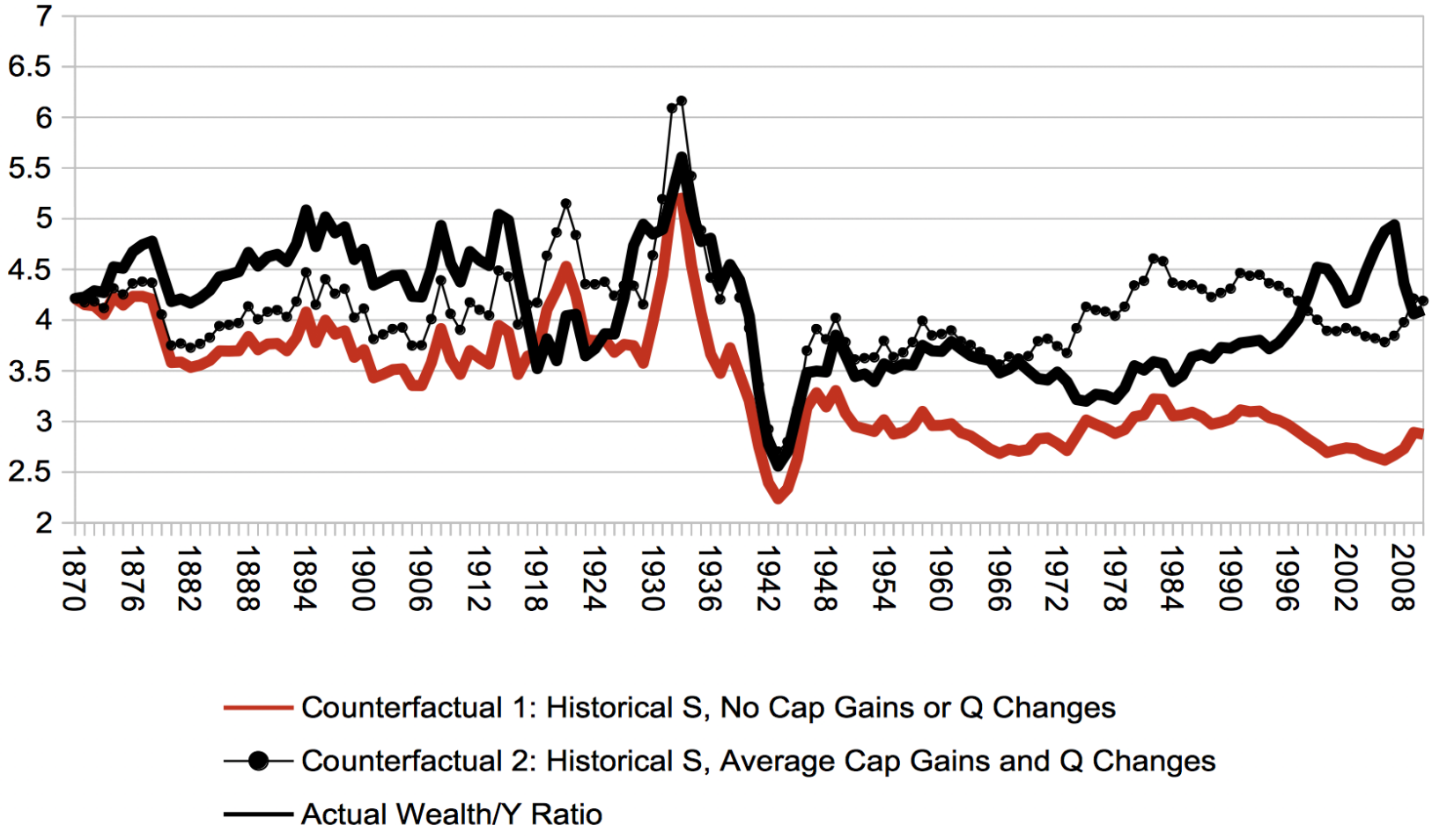
Examples

1. "Domesticated" and "wild" Piketty
2. Changes in state-local balance sheets
3. Older vs newer work on minimum wage
4. Incomes and expenditure switching in European trade balances
5. The fall in labor force participation after 2007
6. Dynamics of public debt

