

History of Economic Thought

2019-20

Seminar 2.2

Economic cycles and
crises

Poverty and misery in the 1930s



The Great Depression and how economists got it wrong

- **Irving Fisher:** «Stock Prices are low», they reached a “permanent plateau” (*New York Times*, October 22, 1929)

October 24th: **Black Thursday** Stock market crash

October 29th: **Black Tuesday** A new crash

Stocks: **64%** increase between January 1928 and September 1929, then **33%** decline from September to December



Irving Fisher
(1867-1947)

The
Economist

2014 12 14 - 19 2014

economist.com

Islamic State's war on culture
Where Uber goes next
Insuring against Asia's catastrophes
The robots are coming...slowly
I think, therefore I am French

Watch out

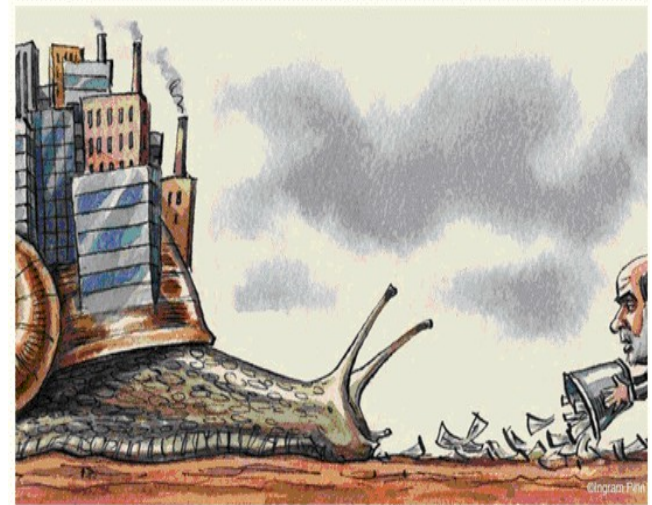
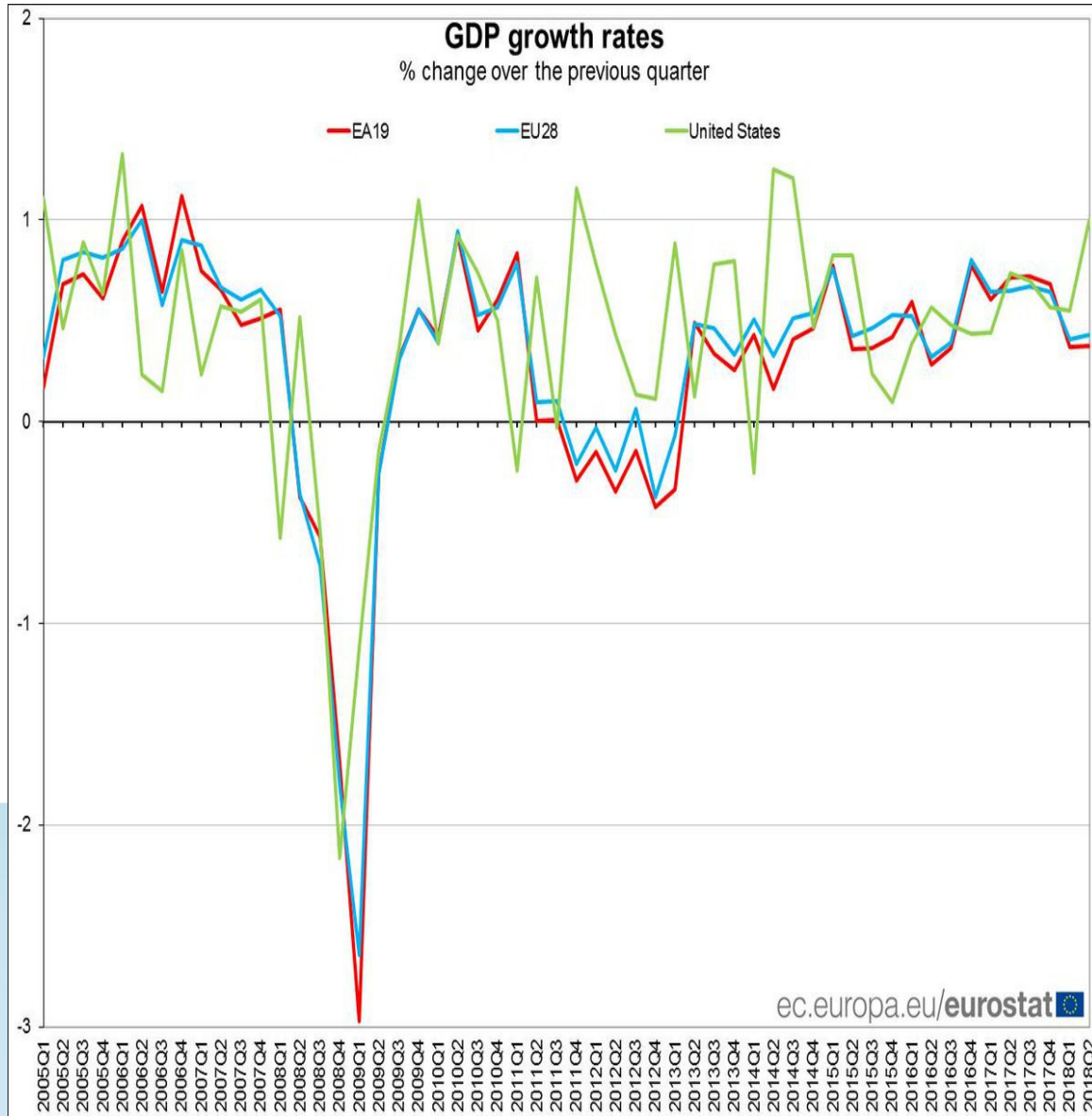
The world is not ready for
the next recession



Again?

New risks:

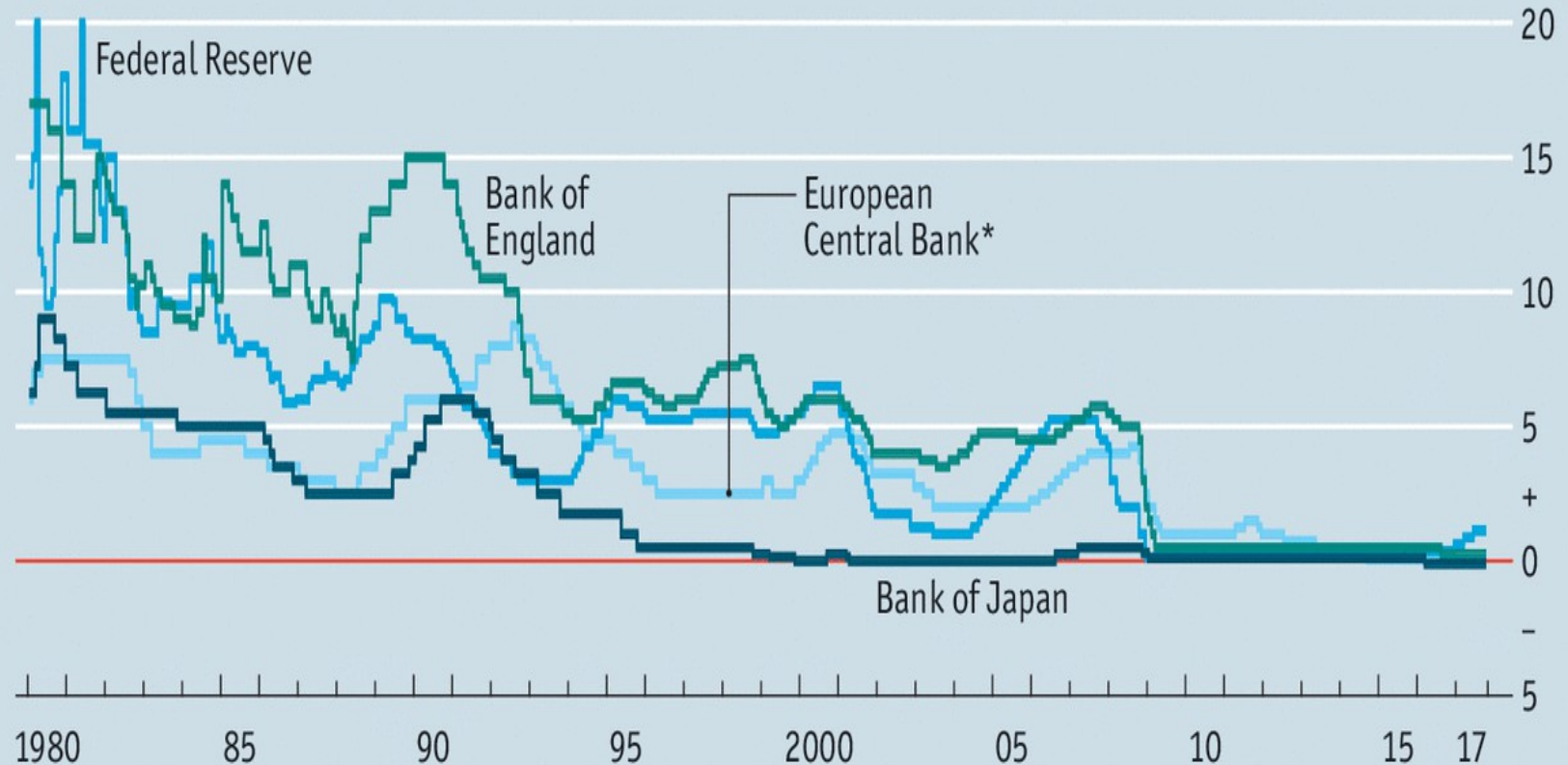
- debt,
- stagnation,
- deregulation.



