Carlos Viana de Carvalho, "Unconventional Policies during the Crisis and Expectations of Inflation and Growth: A Cross-Country Analysis"

Marco Del Negro, "The Great Escape? A Quantitative Evaluation of the Fed's Non-Standard Policies"

Timothy J. Kehoe

University of Minnesota, Federal Reserve Bank of Minneapolis, and National Bureau of Economic Research

XIV Annual Inflation Targeting Seminar
Banco Central do Brasil
May 2012

A central question for a central banker (at least for Ben Bernanke):

What could the Fed have done to prevent the Great Depression of 1929–1939 in the United States?

A central question for a central banker (at least for Ben Bernanke):

What could the Fed have done to prevent the Great Depression of 1929–1939 in the United States?

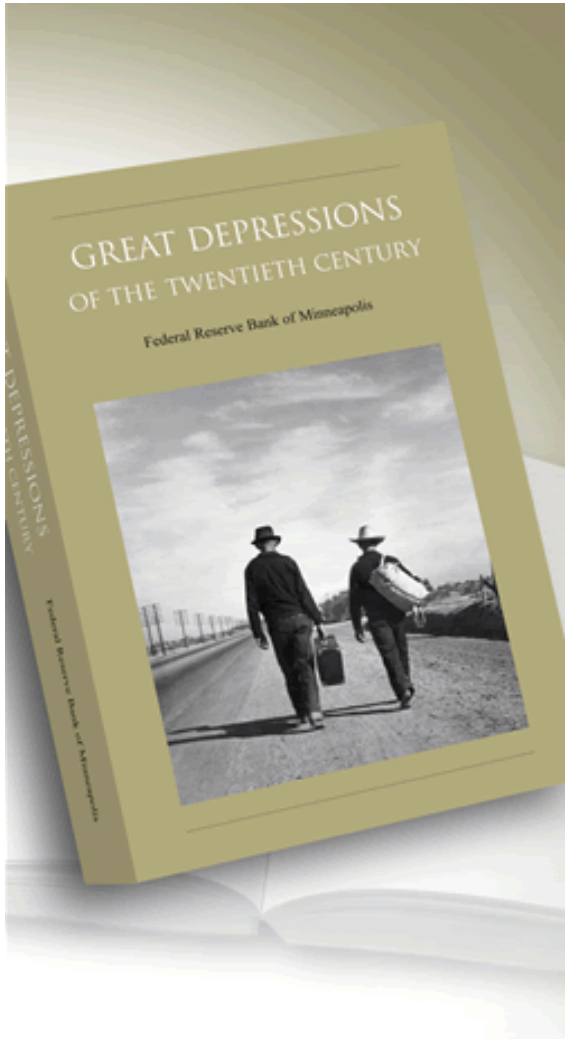
Answer of Milton Friedman and Anna Schwartz, *Monetary History of the United States*:

Untimely death of Benjamin Strong, Jr., the Governor of the Federal Reserve Bank of New York, in October 1928, left the Fed effectively leaderless, during the Great Depression. Aggressively expansionary monetary policy would have prevented the worst of the Great Depression.

These papers are first steps to confirming this view:

Carlos Carvalho, Stefano Eusepi, and Christian Grisse have an imaginative and innovative approach to teasing out the impact of unconventional monetary policy and fiscal stimulus on expectations of inflation and economic growth, at least on the part of forecasters. They find that such policies were effective.

Marco Del Negro, Gauti Eggertsson, Andrea Ferrero, Nobuhiro Kiyotaki combine innovative monetary theory with cutting edge DSGE modeling to develop a model of unconventional monetary policy and sue it to analyze the impact of Fed policy following the collapse of Lehman Brothers in September 2008. They argue that Fed policy was effective in avoiding another Great Depression.



Great Depressions of the Twentieth

Timothy J. Kehoe and

Edward C. Prescott

www.greatdepressionsbook.com

Cole and Ohanian, “The Great Depression in the United States from a Neoclassical Perspective,” *Federal Reserve Bank of Minneapolis Quarterly Review*, Winter 1999.

Federal Reserve Bank of Minneapolis Conference, October 2000.

Special Issue of *Review of Economic Dynamics*, January 2002.

Great Depressions of the Twentieth Century, July 2007.

15 studies by 26 researchers using the same methodology

Great depressions

1930s
United States, United Kingdom, Canada, France, Germany

Contemporary
Argentina (1970s and 1980s), Chile and Mexico (1980s), Brazil (1980s and 1990s), New Zealand and Switzerland (1970s, 1980s, and 1990s), Argentina (1998-2002)