Example 1: Piketty

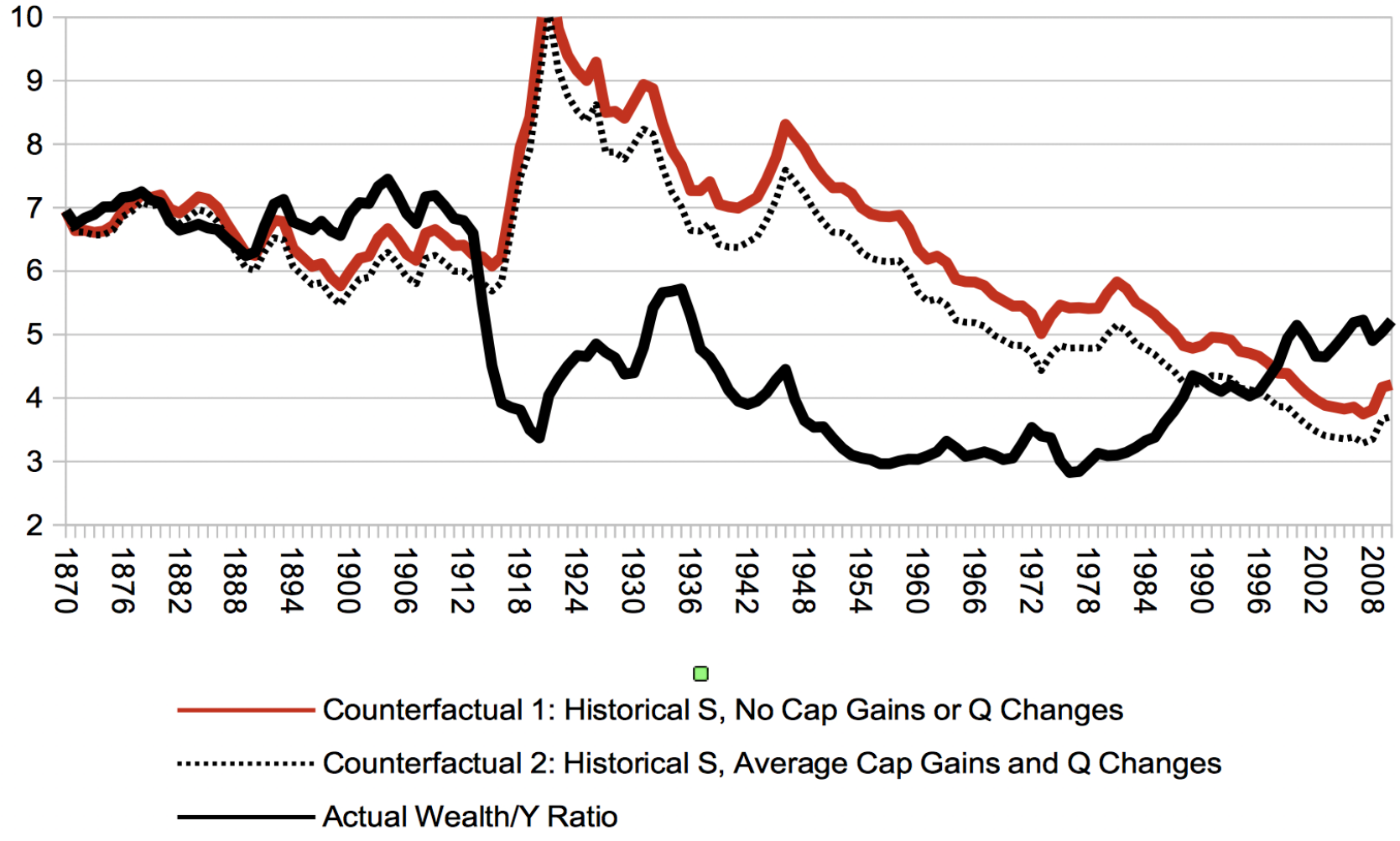
His *model* says it is all about accumulation: r $>$ g!