Nowhere to go

Interest rates at a minimum

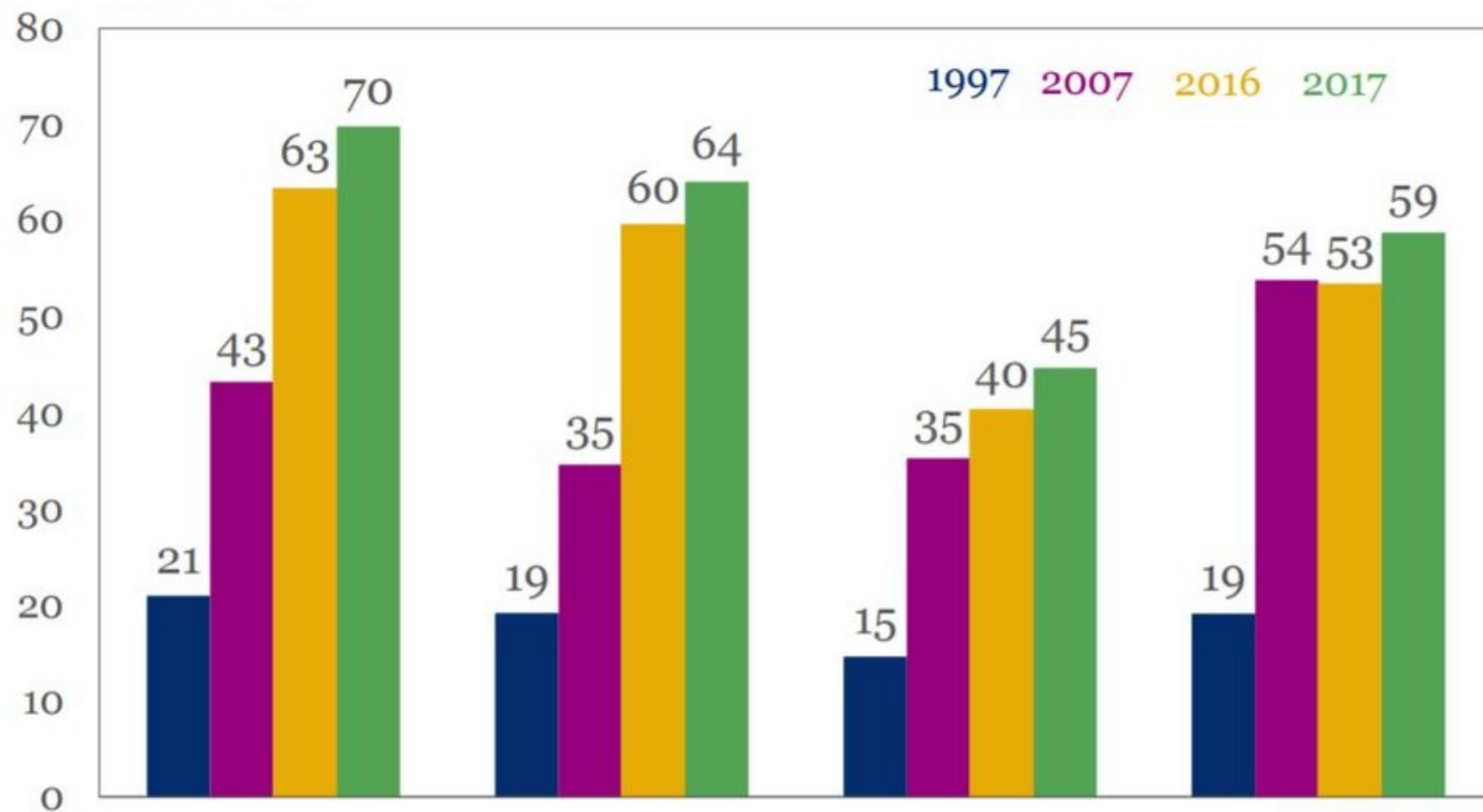
Benchmark interest rates, %



Sources: Bloomberg; Thomson Reuters

*German Bundesbank discount rate pre-1999

The snowball of debt



Source: IIF Global Debt Monitor – Julho 2018

corporates

financial sector

Financiarização: profits but no accumulation

Finance Profits as a Share of Total Corporate Profit

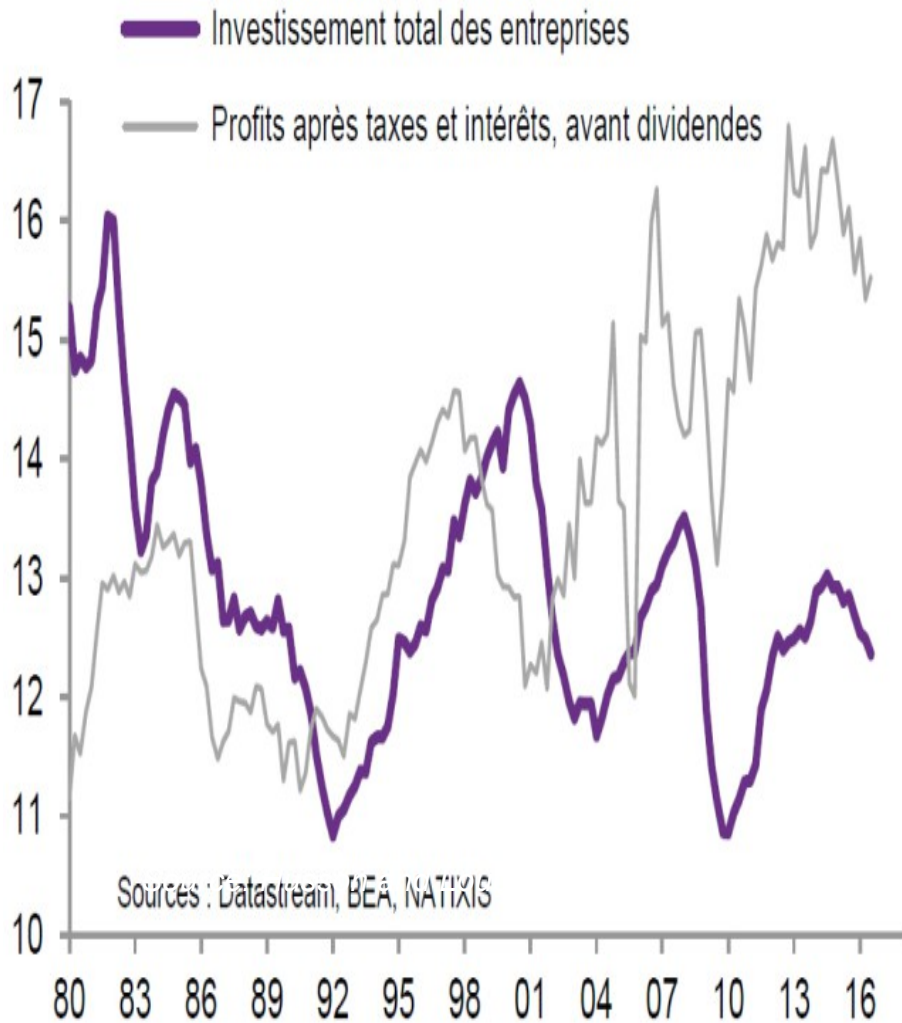


- Structural crises since the 1970s
- Low profitability, but larger than accumulation
- Expansion of finance