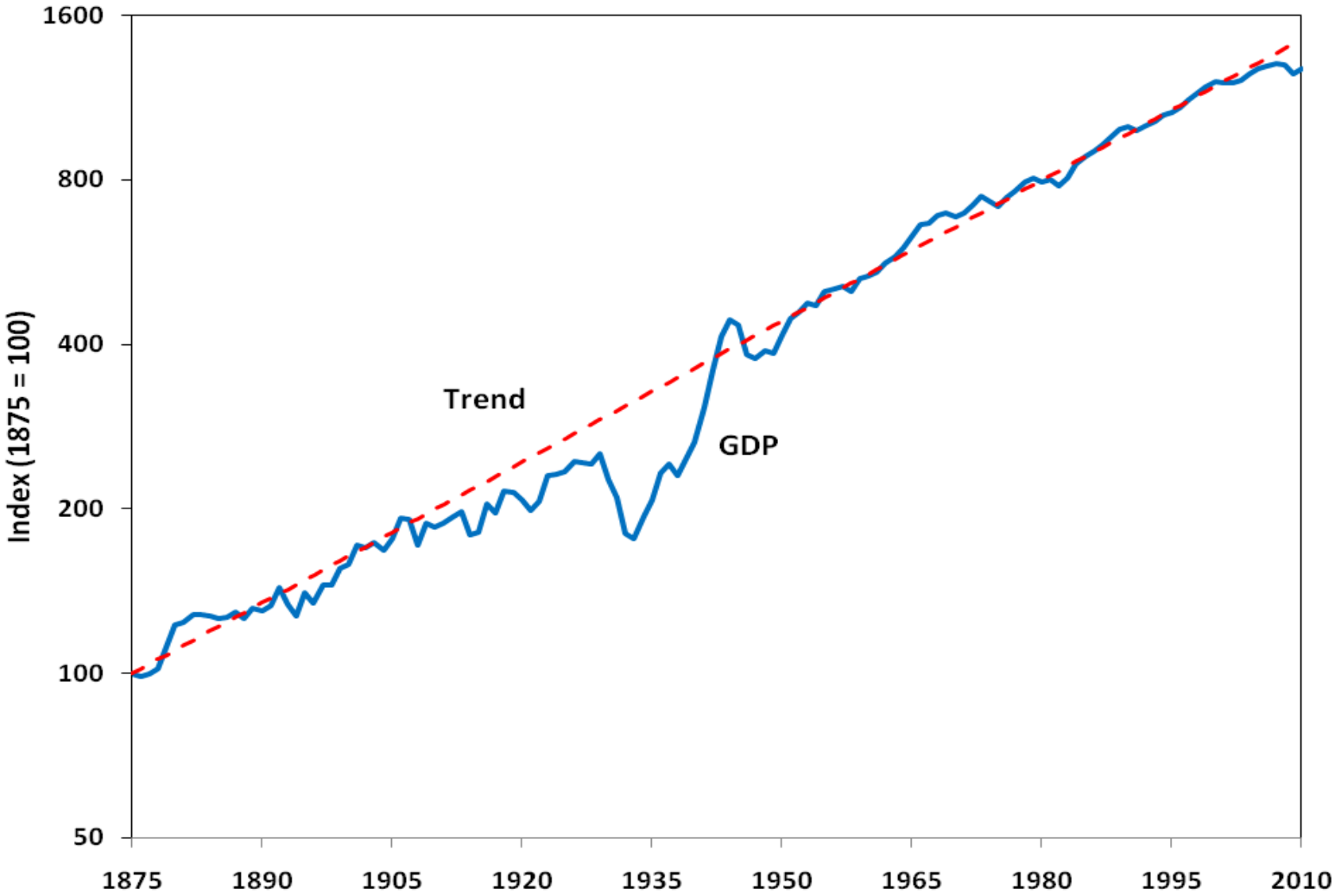
Not-quite-great depressions

Italy (1930s), Finland (1990s), Japan (1990s)

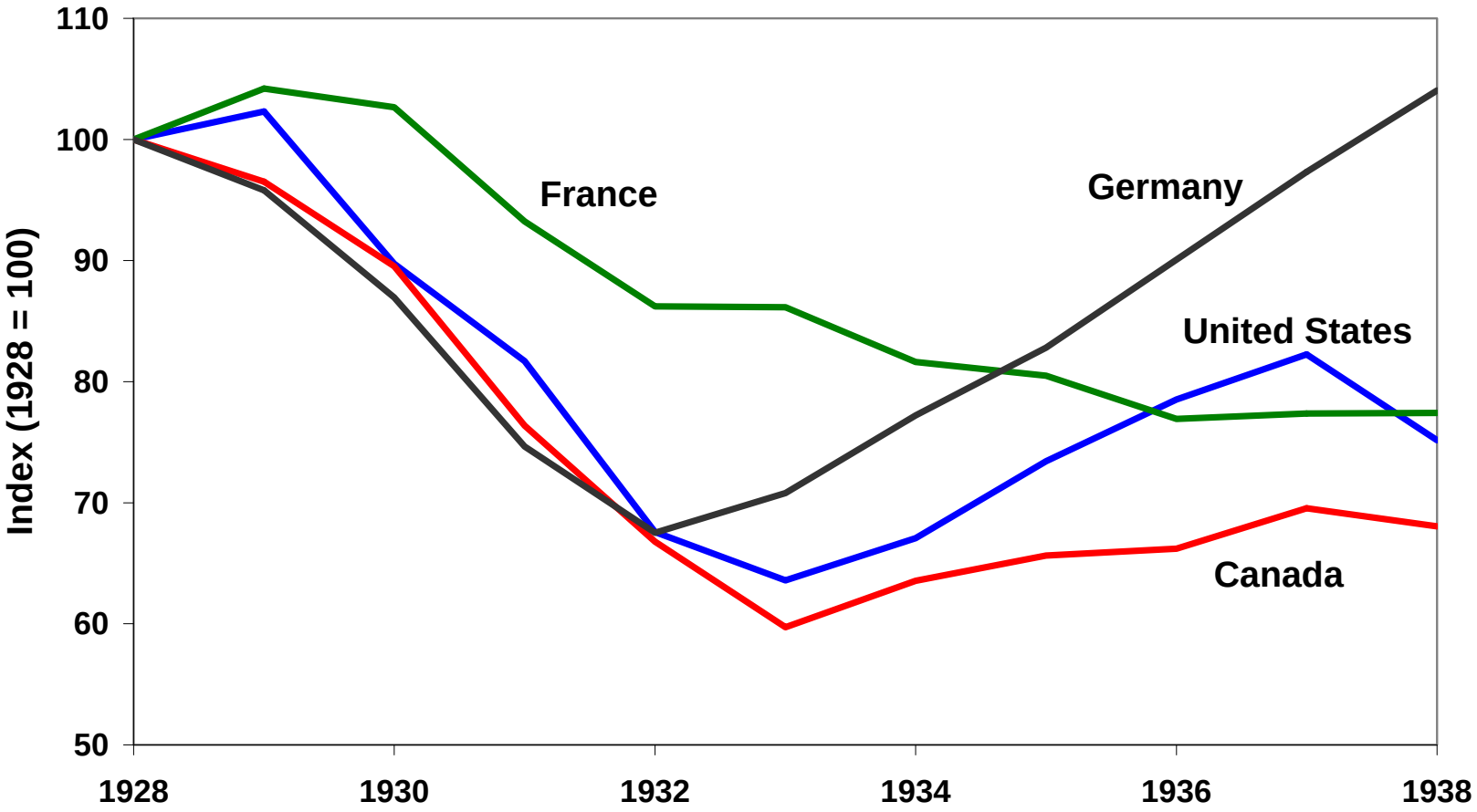
Kehoe and Prescott define a great depression to be a large negative deviation from balanced growth.

They set the growth rate in the balanced growth path to be 2 percent per year, the growth rate of output per working-age person in the United States during the twentieth century.