His *accounting* says it is all about valuation changes



Example 1: Piketty

Actual W/Y for the UK and counterfactuals with no and fixed valuation changes



Example 2: State-Local Balance Sheets

Table 6: Decomposition of Across-State Debt-Growth Variance, Two Periods

	1981-1986	2008-2010
St. Dev. of Debt Ratio Change	0.44	0.29
Share of variance attributable to...		
Nominal Growth (-)	-0.11	0.05
Borrowing	1.06	0.94
Fiscal Balance (-)	-0.47	0.77
Revenue (-)	-2.18	1.38
Expenditure	1.71	-0.61
Trusts and NAFA	1.53	0.16

Source: Census of Governments, author's analysis. The analysis here excludes Alaska.

from Page, Mason and Jayadev (2019)

Example 3: Minimum wage

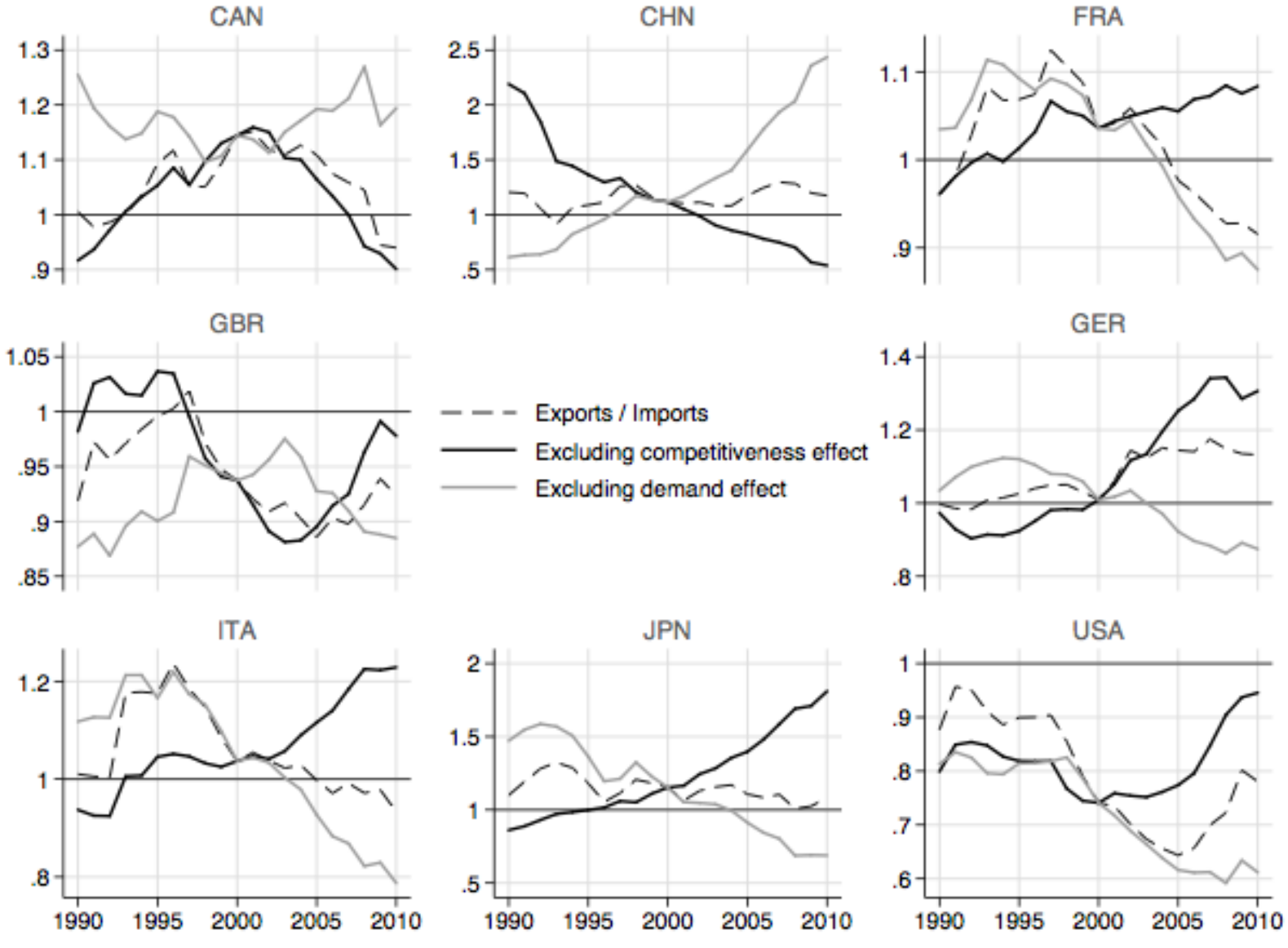
"What is the effect of a higher minimum wage on employment" is not a meaningful question.