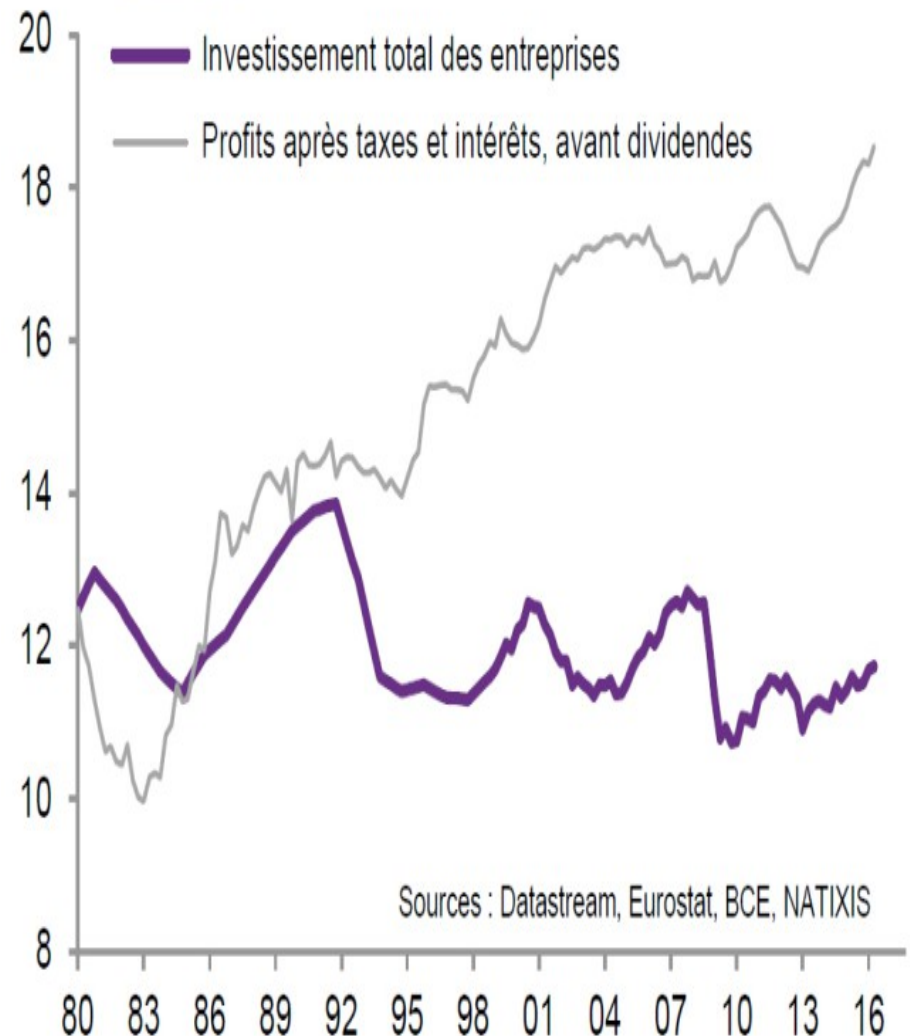
Fonte: Epstein, G. e Montecino, J. A. (2016). *Overcharged: The High Cost of High Finance*. Relatório do *Roosevelt Institute*.

Profit and no investment

Etats-Unis



Zone euro



But this is not what theory
suggests

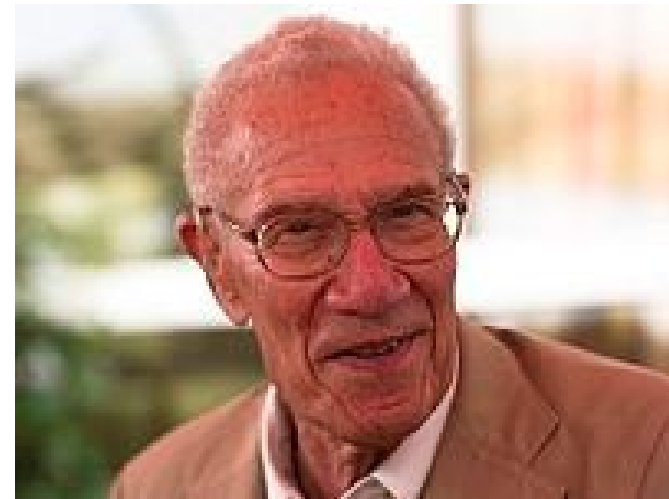
Robert Solow

1970

“the old notion of a business cycle is **not very interesting anymore**”

1972

“today’s graduate students have never heard of Schumpeter’s apparatus of Kondratieffs, Juglars, Kitchins, and would find it quaint if they had”



Paul Samuelson and Arthur Okun

Paul Samuelson: the National Bureau of Economic Research, specialized in business cycle analysis, had **“worked out one of its jobs, the business cycle”**

(remarks at NBER conference, 50th anniversary)

Or **Arthur Okun:** business cycles **“are now preventable, like airplane crashes”**, a threat that is **“obsolete”**

(Okun, A. (1970), The Political Economy of Prosperity, Washington, p.33)



Robert Lucas

“My thesis in this lecture is that macroeconomics in this original sense has succeeded: **its central problem of depression prevention has been solved, for all practical purposes, and has in fact been solved for many decades**”
(2003)



The drama of Robert Lucas

Lucas 2004:

“There’s a residue of things they (the CB’s DSGE models) don’t let us think about. They don’t let us think about the **US experience in the 1930s** or about financial crises and their real consequences in **Asia** and **Latin America**; they don’t let us think very well about **Japan** in the 1990’s”

Lucas 2008:

“I’m changing my views on bank regulation every week. It was an area I saw under control. Now I don’t believe that”

Gregory Mankiw (Harvard)

“A new consensus has emerged about the best way to understand economic fluctuations”



John Cochrane (Chicago)

February 2010:

“The economy can recover very quickly from a credit crunch if left on its own” – in weeks



Eugene Fama and the market efficiency

Eugene Fama, 2010

“We don’t know what causes recessions. I’m not a macroeconomist so I don’t feel bad about that! We’ve never known. Debates go on to this day about what caused the Great Depression. Economics is not very good at explaining swings in economic activity. (...) If I could have predicted the crisis, I would have. I didn’t see it. I’d love to know more what causes business cycles.”

Are the markets efficient? **“Yes. And if it isn’t, then it’s going to be impossible to tell.”**

Theories of economic crises and cycles

Classification of theories of cycles

- **Three main types of cycles:**
 - Clément Juglar (1819-1905)
 - Joseph Kitchin (1861-1932)
 - Nikolai Kondratiev (1892-1938)

Three types of analyses:

- Exogenous causality (Jevons)
- Impulse + propagation models (Frisch, RBC, etc)
- Endogenous dynamics (Marx, Schumpeter, Kondratiev)

W Jevons (1835-1882)



Notion of utility

Probability and inductive logic

Applied economics:
limited resources

W. Jevons (1847)

“I can see no reason why the human mind, in its own spontaneous action, should select a period of **just 10.44 years** to vary in. (...) when we know that there is a cause, the variation of the solar activity, which is just of the nature to affect the produce of agriculture, and which does vary in the same period, it **becomes almost certain that the two series of phenomena**, credit cycles and solar variations, are connected as **effect and cause**”

1878

Marx: each 20 or 50 years?

Scrope, quoted by Marx (after indicating a period of 5 to 10 years for replacement of fixed capital):

«Capital spent on buildings, such as factories, shops, seems not to circulate. But these installations are spent and the owner should reproduce them in order to pursue his operation. This capital investment follows a rotation each 20 to 50 years.»

Léon Walras and the cycle as a stable surface of a lake



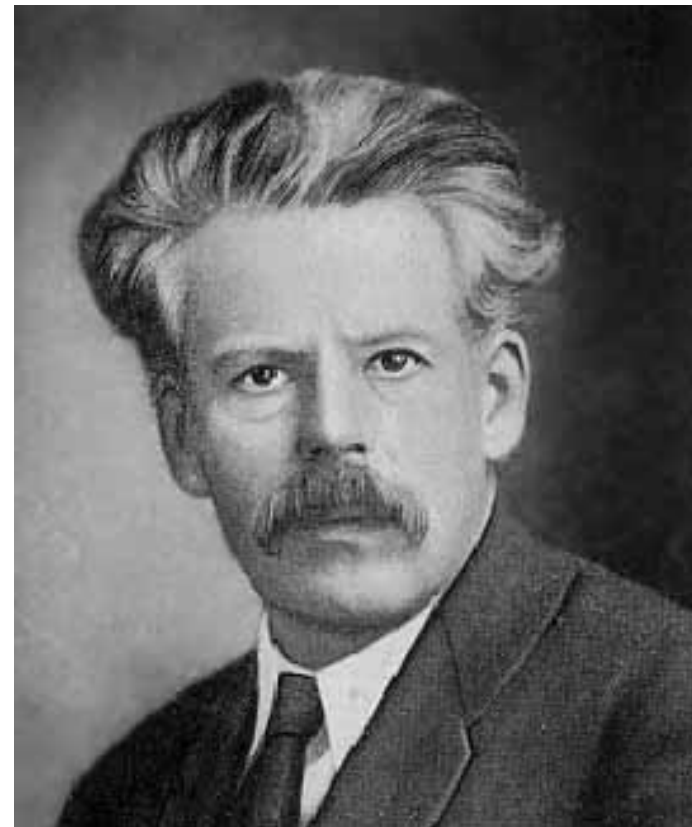
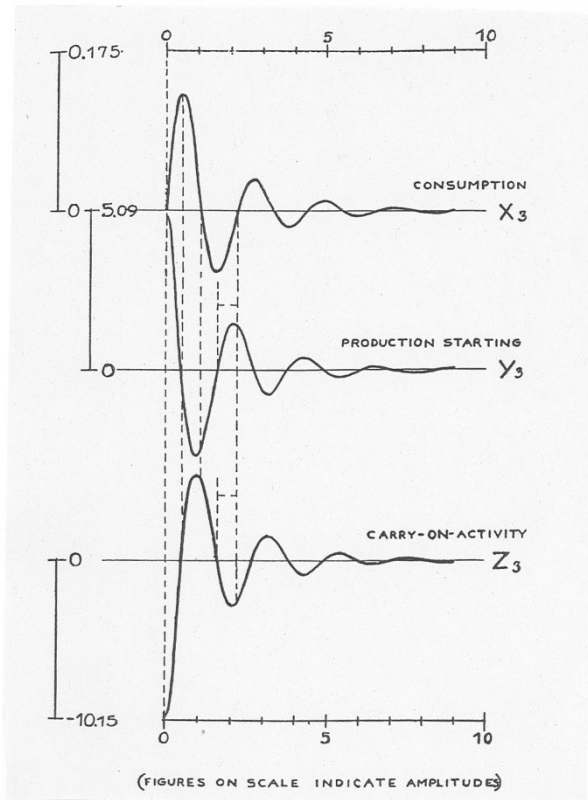
Rocking horse



The rocking horse model (Frisch, 1933)

propagation + impulse

E. Slutsky



Frisch 1933

The idea of erratic shocks represents one very essential aspect of the impulse problem in economic cycle analysis, but probably it does not contain the whole explanation. There is also present another source of energy operating in a more continuous fashion and being more intimately connected with the permanent evolution in human societies. The nature of this influence may perhaps be best exhibited by interpreting it in the light of Schumpeter's theory of the innovations and their role in the cyclical movement of economic life. Schumpeter has emphasized the influence of new ideas, new initiatives, the discovery of new technical procedures, new financial organizations, etc., on the course of the cycle. He insists in particular on the fact that these new

An illustration of endogenous and cumulative causality

The debate between Schumpeter
and Frisch:

Mechanical models or
superimposition of different wave
movements (and endogenous
causation)?

