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Inequality and financial crises*

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1. Introduction;
2. Financial crises 1911-2010;
3. Which inequality of what?
4. Empirical evidence: case studies of Nordic and Asian crises;
5. Evidence from 25 countries over 100 years
6. Interpretation: co-incident or causal?
7. What can we conclude so far?

1. Introduction

Two way relationship:

Inequality

Financial crises

DIFFERENT VIEWS:

How do crises affect inequality?

REDUCE INEQUALITY: US 1929 Great Crash: “Inequality fell between 1929 and the early years after World War II” (Williamson and Lindert, 1980, page 95).

“The share of years … that a country was exposed to a banking crisis has a substantive negative impact on top income shares” [5 year crisis reduces share of top 1 per cent by 1 percentage point]” (Roine, Vlachos and Waldenström, *Journal of Public Economics*, 2009).

How do crises affect inequality?

INCREASE INEQUALITY: “After nearly a decade of either declining or stable trend since the mid 1980s, the family income inequality in Korea sharply increased in the course of the financial crisis [of 1997], and remained high even after the economy recovered from the recession” (Lee, 2002).

“The current economic crisis has shown that it is the poor and vulnerable groups in society who are disproportionately affected by such shocks” (OECD, January 2011).

DIFFERENT VIEWS:

Does inequality increase the risk of financial crises?

NO: The indexes to three authoritative accounts of financial crises, by Kindleberger and Aliber (2005), Krugman (2009) and Reinhart and Rogoff (2009), contain neither "inequality" nor "income distribution".

The US Financial Crisis Inquiry Commission, set up in 2009 to investigate "the most significant financial crisis since the Great Depression", was charged with examining 22 specific areas. None of these refer to inequality.

Does inequality increase the risk of financial crises?

YES: According to Stiglitz, in the face of stagnating real incomes, households in the lower part of the distribution in the US borrowed to maintain a rising standard of living. This borrowing later proved unsustainable, leading to default and pressure on over-extended financial institutions.

According to Rajan, “growing income inequality in the United States stemming from unequal access to quality education led to political pressure for more housing credit. This pressure created a serious fault line that distorted lending in the financial sector.”

2. Financial crises 1911-2010

Consider:

- systemic banking crises (not limited to a few banks).

The study of crises requires long run data: “a data set that covers only twenty-five years simply cannot give one an adequate perspective” (Reinhart and Rogoff, 2009).

It requires cross-country data: “to use history to gauge the probability and size distribution of macroeconomic disasters, it is hopeless to rely on the experience of a single country” (Barro, 2009, page 246).

The data challenge: Banking crises

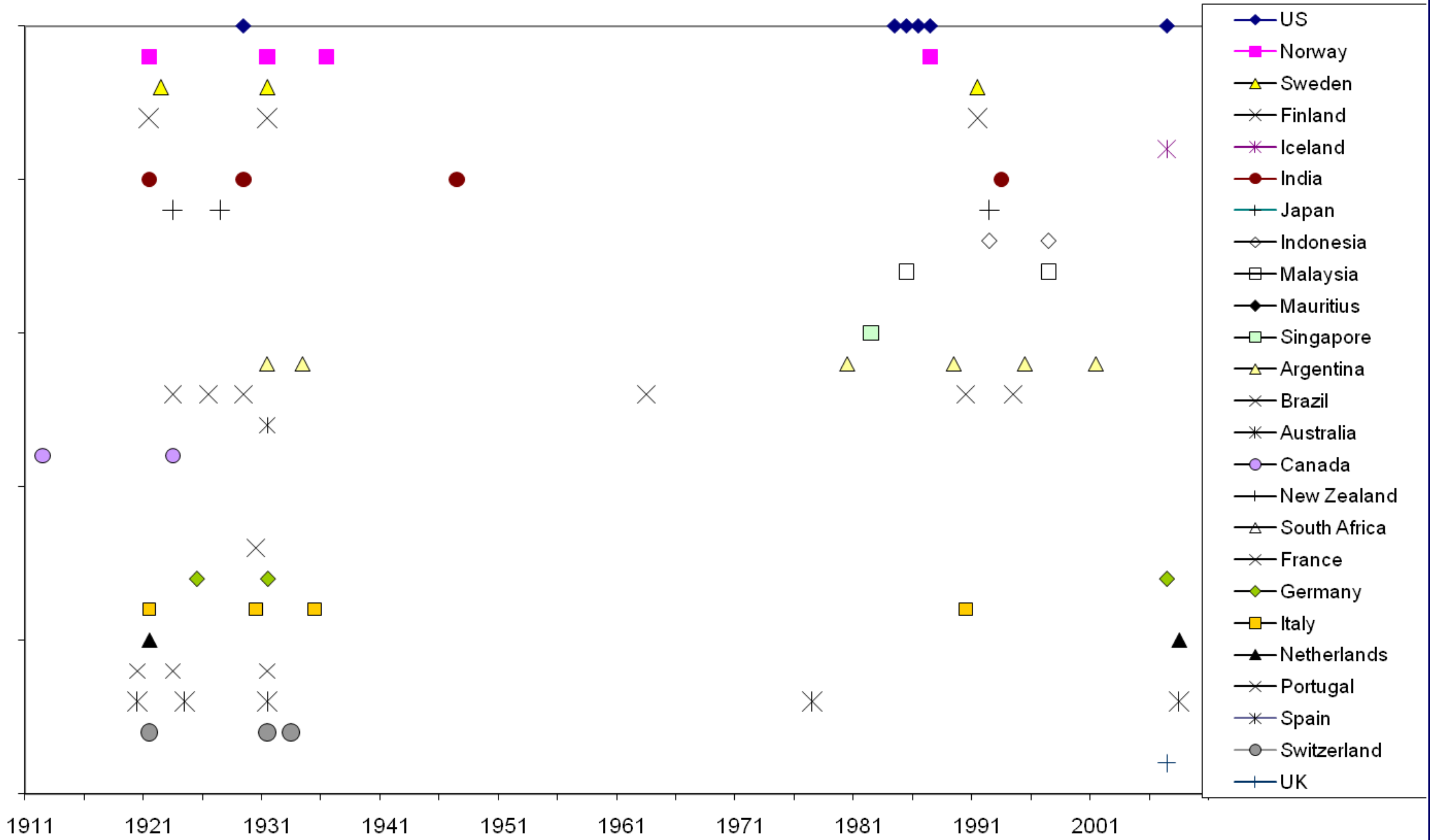
We have relied on three major sources to identify systemic banking crises:

- Bordo, Eichengreen, Klingebiel and Martinez-Peria, 2001;
- Reinhart and Rogoff, 2008, 2009 and Reinhart, 2010;
- Laeven and Valencia, 2009 and 2010.