"What is a plausible range of employment impacts of *this particular* minimum wage increase" is

Shift toward latter with synthetic controls, etc.

Example 4: Income and Expenditure Switching in Trade Balances

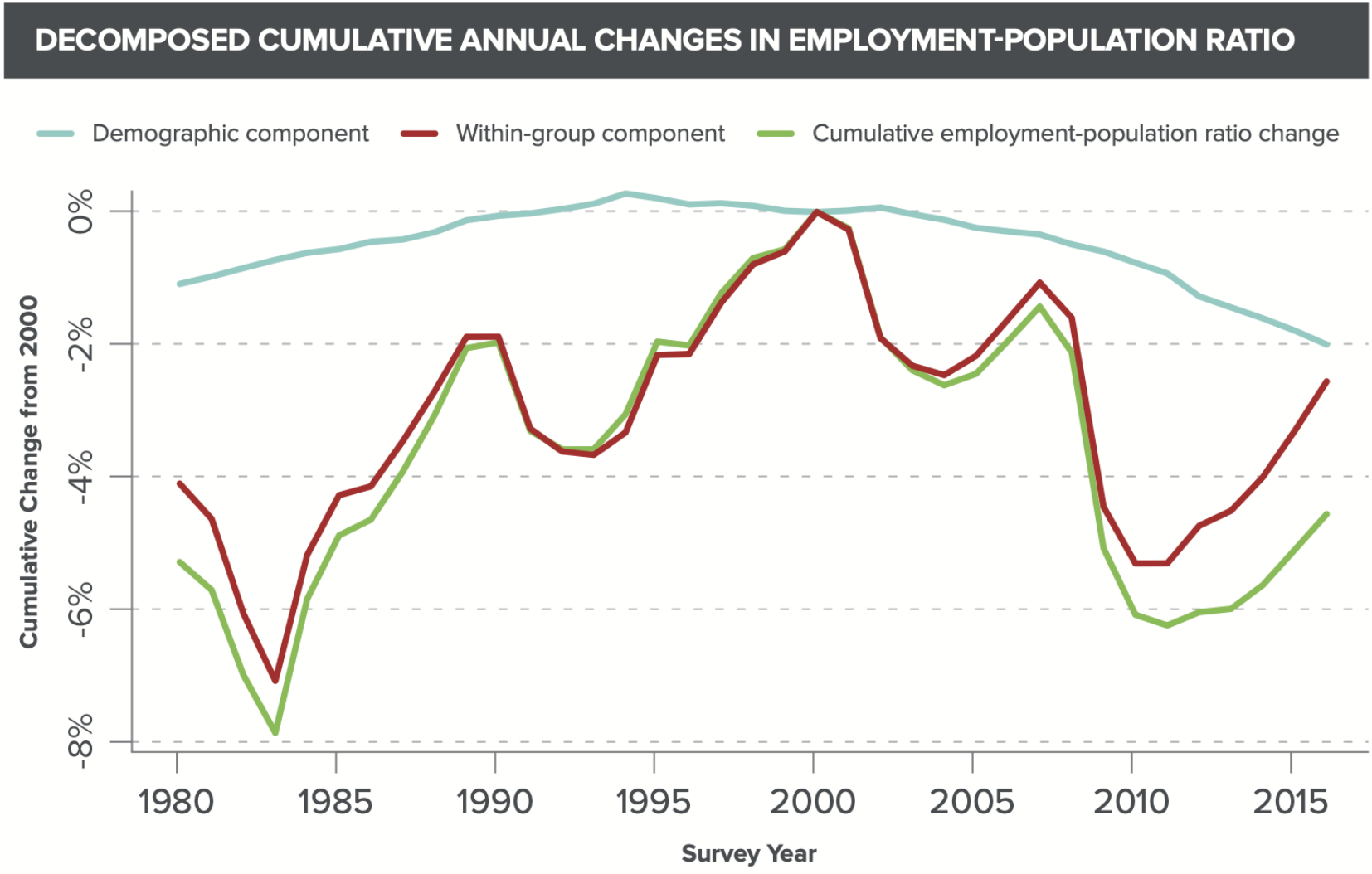
from Enno Schroeder



			2000	2009
	Germany	Demand	2,041	2,258
		Imports from EU	340	429
		Imports from Rest of World	198	235
		Germany Share	74%	71%
		EU ex-Germany Share	17%	19%
	EU ex-Germany	Demand	9,179	11,633
		Imports from Germany	387	501
		Imports from Rest of World	795	998
		Germany Share	4%	4%
		EU ex-Germany Share	87%	87%
	Ratio, Germany-EU Exports to Imports		1.14	1.17
	EU Surplus, Percent of German GDP		2.27	3.02