Frisch to Schumpeter on the pendulum

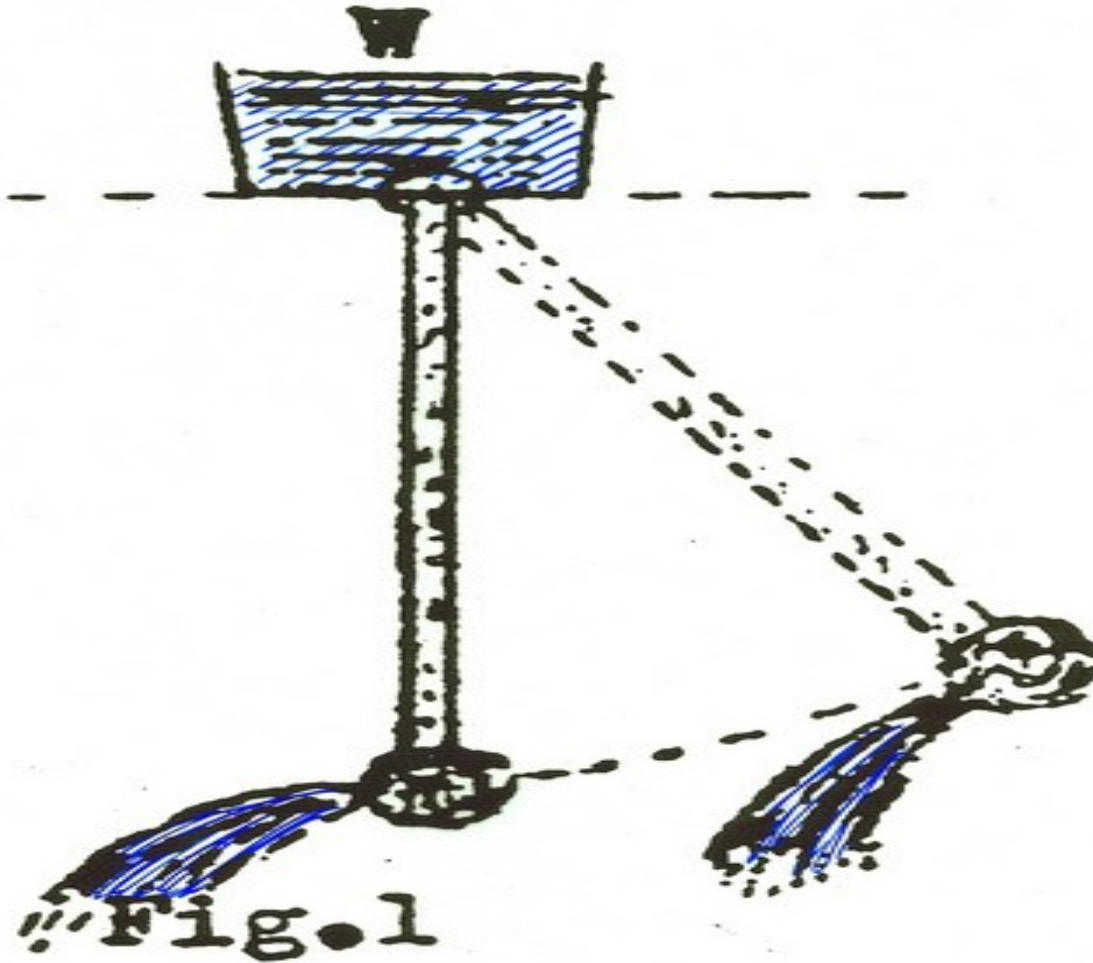
“I think I understand now your point about dynamics. Those things you mention: the more or less unpredictable innovations are those things that in my terminology would form the substance of the impulse problem, as distinguished from the propagation problem. Some other time I want to write you more fully about this.” (Frisch to Schumpeter, 28th May 1931)

Reply by Schumpeter, June 1931

“This [the discussion of the nature of statics, ‘a problem à la pendulum’] would be all, if data did not vary except by influences which we could call influences “**from without**” or by “growth”. But there is an agent, within the economic world which alters data and with these the economic process: **entrepreneurial activity**, which I have elsewhere given the reasons for considering as something sui generis. (...)

It not only **destroys existing equilibrium**, but also that circuit-like process of economic life, it makes economic things **change** instead of making them **recur**.”

The Schumpeterian pendulum (Frisch's version)