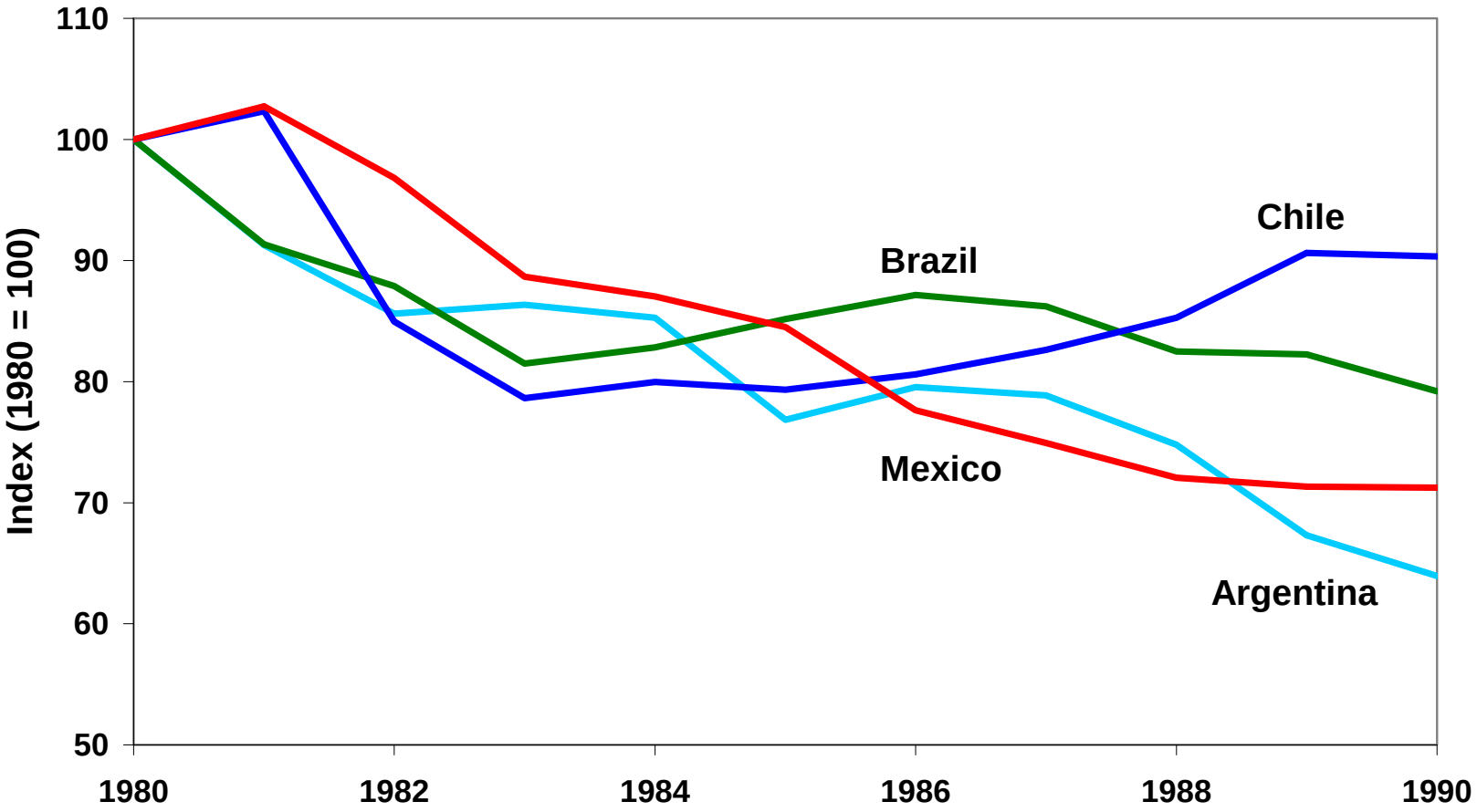
Real GDP per working-age person in the United States



Great depressions in the 1930s:
Detrended output per person



Great depressions in the 1980s:
Detrended output per working-age person



Great depressions methodology

Crucial elements: Growth accounting and dynamic general equilibrium model

Growth accounting decomposes changes in output per working-age person into three factors:

- a productivity factor
- a capital factor
- an hours-worked factor

Great depressions methodology

Crucial elements: Growth accounting and dynamic general equilibrium model

Growth accounting decomposes changes in output per working-age person into three factors:

- a productivity factor
- a capital factor
- an hours-worked factor

Keynesian analysis stresses declines in inputs of capital and labor as the causes of depressions.