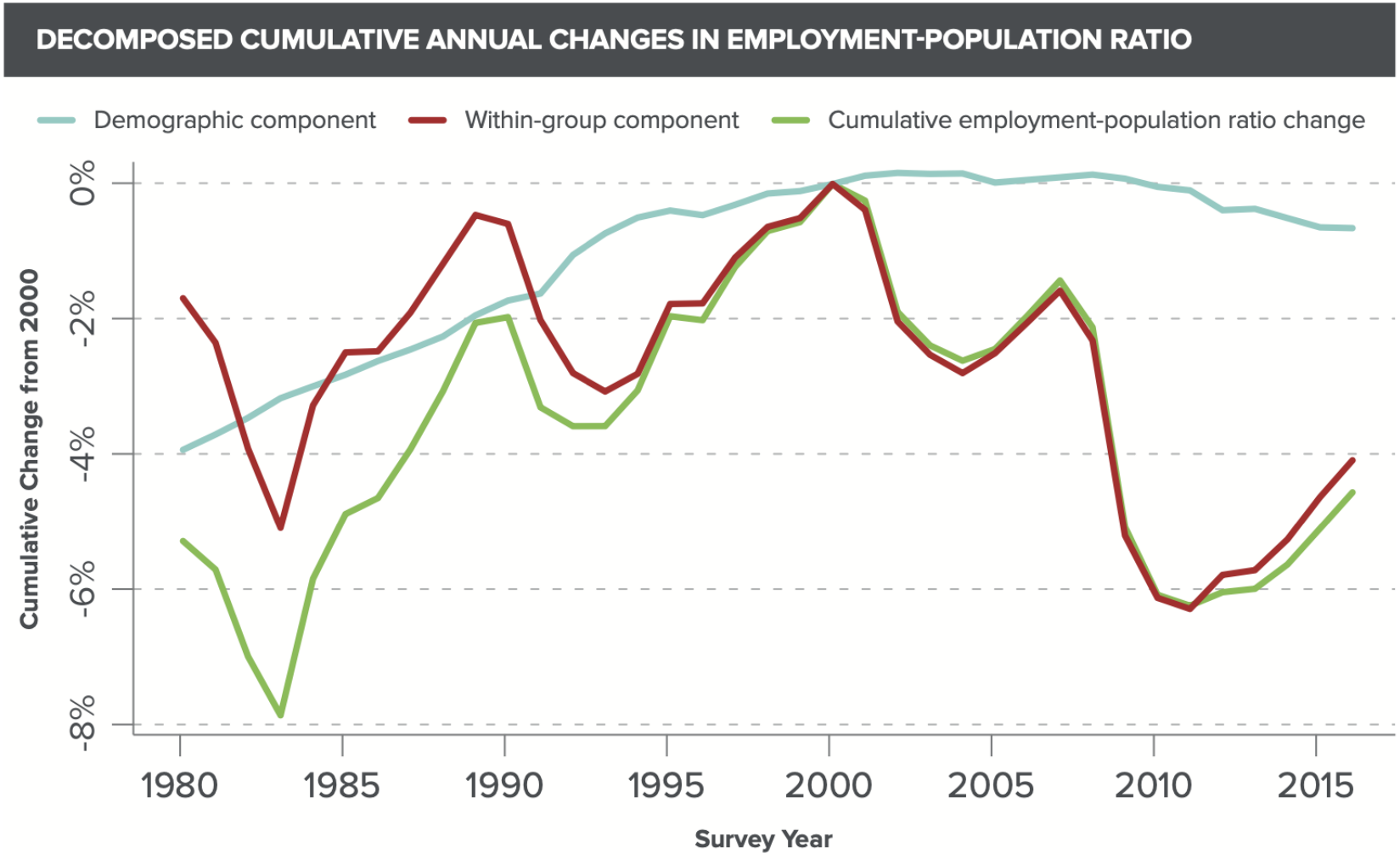
Example 5: Employment-Population Ratio

Race and sex only (Mason 2017)