S: FRISCH (1933-34)
MAKRODYNAMIKS

Pendulum in mechanics: a clock

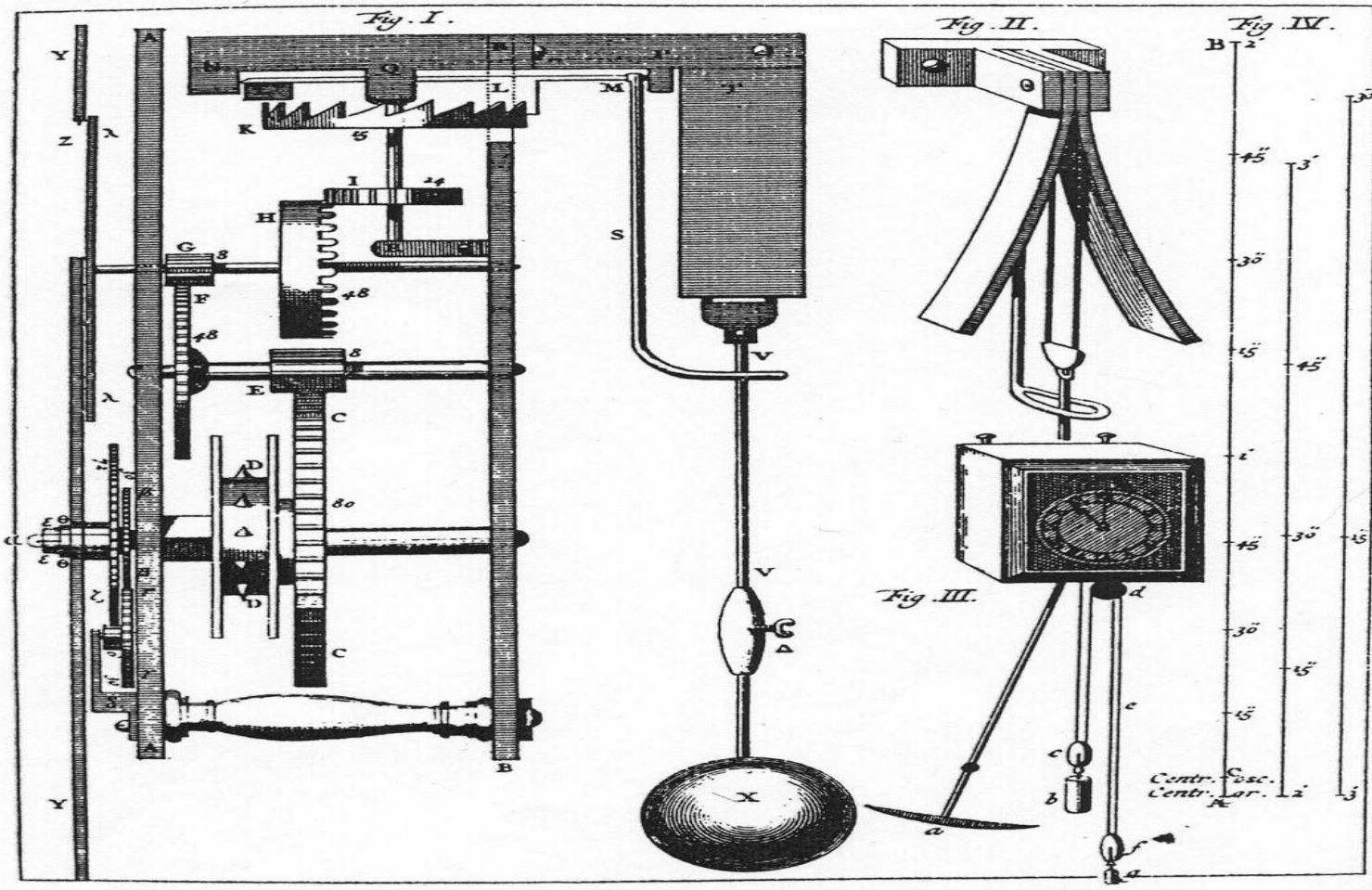
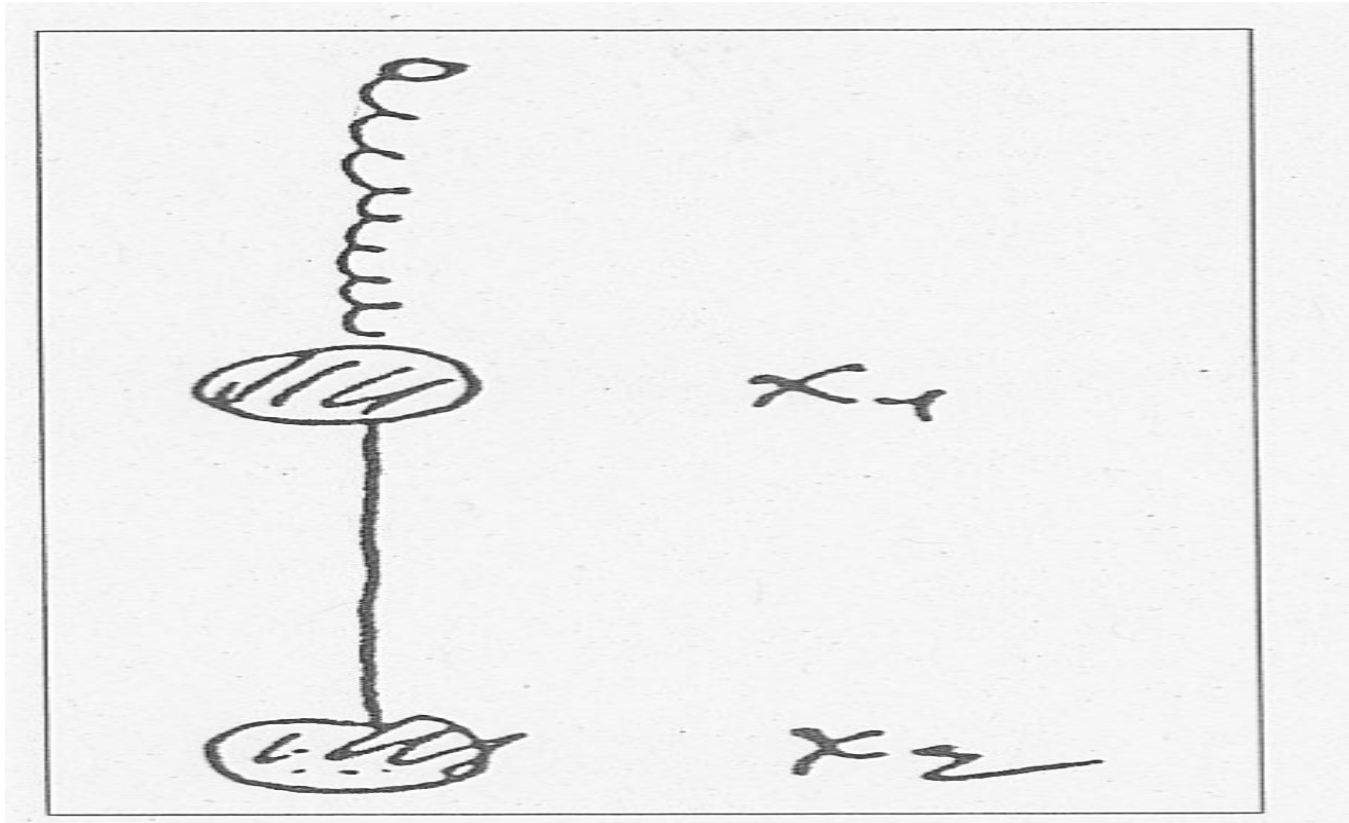


Figure 1.1. The clock of the *Horologium Oscillatorium*.

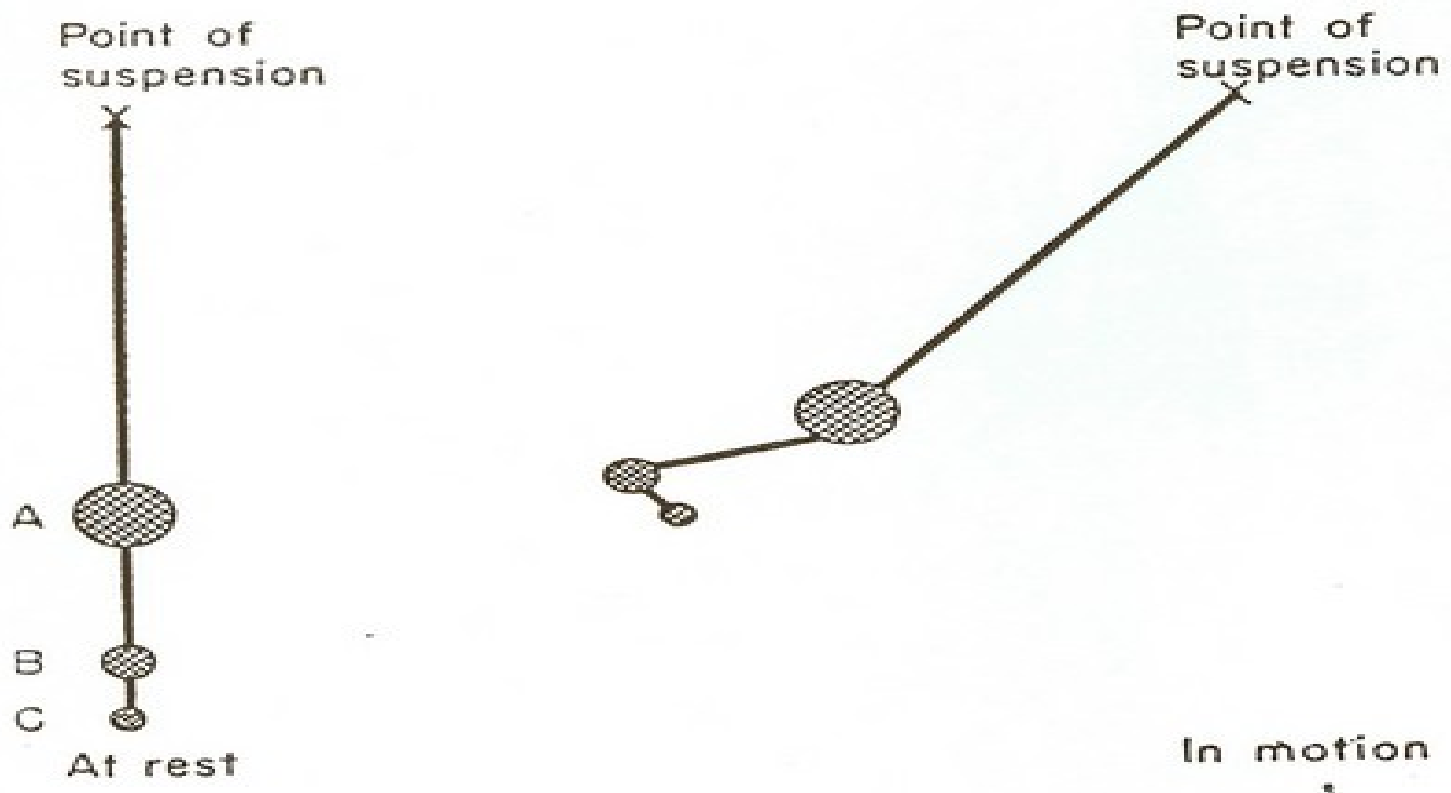
And what if the BC depend on related variables?



Frisch: the three pendula by Marshall

Figure 4

Frisch' triple pendula,
entending Marshall's views on the time dimensions



Frisch: a non-stochastic view?