Balanced growth path

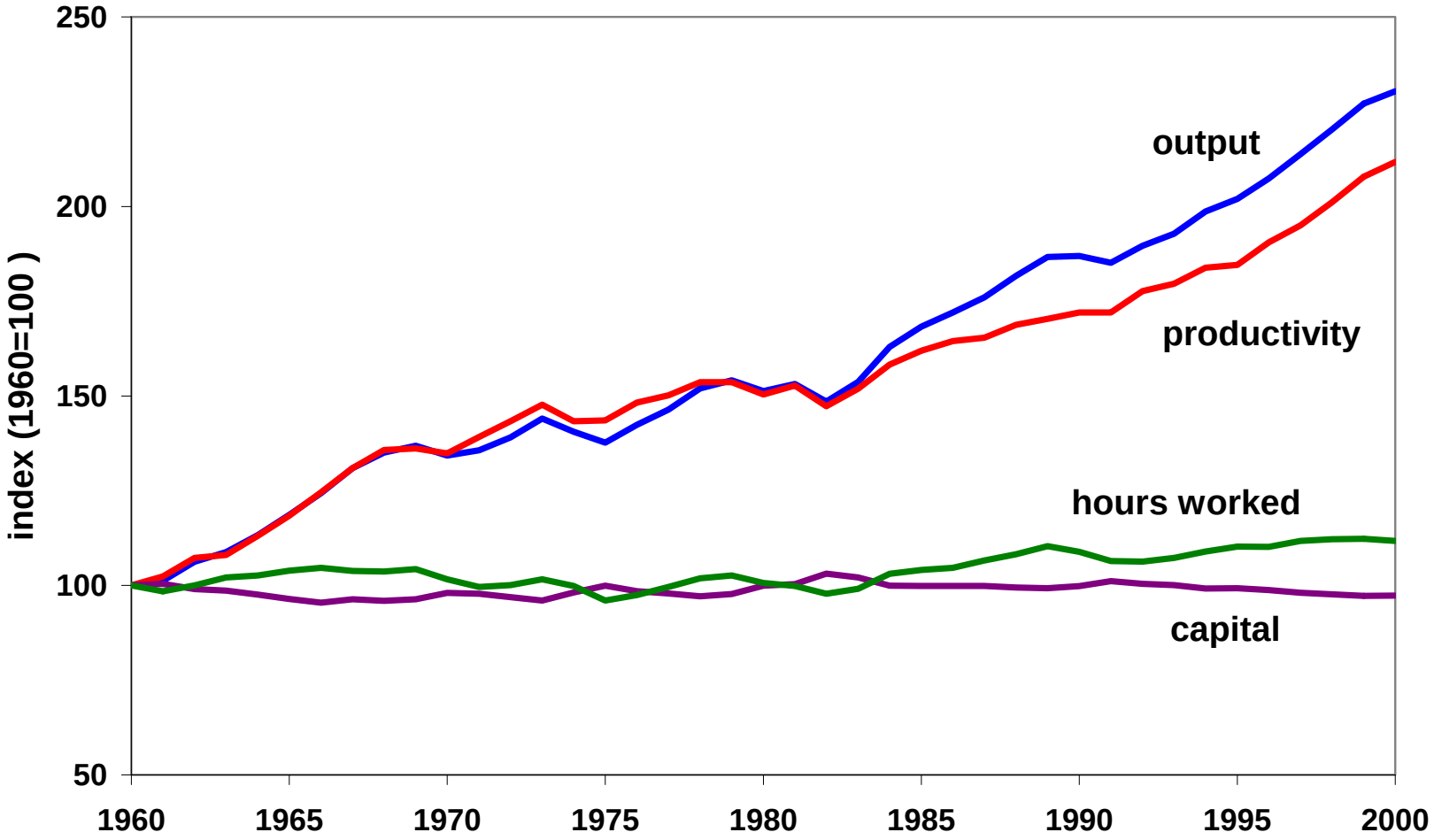
In the dynamic general equilibrium model, if the productivity factor grows at a constant rate, then

the capital factor and the hours-worked factor stay constant and

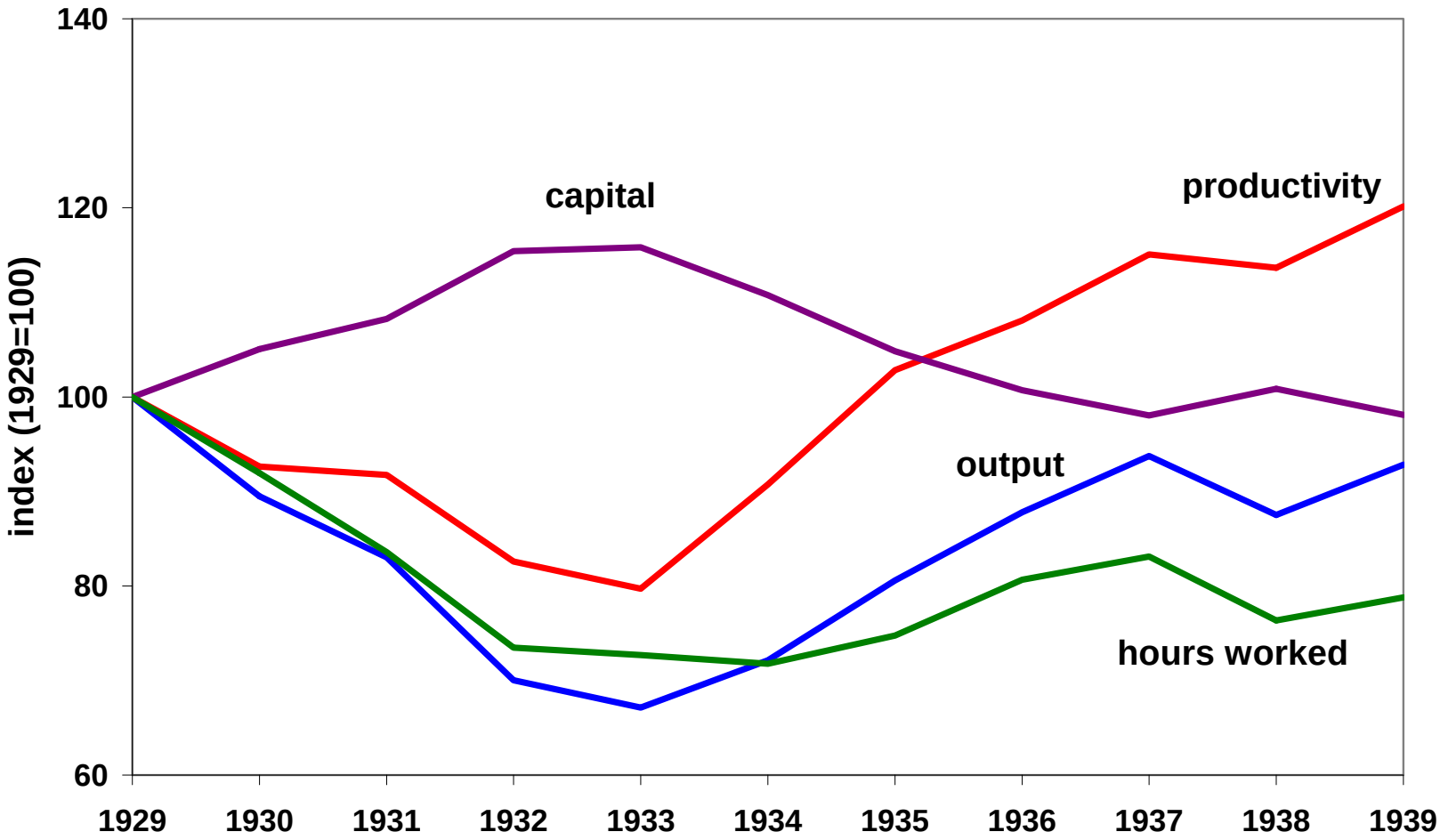
growth in output is due to growth in the productivity factor.