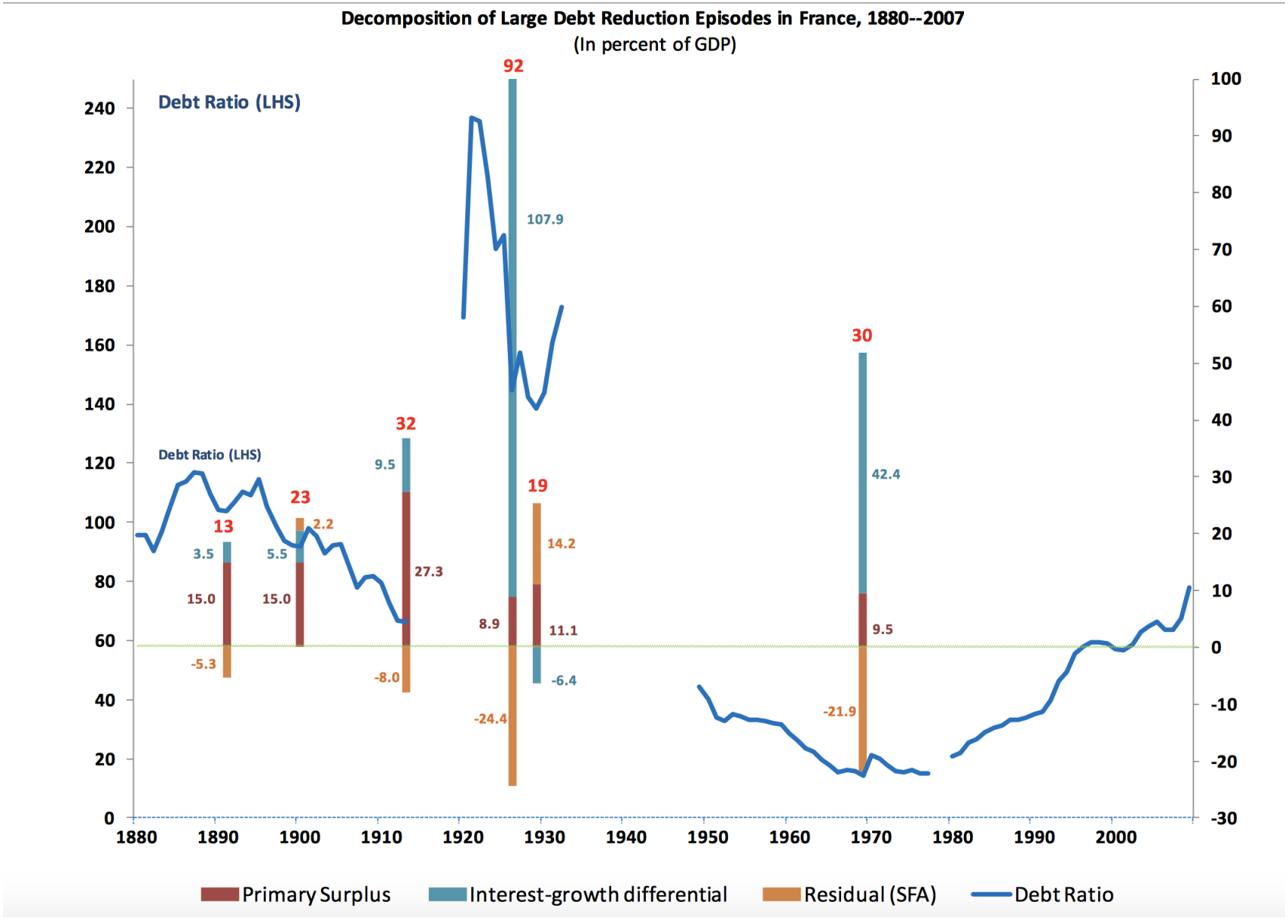


Example 5: Employment-Population Ratio

Race, sex and education (Mason 2017)



Example 6: Dynamics of Public Debt



Example 6: Dynamics of Public Debt

from Mason and Jayadev (2018)

Period	Change in debt-GDP ratio	Due to...		
		Primary balance	Interest payments	GDP growth
1950–1981	−1.6	−0.3	1.5	−3.0
1982–1989	1.8	1.0	3.4	−2.5
1990–2014	1.4	1.2	2.2	−2.0

Source. Kogan, Stone, DaSilva, and Rejeski (2015), authors' analysis.