Frisch (1933, on his Schumpeter pendulum):

“if fully worked out, I believe that this idea will give an **interesting synthesis between the stochastic point of view and the point of view of rigidly determined dynamical laws**“

Schumpeter on innovations

“I am not quite satisfied by your classification of the ‘innovations’ as part of the impulse problem (...), because this seems to coordinate them with events, which **come from outside** the economic system such as chance gold-discoveries. The problem with these is simply to discover the reaction of the economic system on them. (...) Now as I look at it, **any innovations are something different to impulses in this sense. They come from inside.**”

Nikolai Kondratiev (1892-1938)

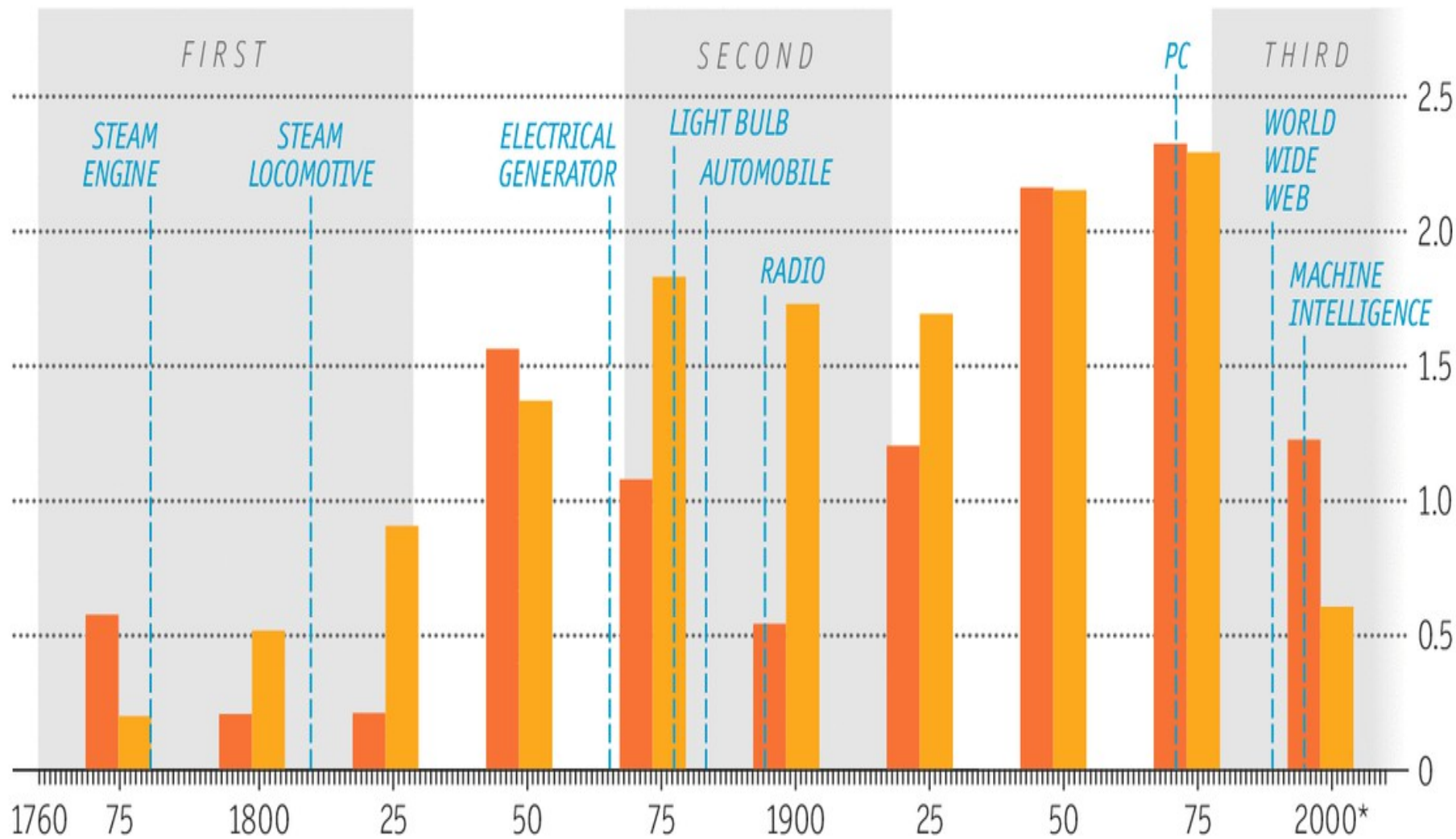


- Statistical analysis and detection of long waves
- The Russian debate on the statistical methods and types of explanation

For richer, for poorer

GDP per person, average annual % change over 25-year periods

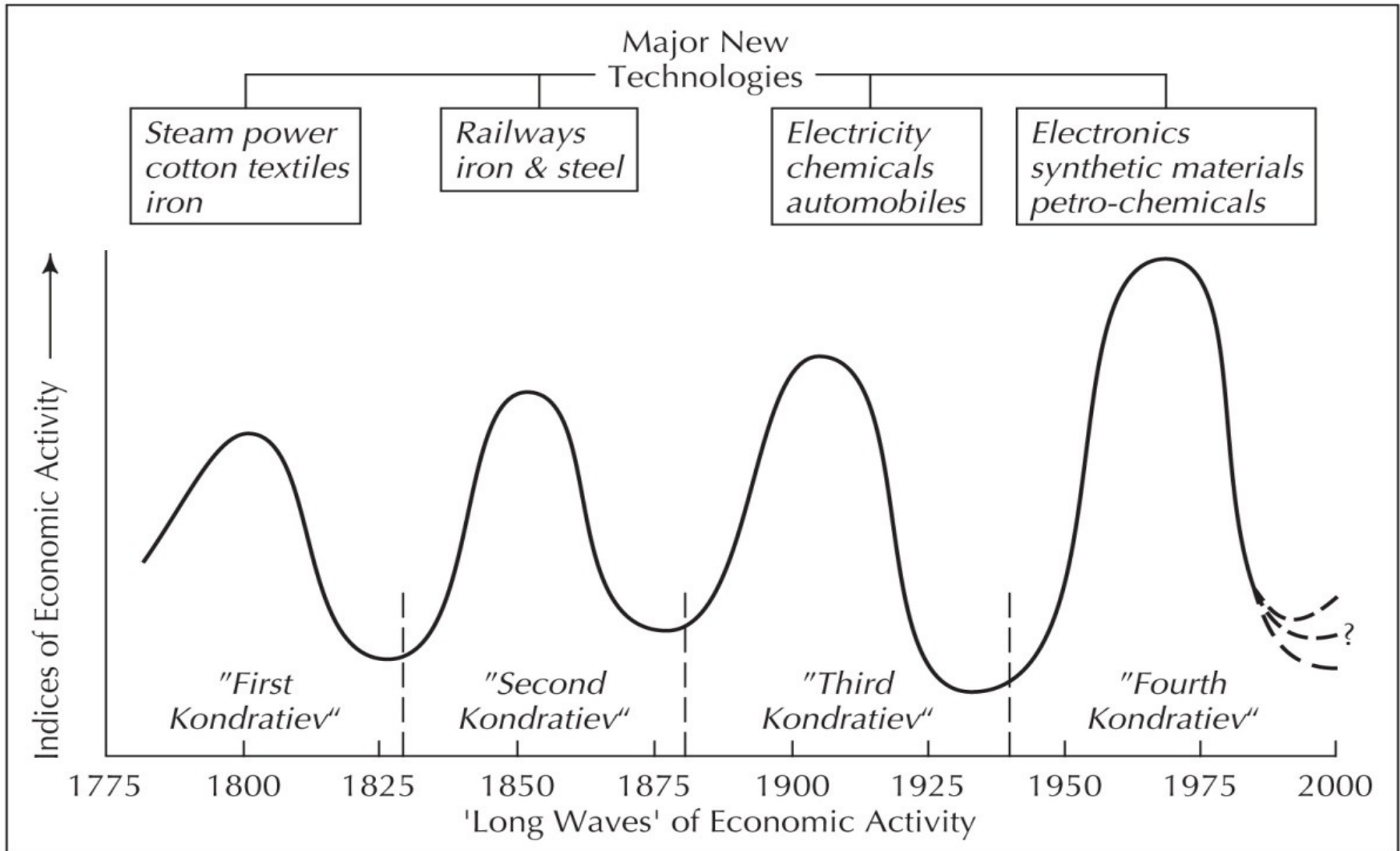
Britain United States
Industrial revolutions