Twentieth century U.S. macro data are very close to a balanced growth path, with the exception of the Great Depression and the subsequent World War II build-up.

Growth accounting for the United States



Growth accounting for the United States



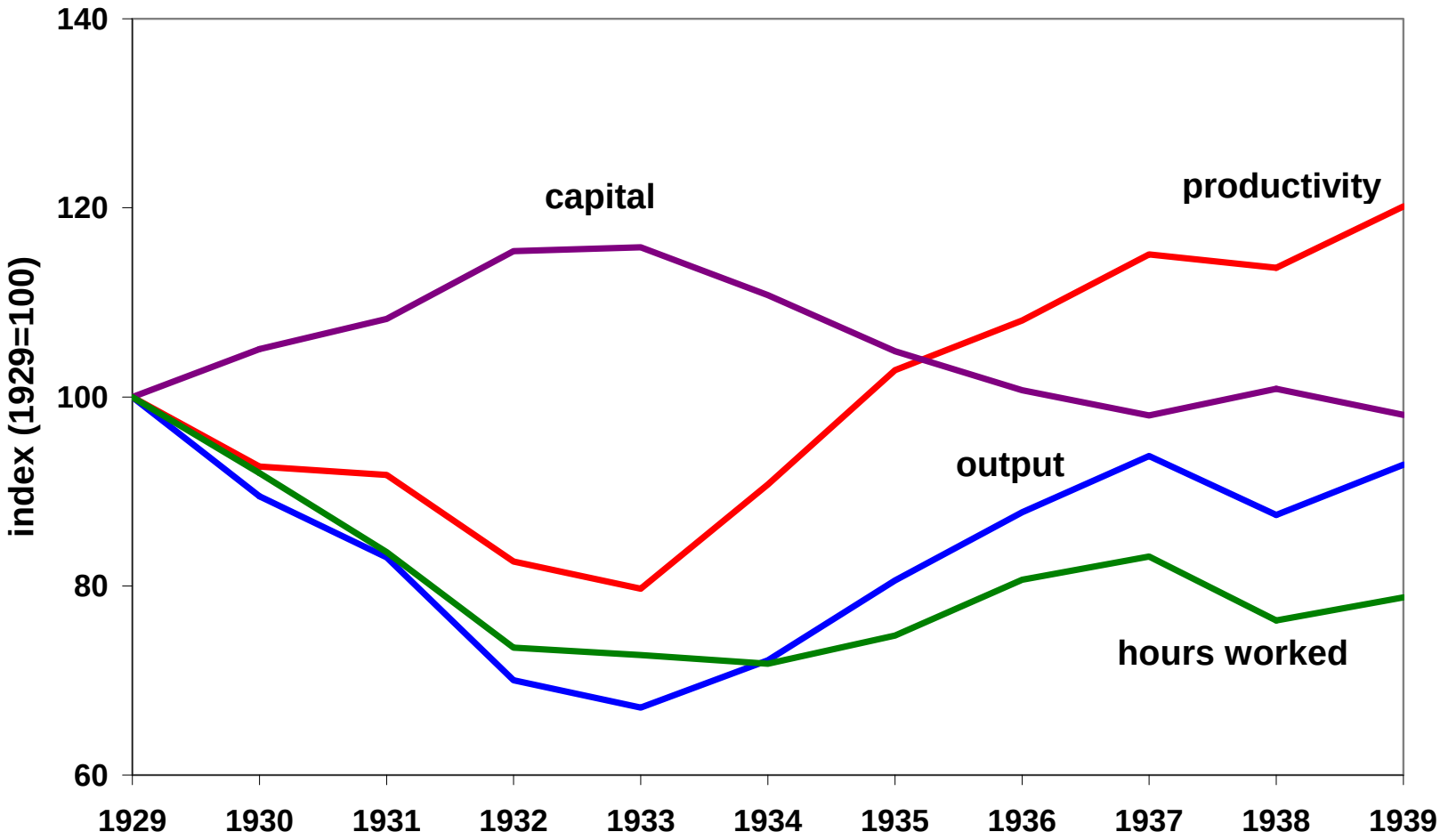
We use a dynamic general equilibrium model to model the responses of households and firms — in terms of capital accumulation and hours worked — to changes in productivity and changes in government policy.

We take the path of the productivity factor as exogenous.

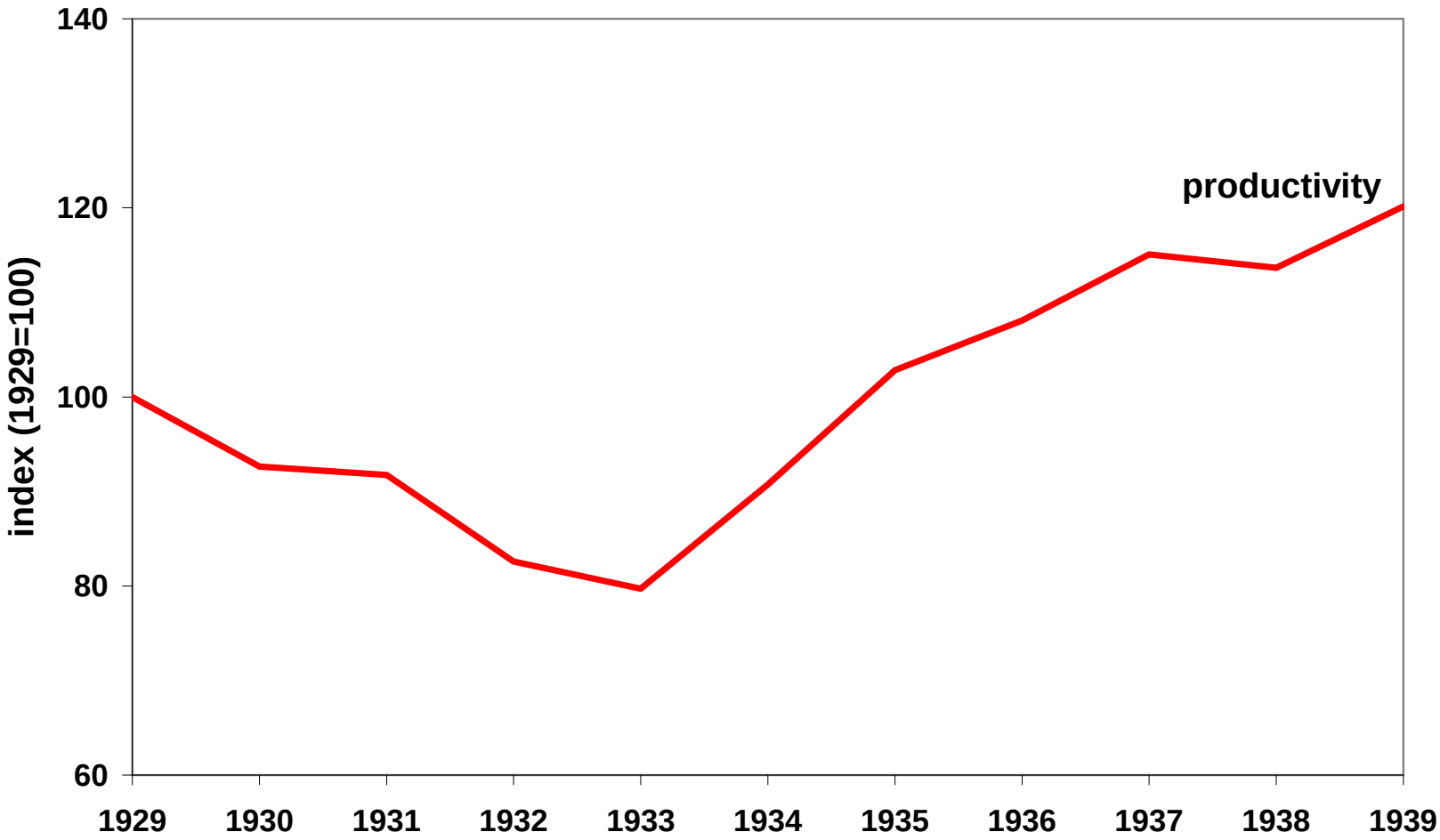
Comparing the results of the model with the data, we can identify features of the depression that need further analysis.