They do not cover all the same countries or the same time periods, and they do not always agree.

We have applied a majoritarian criterion. Where there are only two entries (one data-base does not cover the country or period), and they disagree, we have in general included the crisis.

Figure 1 63 Banking crises in 25 countries over 100 years (exc war times)

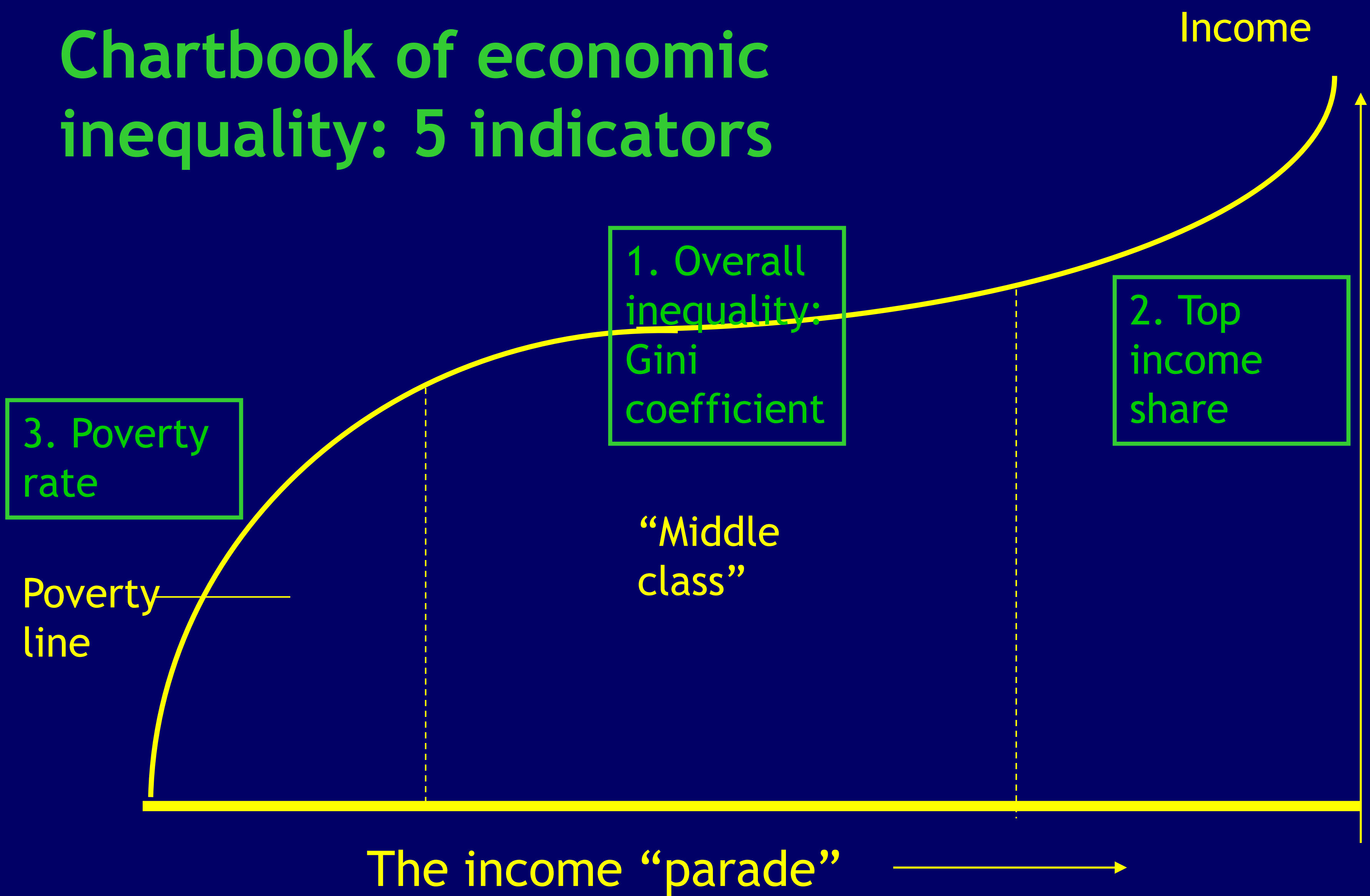


Need to clarify

3. *Which* inequality of *what*?

- Inequality of what? Earnings versus income versus consumption versus wealth;
- Snapshots versus lifetime outcomes; inequality of opportunity;
- Which part of the parade should we be watching?
- Horizontal dimensions of inequality.

Chartbook of economic inequality: 5 indicators



+ (4) top earnings decile and (5) top wealth share

Inequality: the data challenge

- Crises are rare events, so that we need a long run of years;
- To explore the impact of a crisis, we need to be able to monitor change year by year: we need annual series;
- For the present crisis, we lack up-to-date distributional data for many countries;
- For past years, we cannot simply download annual series on inequality covering a range of countries;
- Data have to be pieced together from a variety of national sources; data for earlier parts of the century are hard (or impossible) to find;
- Priority given to time series consistency over cross-country comparability.