Sources: Maddison Project; *The Economist*

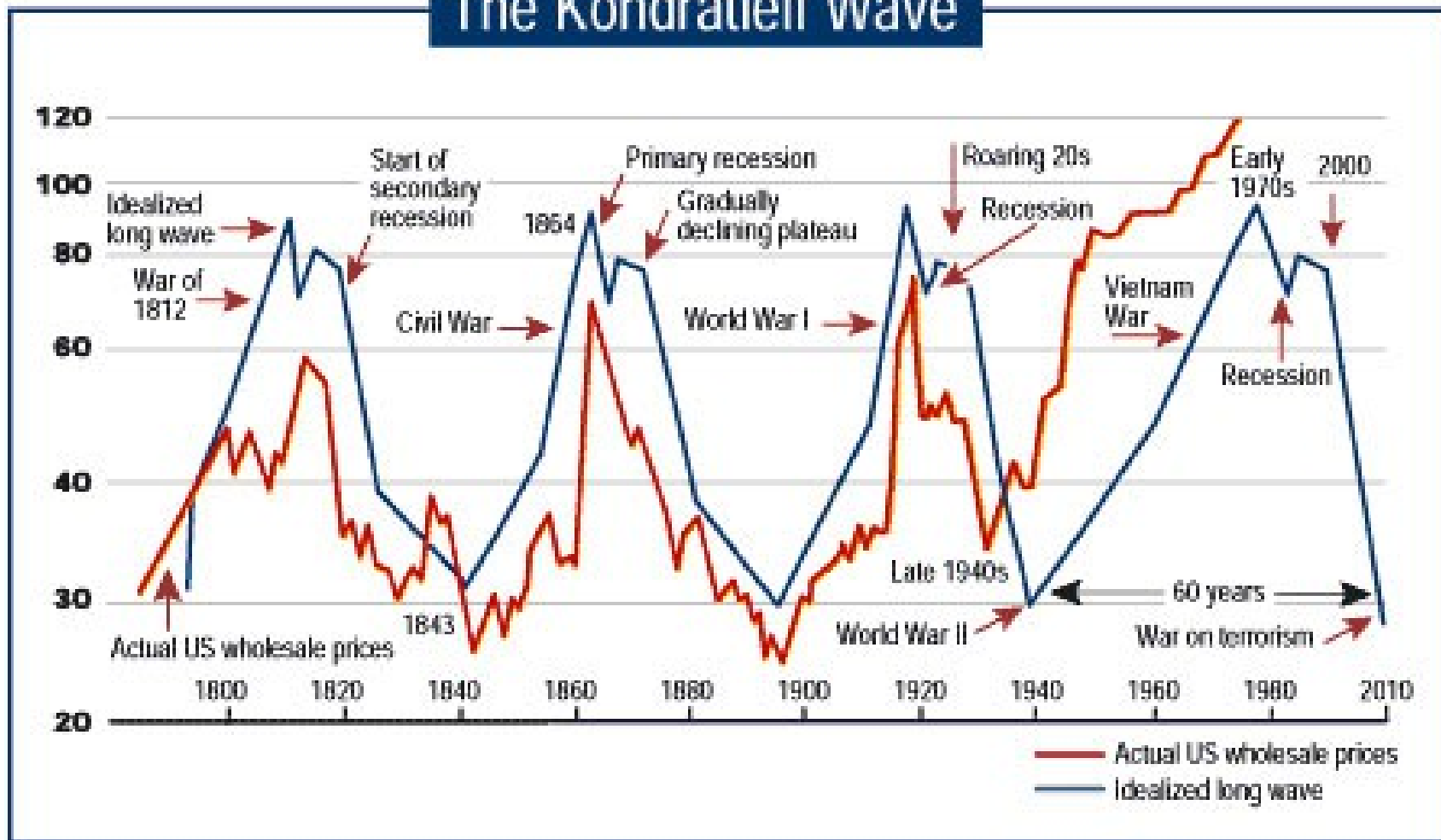
*To 2010

The four long waves

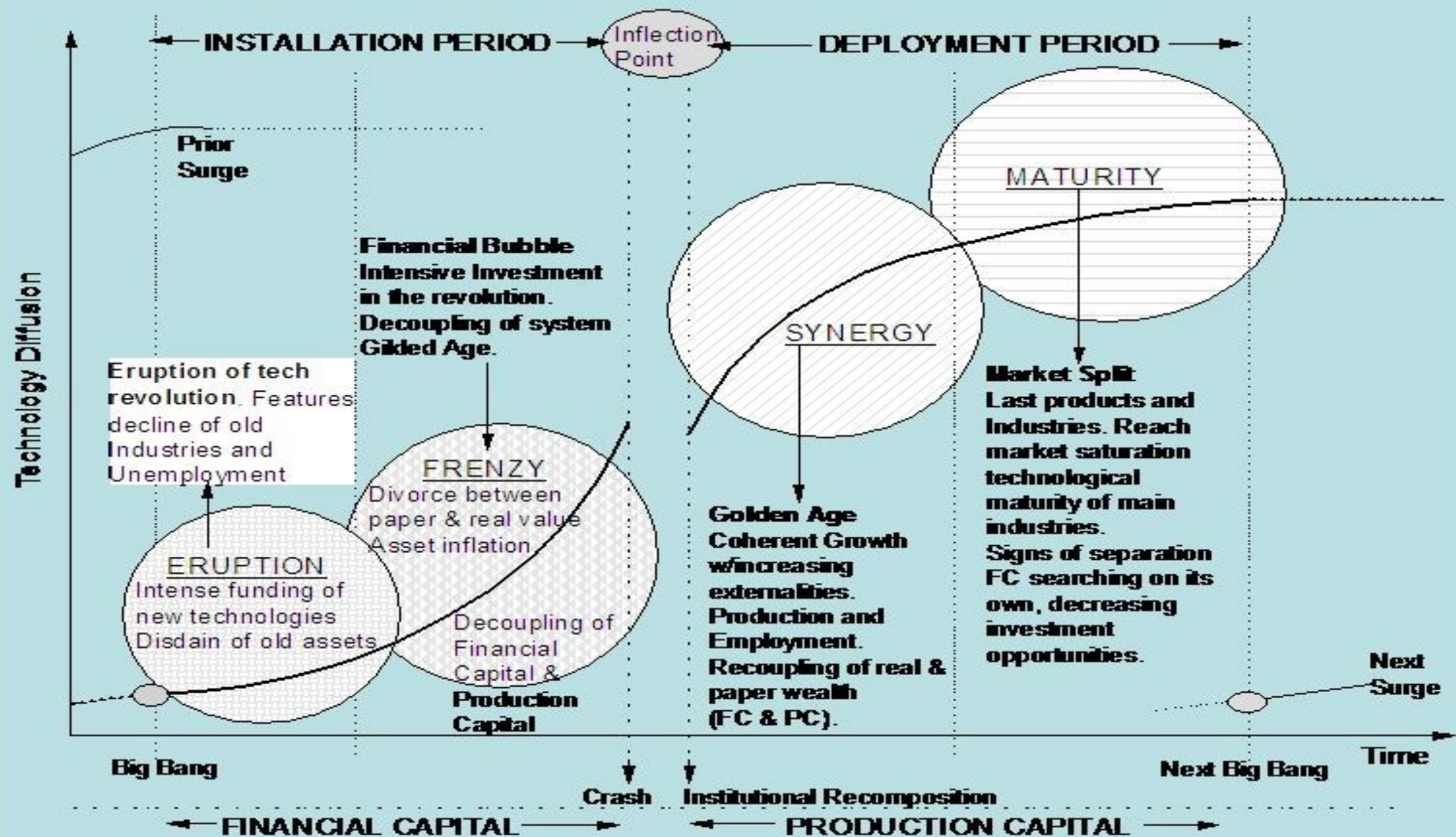


Long waves and “exogenous” factors

The Kondratieff Wave



Long Waves or K-Waves



* Carlota Perez, Technological Revolutions and Financial Capital
Page 74. Edward Elger Publishing, 2002

The *mismatch* between TEP and SIF



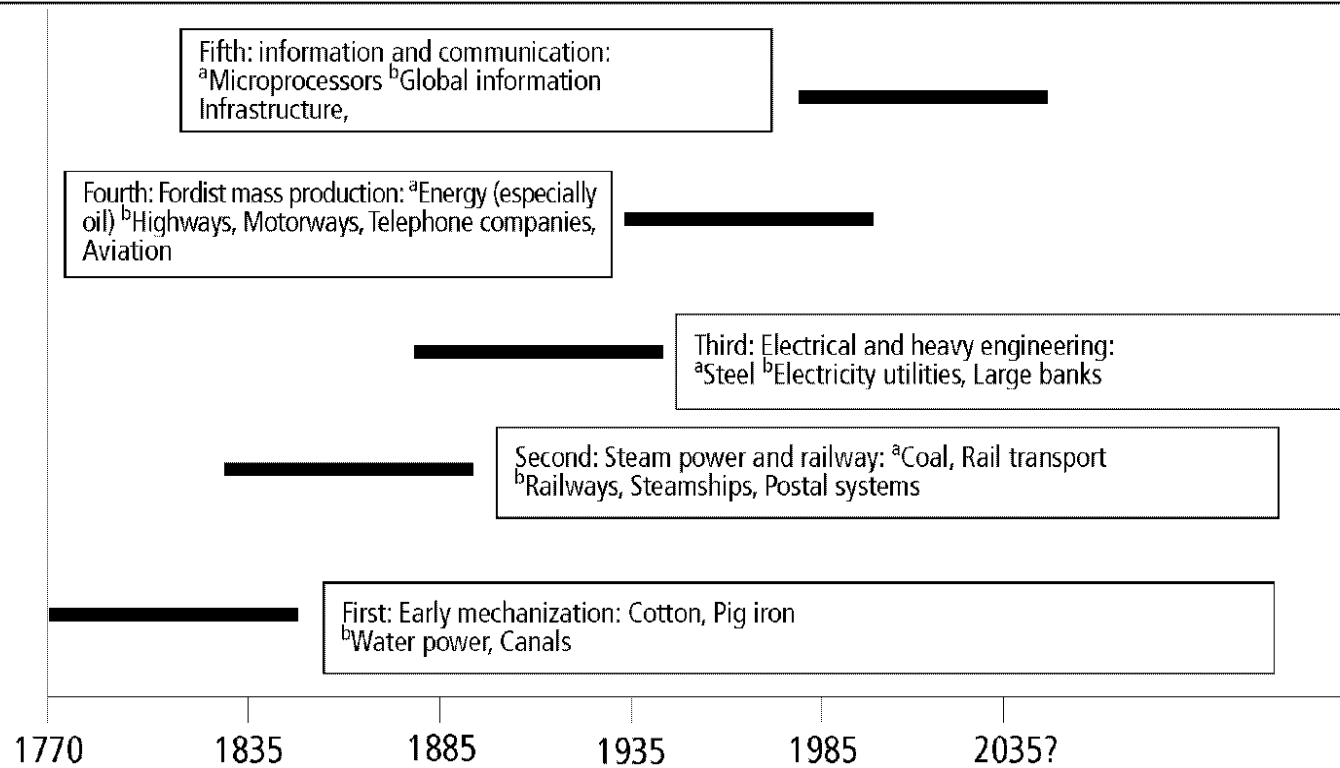
- **Chris Freeman (1911-2010)**
- University of Sussex and Maastricht, founder of SPRU (Sussex)