Example: The Great Depression in the United States.

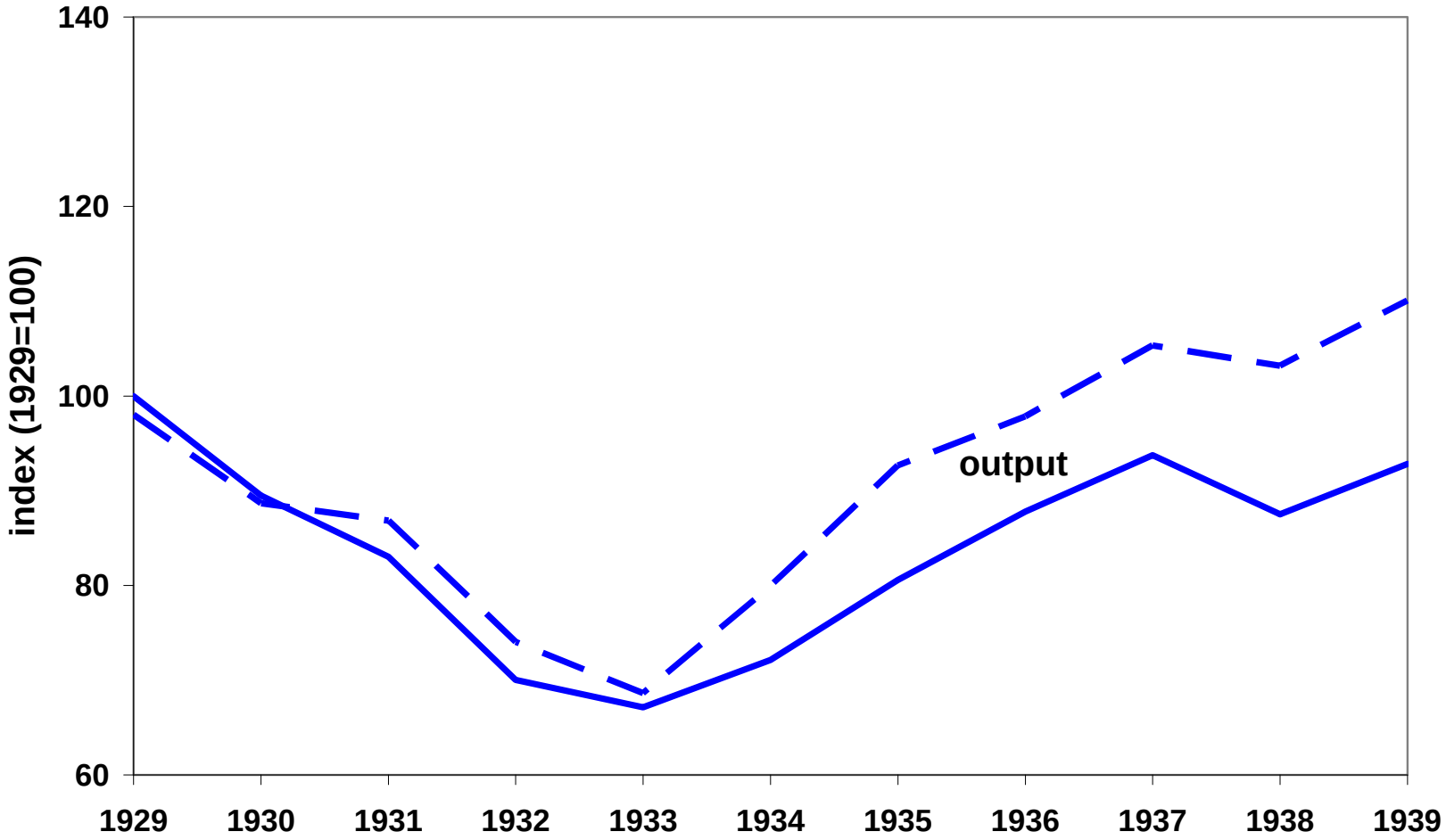
Growth accounting for the United States



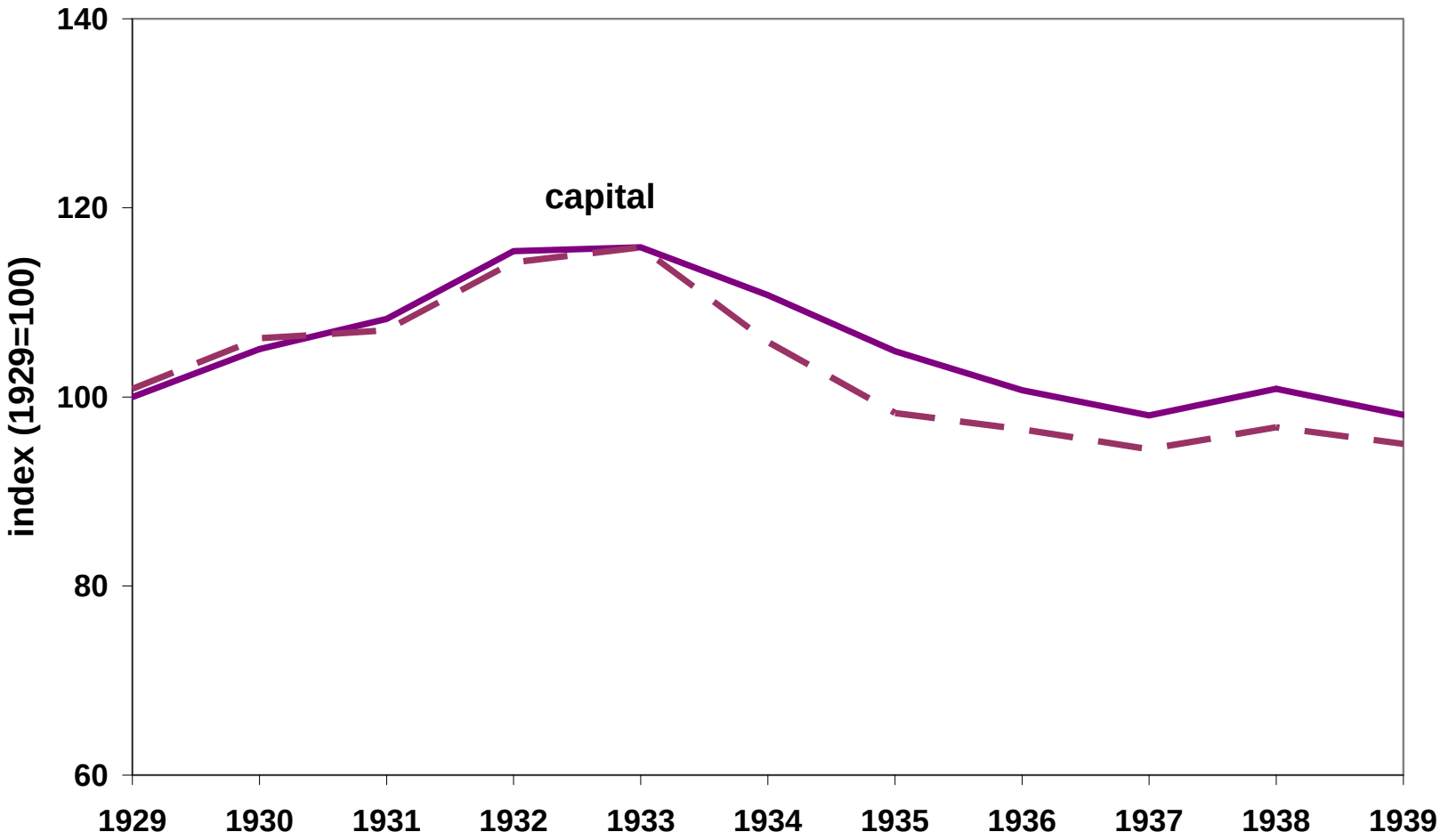
Growth accounting for the United States



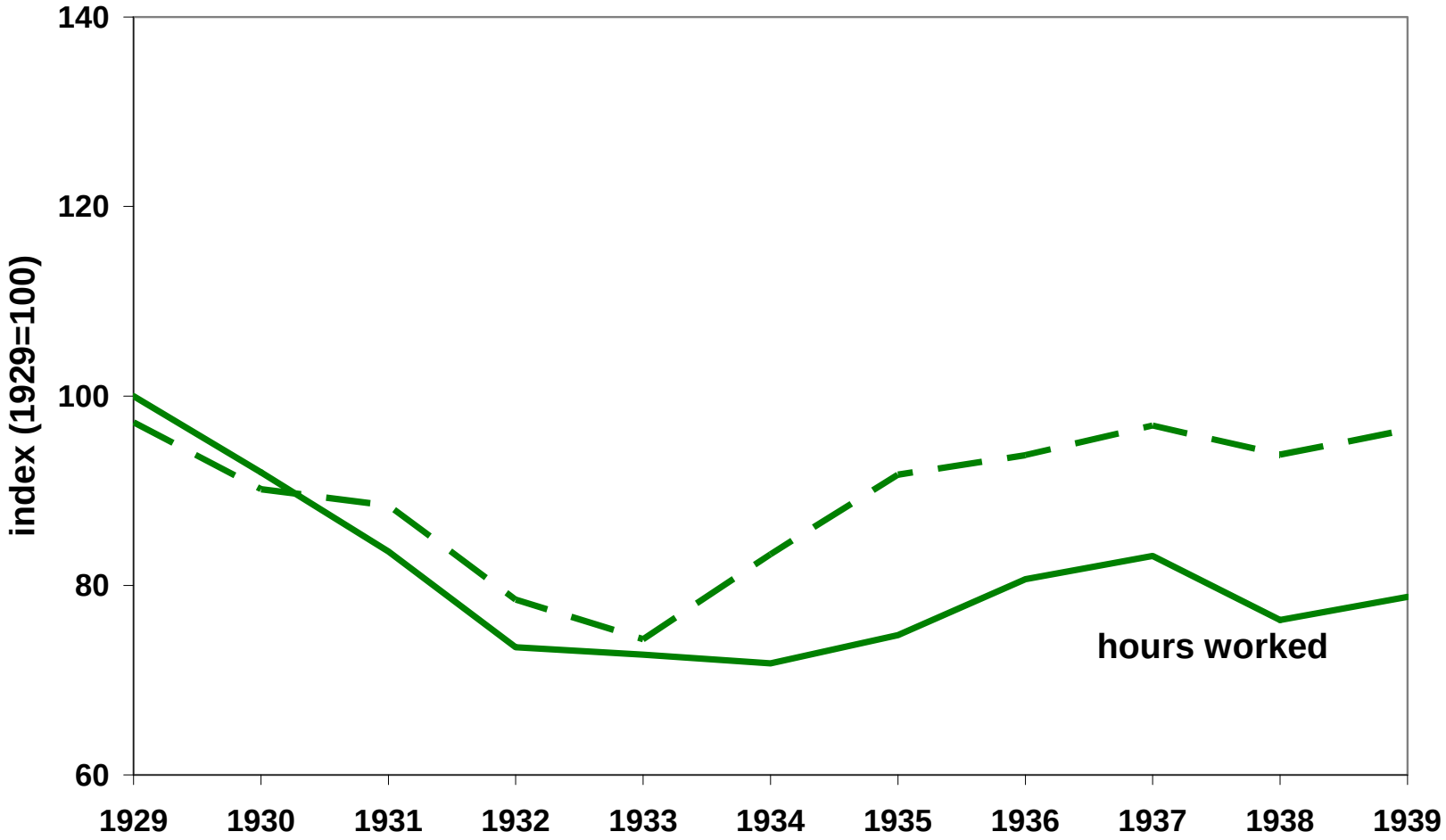
Growth accounting for the United States



Growth accounting for the United States



Growth accounting for the United States



Conclusions

A simple dynamic general equilibrium model that takes movements in the productivity factor as exogenous can explain most of the 1929-1933 downturn in the United States.