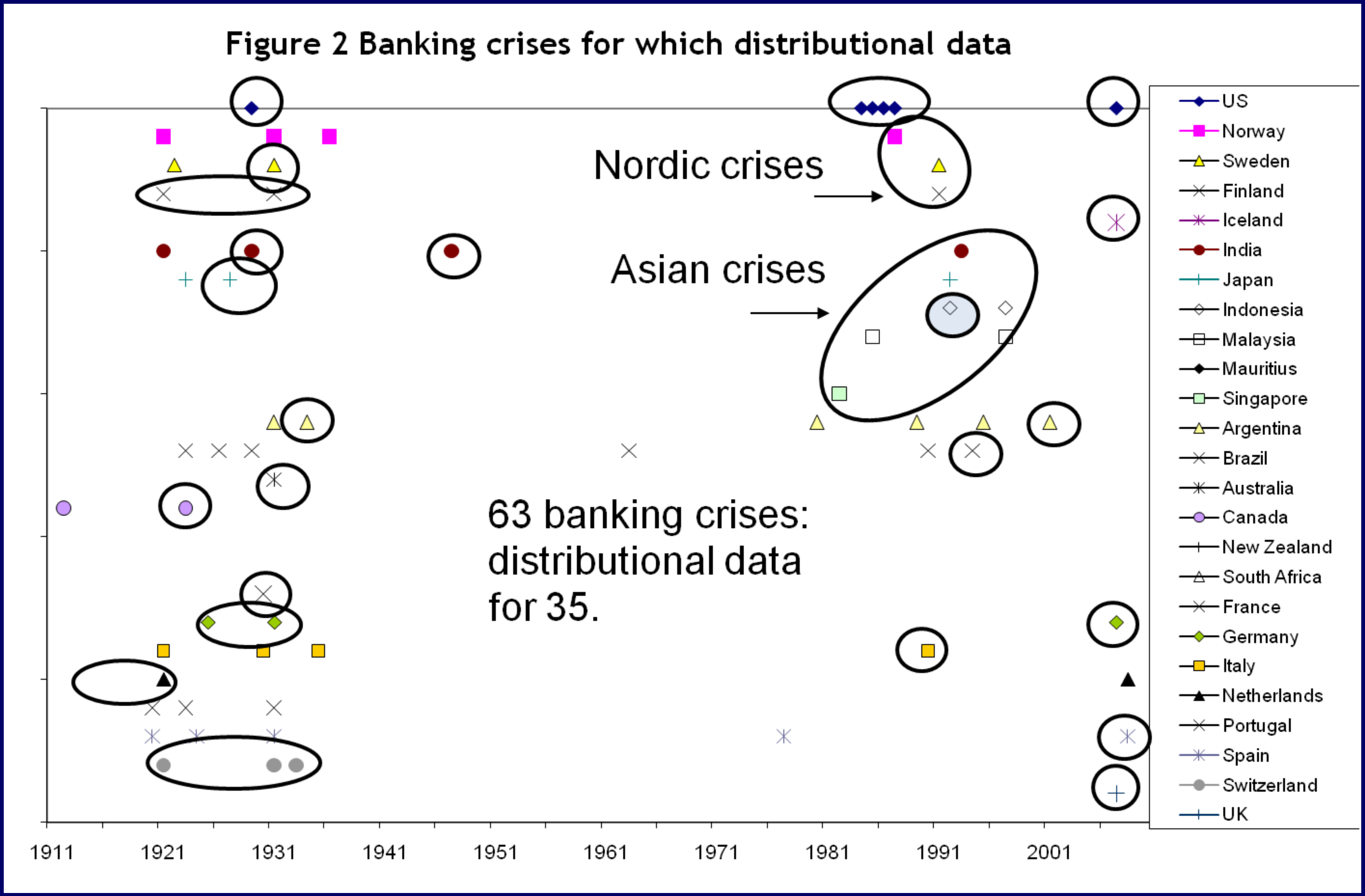
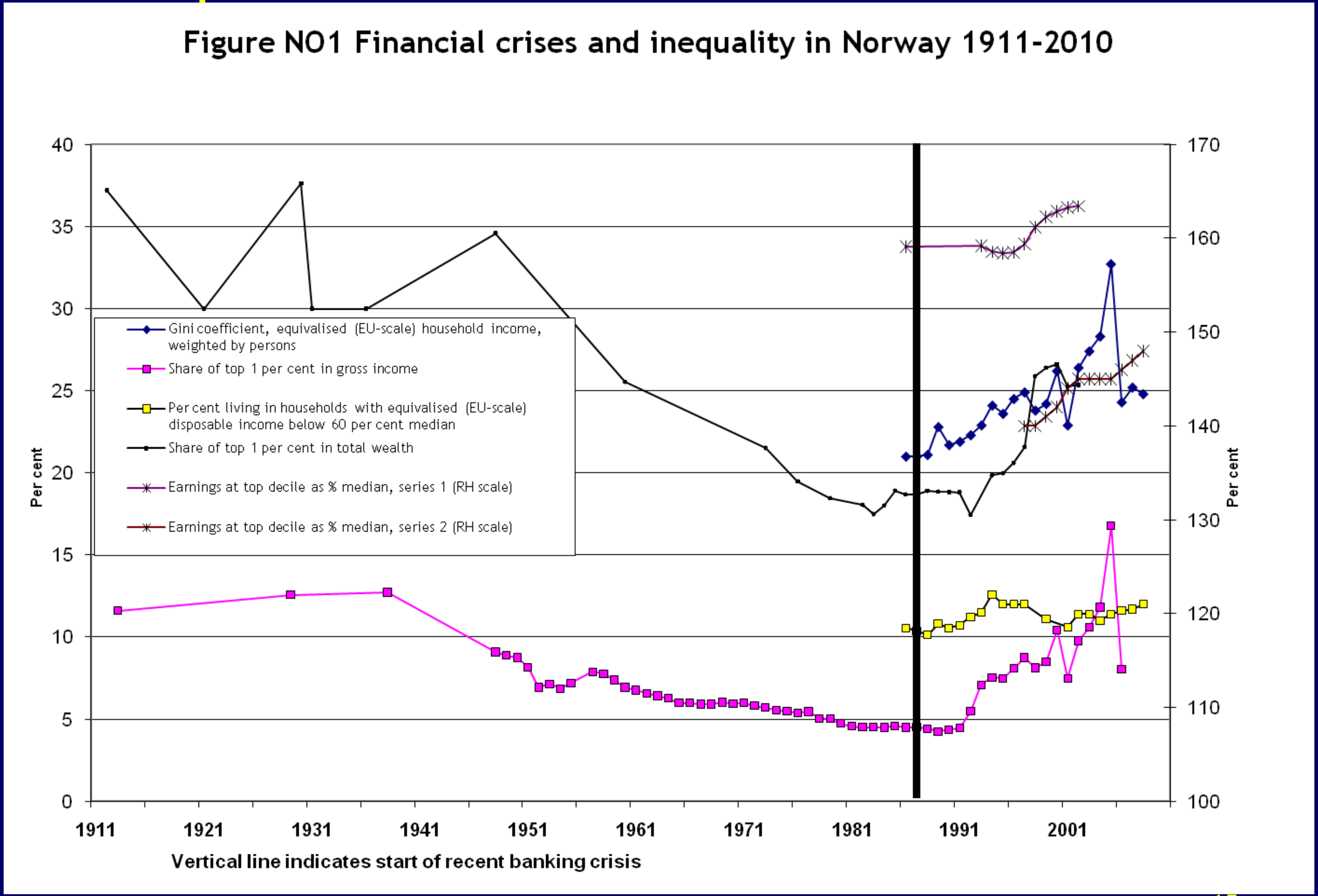


Figure 2 Banking crises for which distributional data
Nordic crises
Asian crises
63 banking crises:
distributional data
for 35.
1911
1921
1931
1941
1951
1961
1971
1981
1991
2001
US
Norway
Sweden
Finland
Iceland
India
Japan
Indonesia
Malaysia
Mauritius
Singapore
Argentina
Brazil
Australia
Canada
New Zealand
South Africa
France
Germany
Italy
Netherlands
Portugal
Spain
Switzerland
UK

4. Empirical evidence: case studies



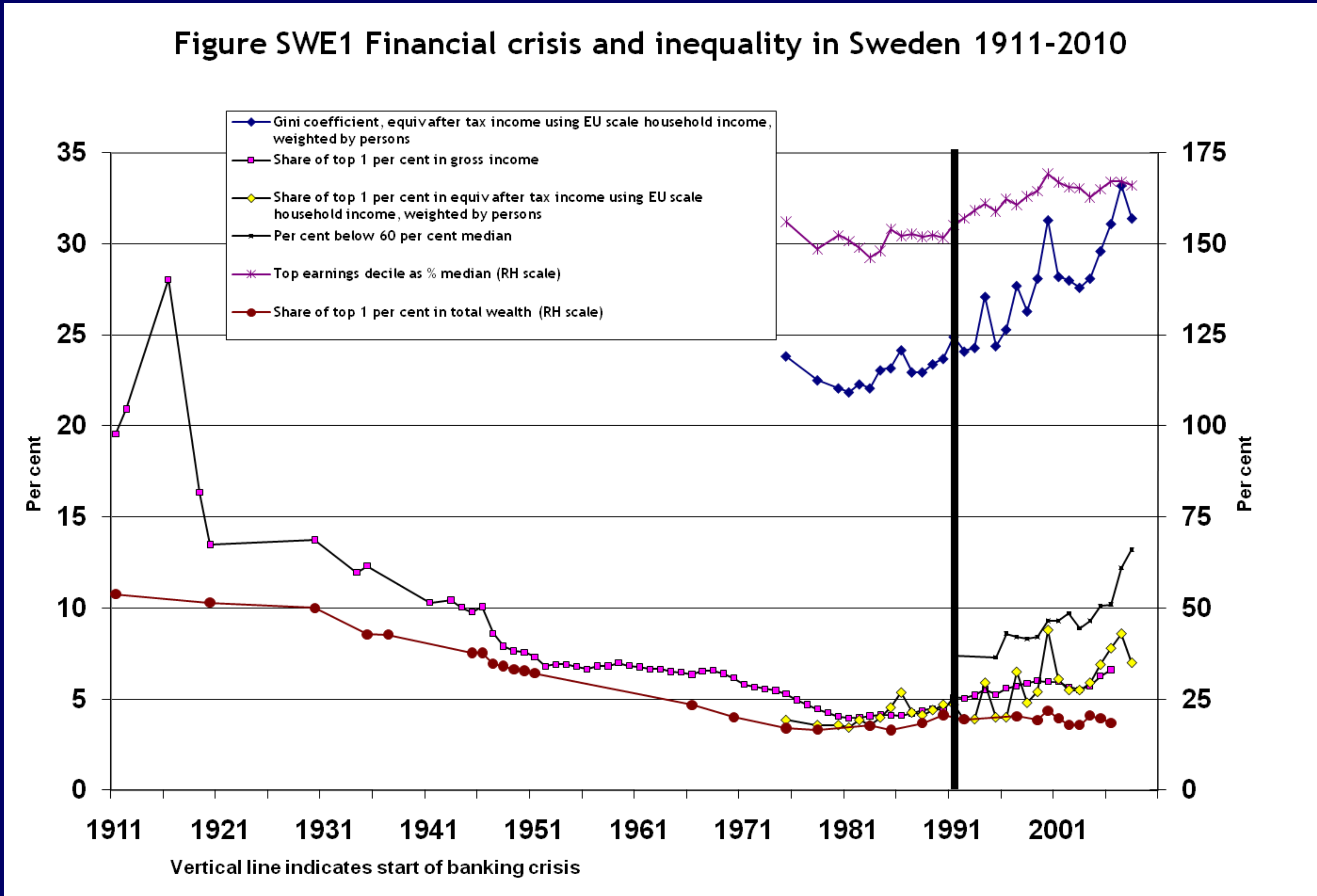
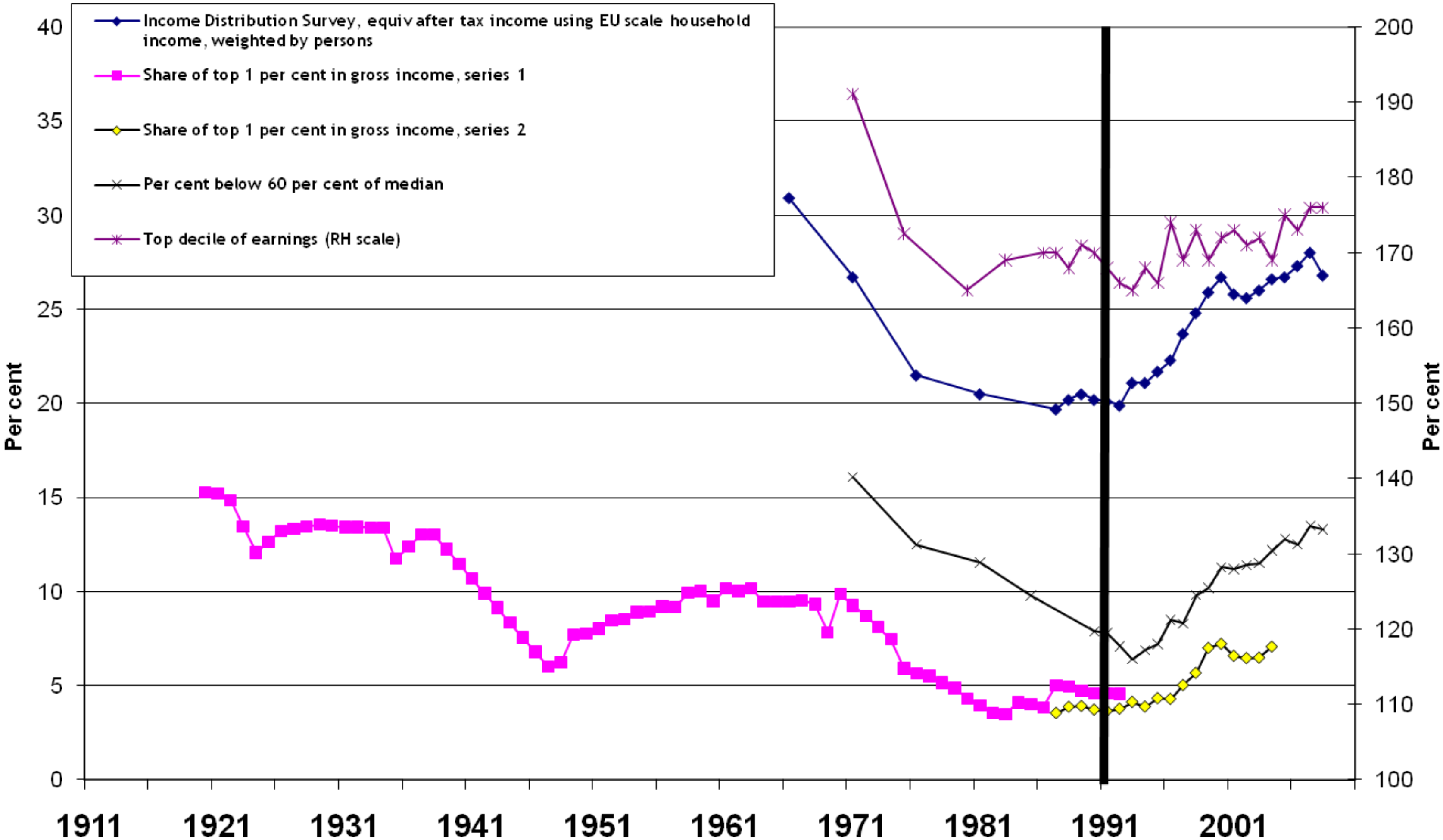