The model over predicts the increase in hours worked during the 1933-1939 recovery.

Need for Further Study

The decline in productivity 1929-1933.

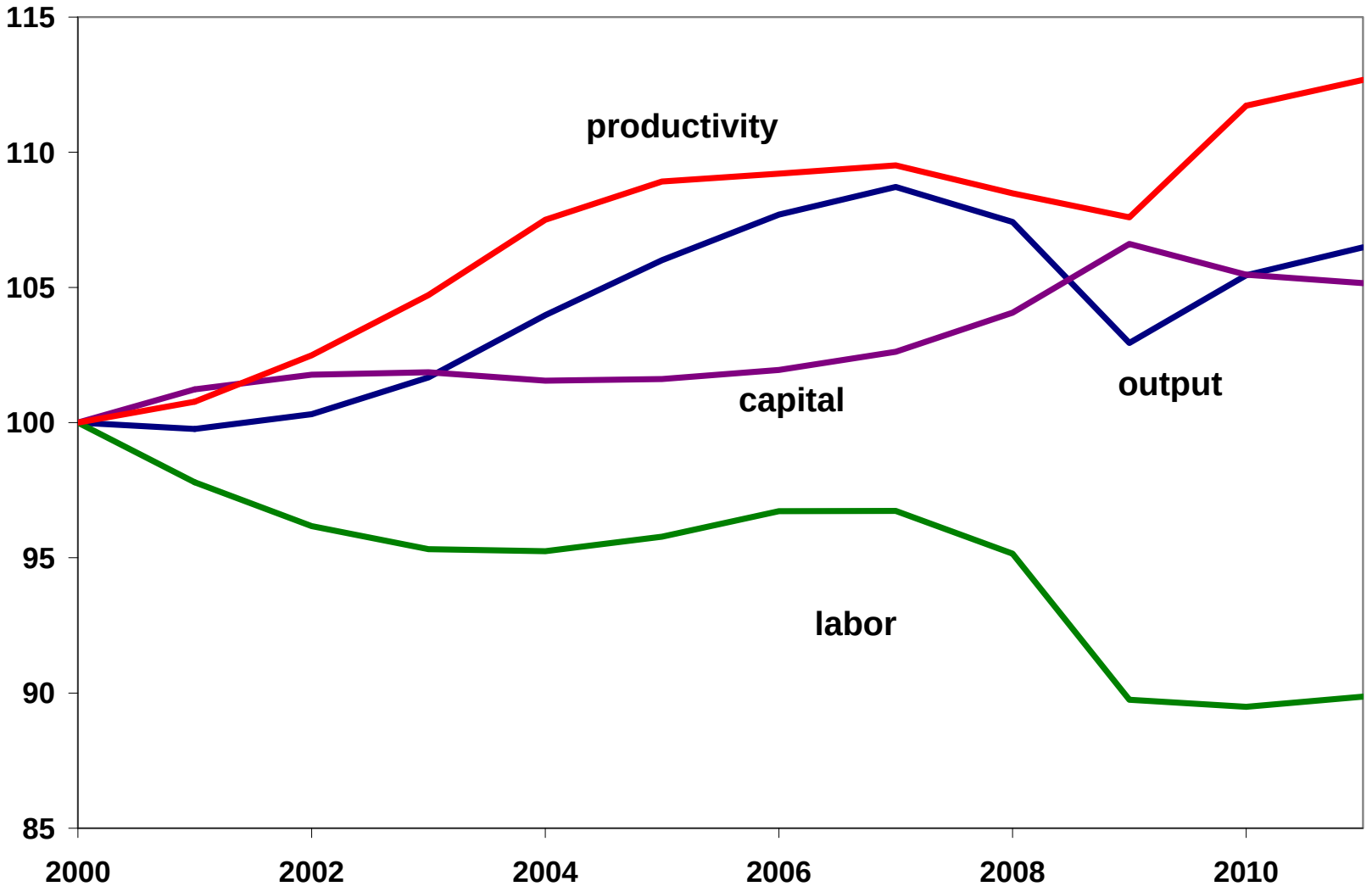
The failure of hours worked to recover 1933-1939.

How could the authors of these papers convince me that Ben Bernanke saved the United States — and the rest of the world — from another Great Depression?

Carlos: More of theory, more distinction between different types of policies. It is not clear to me if your results back up Marco and his coauthor's mdoeling work or not.

Marco: An event study with growth accouting, feeding in time series for key exogenous variables. More of a thoery for diffiernt liquidity characteristics of assets.

Growth Accounting in the United States



Some questions for the authors:

Is it clear that the Great Recession is over?

Why are some assets more liquid than others? Are Greek government bonds liquid?
(Yiting Li, Guillaume Rocheteau, and Pierre-Olivier Weill, 2011, and Pablo Kurlat, 2010)

What are the costs and benefits of expansionary policies? Moral hazard?