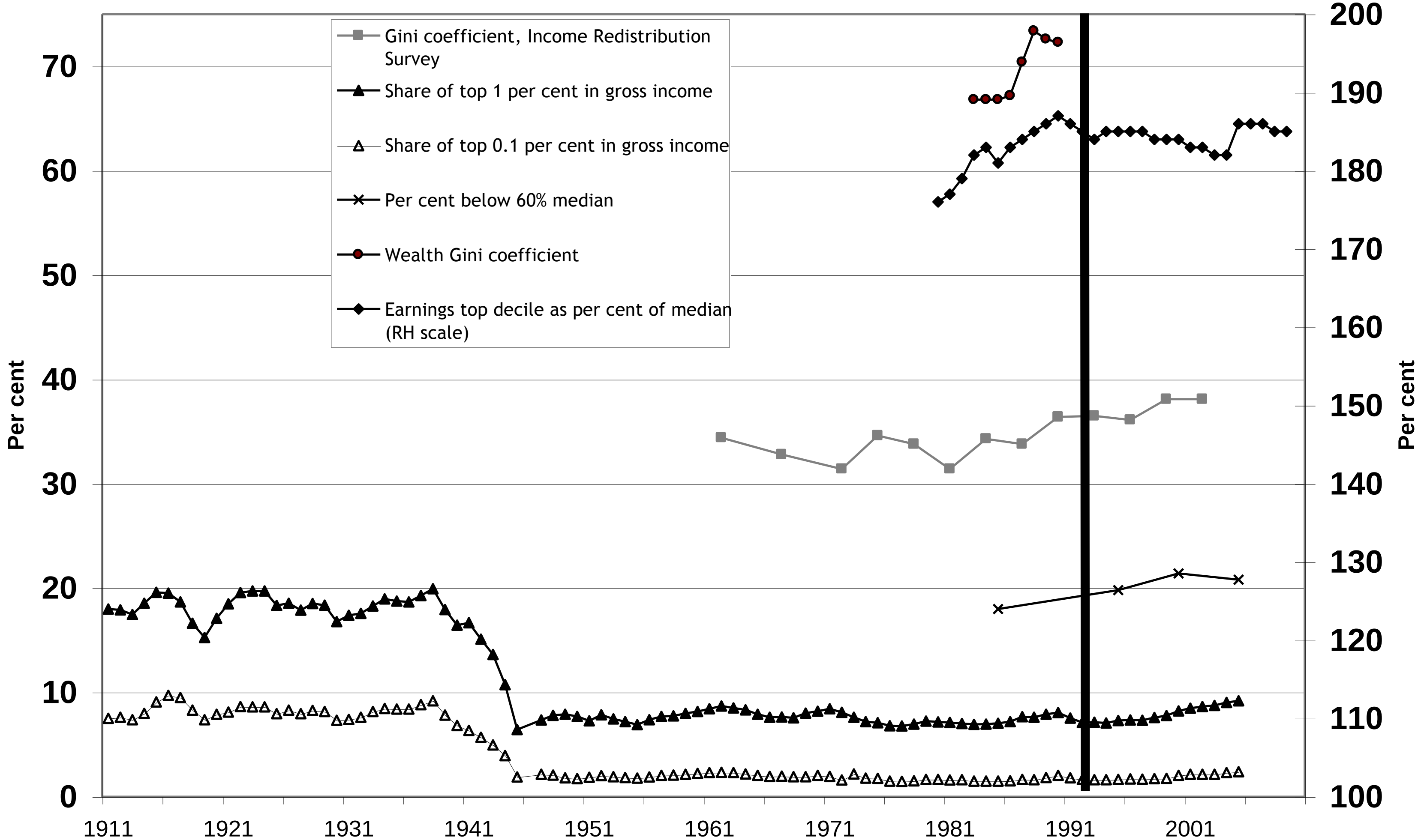
Figure SWE1 Financial crisis and inequality in Sweden 1911-2010
Gini coefficient, equiv after tax income using EU scale household income, weighted by persons
Share of top 1 per cent in gross income
Share of top 1 per cent in equiv after tax income using EU scale household income, weighted by persons
Per cent below 60 per cent median
Top earnings decile as % median (RH scale)
Share of top 1 per cent in total wealth (RH scale)
Per cent
Per cent
35
30
25
20
15
10
5
0
175
150
125
100
75
50
25
0
1911
1921
1931
1941
1951
1961
1971
1981
1991
2001
Vertical line indicates start of banking crisis

Figure FIN1 Financial crisis and inequality in Finland 1911-2010



Vertical line indicates start of banking crisis

Figure JA1 Economic crises and inequality in Japan



Vertical line indicates start of banking crisis

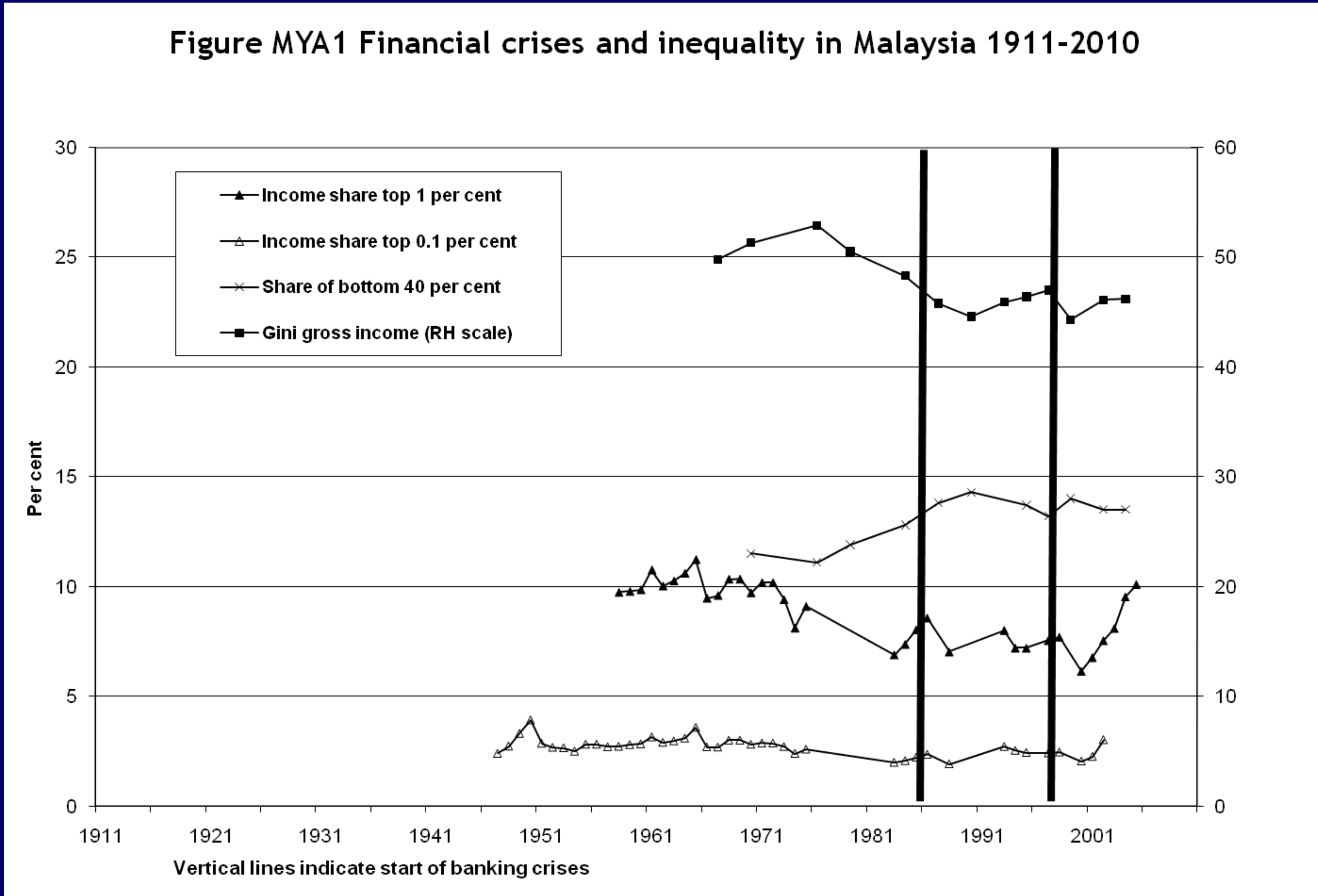
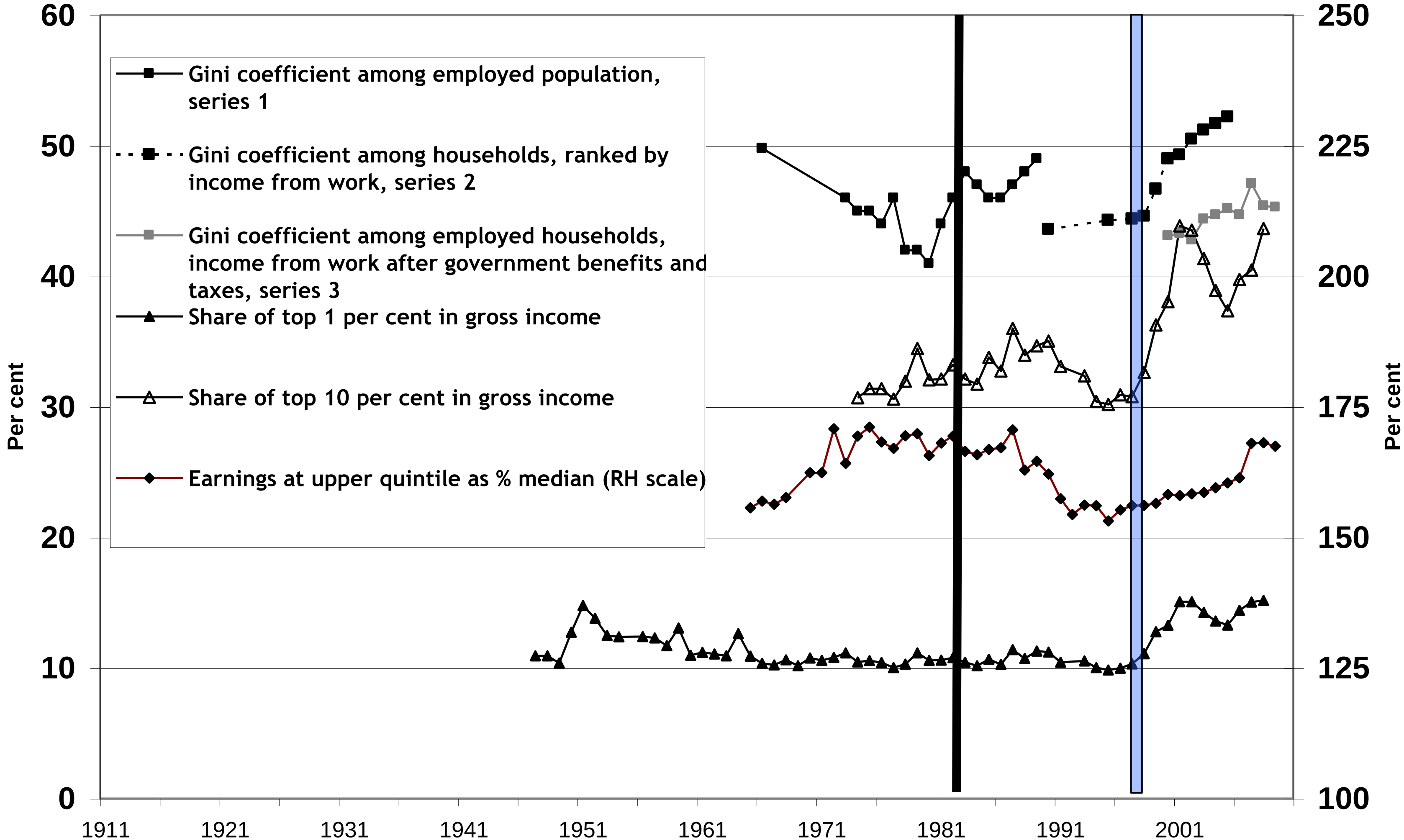


Figure MYA1 Financial crises and inequality in Malaysia 1911-2010
Income share top 1 per cent
Income share top 0.1 per cent
Share of bottom 40 per cent
Gini gross income (RH scale)
Per cent
30
25
20
15
10
5
0
60
50
40
30
20
10
0
1911
1921
1931
1941
1951
1961
1971
1981
1991
2001
Vertical lines indicate start of banking crises

Figure SI1 Economic crises and inequality in Singapore 1911-2010



Vertical line indicates start of banking crisis; rectangle shows consumption collapse (peak to trough

5. Do crises lead to inequality?

Window diagrams

Figure US1929 Window diagram

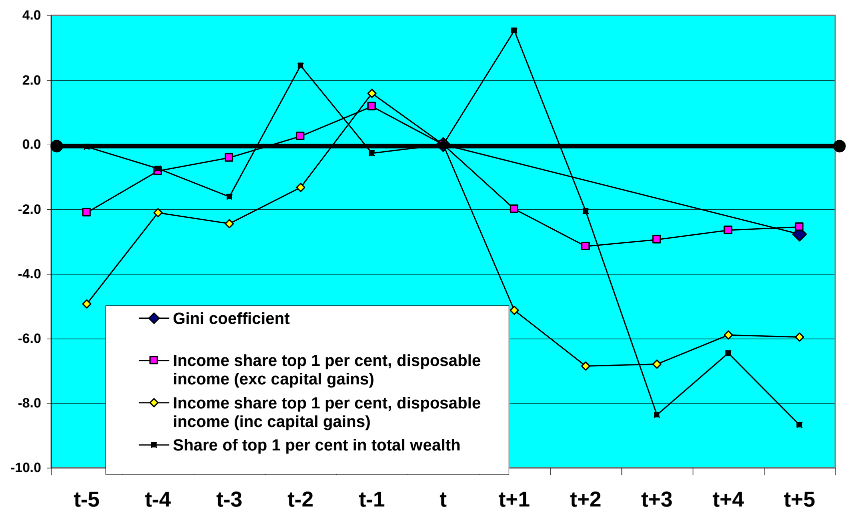


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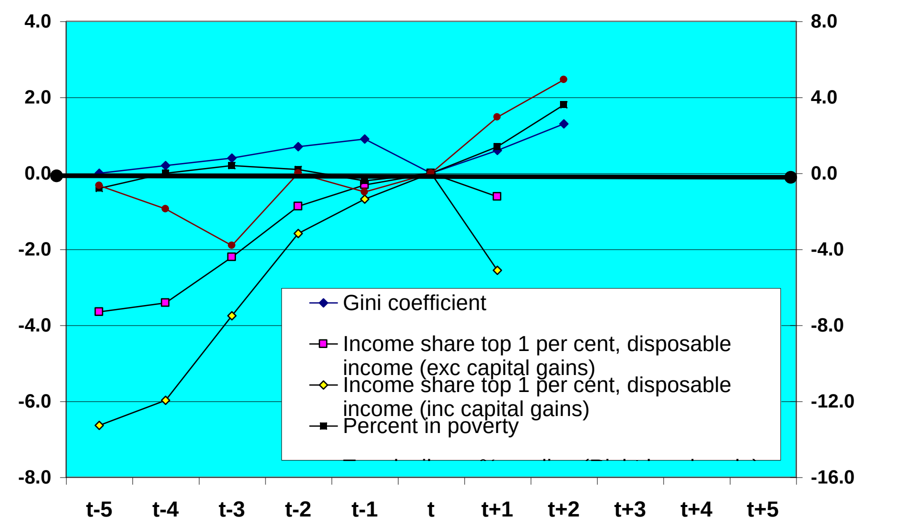
Figure US2007 Window diagram



Evidence from all 25 countries 1911-2010

Did inequality rise before and fall after? Classification of 63 banking crises

Classic US 1929

Before / After	\	=	/	#	TOTAL
/	1	1	1	4	7
=	2	0	4	2	8
\	1	1	3	2	7
#	5	2	6	28	41
TOTAL	8	11	12	36	63

Did inequality rise or fall after a crisis?

Classic US 1929

	After \	=	/	#	TOTAL
Before /	1	1	1	4	7
=	2	0	4	2	8
\	1	1	3	2	7
#	5	2	6	28	41
TOTAL	8	11	12	36	63

Did inequality change direction after a crisis?

Classic US 1929

	After \	=	/	#	TOTAL
Before /	1	1	1	4	7
=	2	0	4	2	8
\	1	1	3	2	7
#	5	2	6	28	41
TOTAL	8	11	12	36	63

Did inequality rise before a crisis?

Classic
US
1929

	After \	=	/	#	TOTAL
Before /	1	1	1	4	7
=	2	0	4	2	8
\	1	1	3	2	7
#	5	2	6	28	41
TOTAL	8	11	12	36	63

6. Interpretation: Co-incident or causal?

1. Banking model, with competitive consumption:
Increased demand for consumer borrowing to finance desired consumption to keep up with those whose earnings are rising faster; banks respond by raising rates but take on more risk. *Change in inequality (top, overall and bottom) is causal*.

2. Banking model, with introduction of securitization:
Change in banking practices with introduction of securitization, taking on greater risk to an extent that is greater the higher the degree of inequality. *Level of inequality (overall and bottom) is jointly causal*.

3. Banking model, with shift in remuneration practices:
Remuneration becomes tied more closely to sales, so that banks behave more like sales maximisers than maximisers of shareholder value, increasing the exposure to risk. Observe increased top inequality and increased risk of crisis. *Co-incident, not causal*.

4. Financial sector model, with bubbles:
Asset bubble draws skilled workers into financial sector, causing wage dispersion to rise. *Change in inequality (top) is co-incident, not causal*.

5. Political economy model of monetary policy:
In response to rise in inequality, uses deregulation of banking for distributional reasons. *Change in inequality (overall and bottom) is causal*.

6. Political economy model of deregulation:
Increased inequality at the top leads to lobbying for deregulation. *Change in inequality (top) is co-incident*.

7. Political economy model of pensions:
Government decides to reduce size of welfare state. Loss of income to current beneficiaries causes inequality to rise. Households respond by saving more in private pensions, driving up equity prices, and by "buy-to-let" purchases of housing, driving up house prices. *Change in inequality (bottom) is co-incident, not causal*.

7. What can we conclude?

- Economic inequality has many dimensions; here focused on income and its components, but some of the most important dimensions of inequality from the standpoint of social cohesion may be those not measured, such as inequality of opportunity;

- Heterogeneity is important; different parts of the distribution may change differently: it depends which part of the parade we are watching; different parts are relevant to different explanatory models and have differing impact on social cohesion;

- The role of inequality in the origins of crises and the distributional impact of banking crises may differ over time: “this time it may be different”; specifically, in the US there was a substantial *rise* in inequality leading up to the 1929 and S+L crises, but this was not the case with the present crisis; on the other hand, in terms of *levels* of inequality, 2007 may be more like 1929 than the 1980s;

7. What can we conclude (continued)

- Outside the US, the history of crises in different countries round the world does not suggest that either rising or high levels of inequality have been adduced as significant causal factors; there is a range of possible mechanisms, but it is not evident that there is a smoking gun;
- Cannot write off high inequality as temporary feature of bubble; in the US the only sustained period of inequality-reduction was in the early 1940s; quite a number of European (and Asian) countries have seen inequality and poverty rise after a banking crisis;
- Much unfinished business.