Freeman-Perez: the techno-economic paradigm

- Radical innovations
- The “key factor”: cheap, accessible and flexible
- A propulsion sector: e.g. textiles, railways, electricity, automobile, chemical, information and telecommunication
- An Infra-structure of transport and communication

Techno Economic paradigms

Figure 1 Techno economic paradigms and key resources



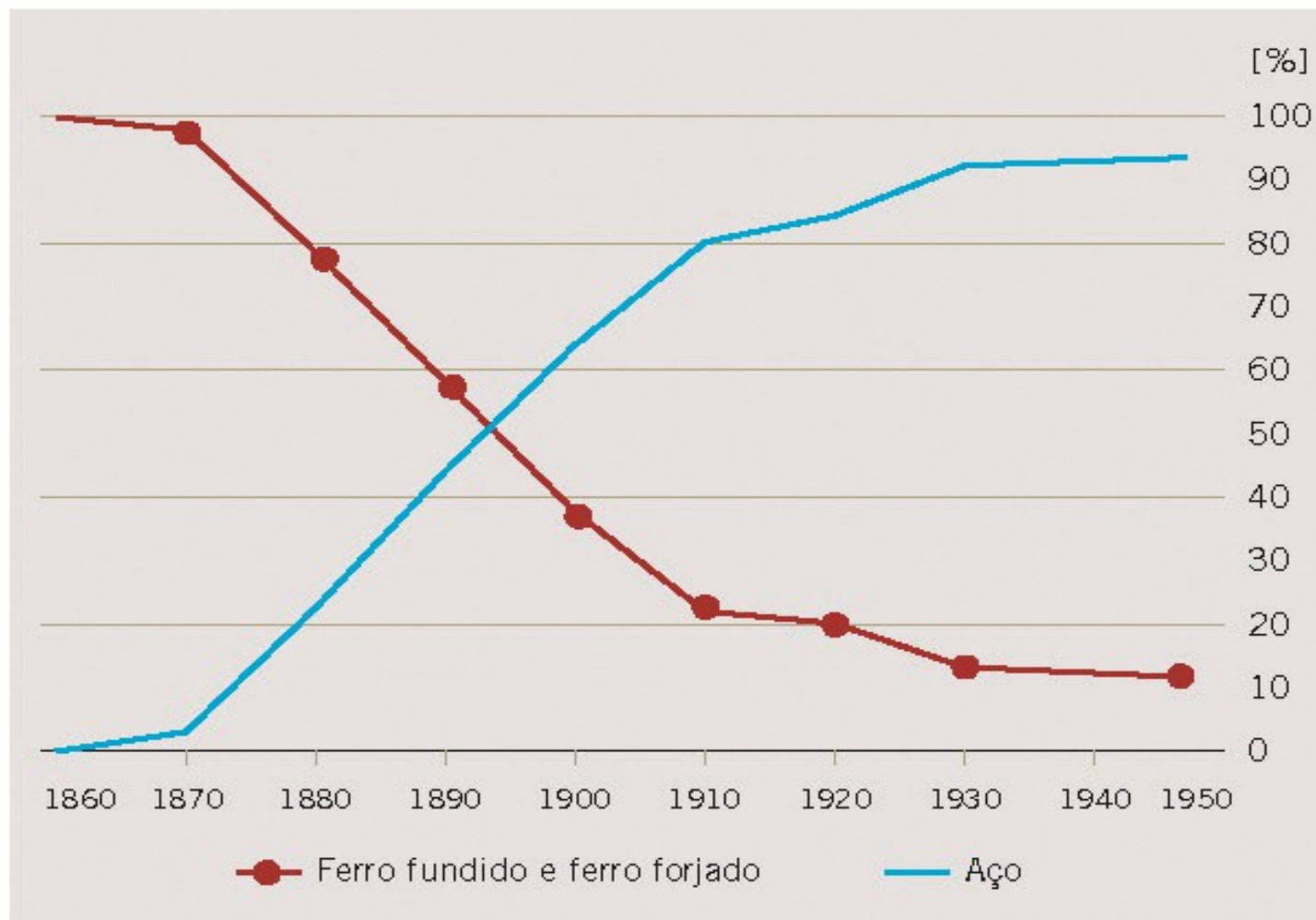
Key

^aAbundant technology resource

^bMajor infrastructure developments



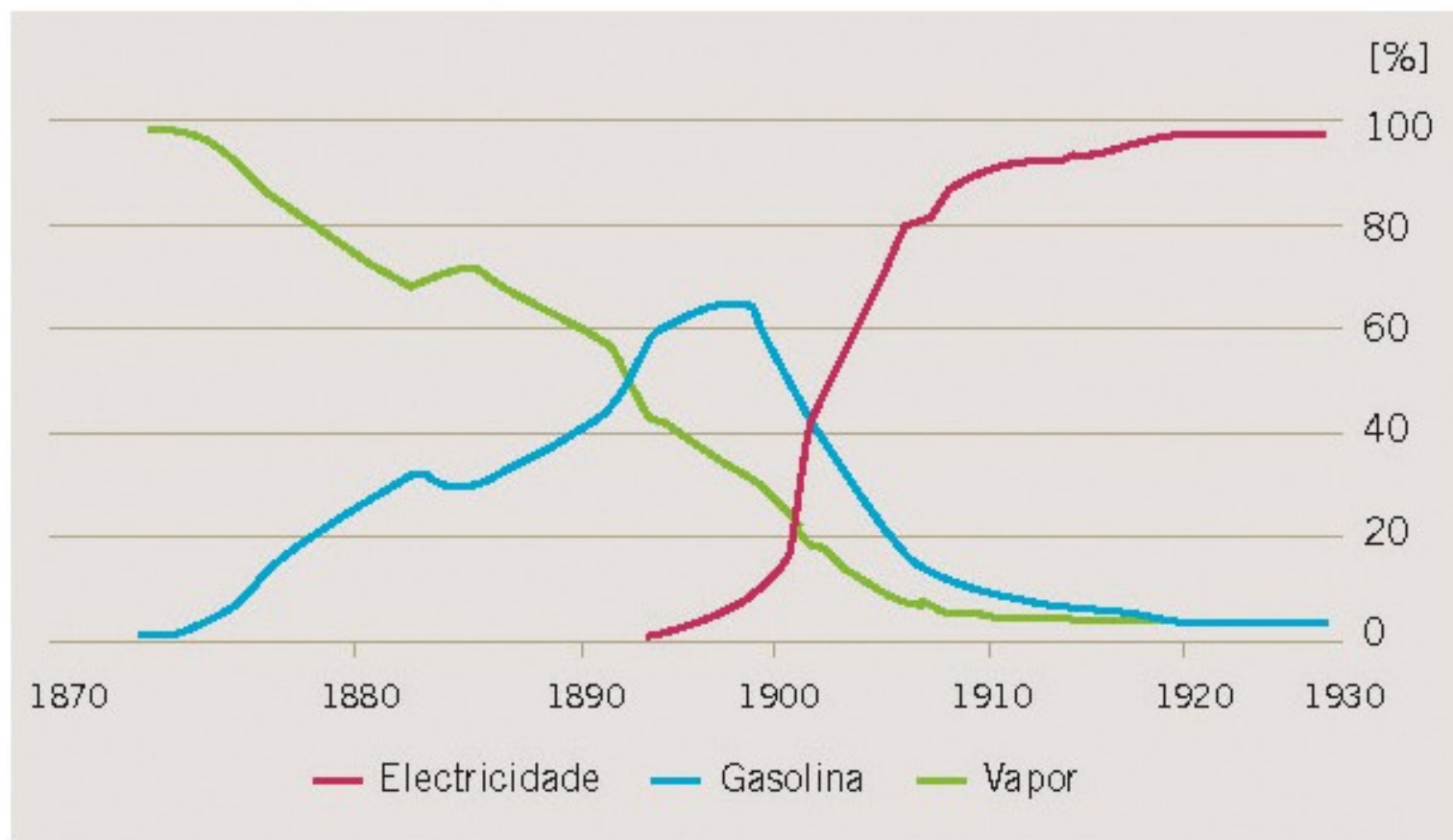
GRÁFICO 10.5. INTENSIDADE DO USO DO AÇO NOS EUA, 1860-1950



Fonte: Ayres, R. U. (1989), *Technological Transformation and Long Waves*, Luxembourg: PIASA.



GRÁFICO 10.6. SUBSTITUIÇÃO DE GERAÇÕES TECNOLÓGICAS



Fonte: Delbeke, J. (1982), *The Mechanization of Flemish Industry, 1812-1930: The Case of Antwerp*, Lovaina: Universidade Católica. Diferentes tipos de máquinas em percentagem do total das instaladas, para fonte de energia.

Socio-institutional framework

- Income distribution
- Social contract and regime of production
- **Social relations in production and distribution:** education, professional training, social groups, trade unions and associations, forms of organization and conflict

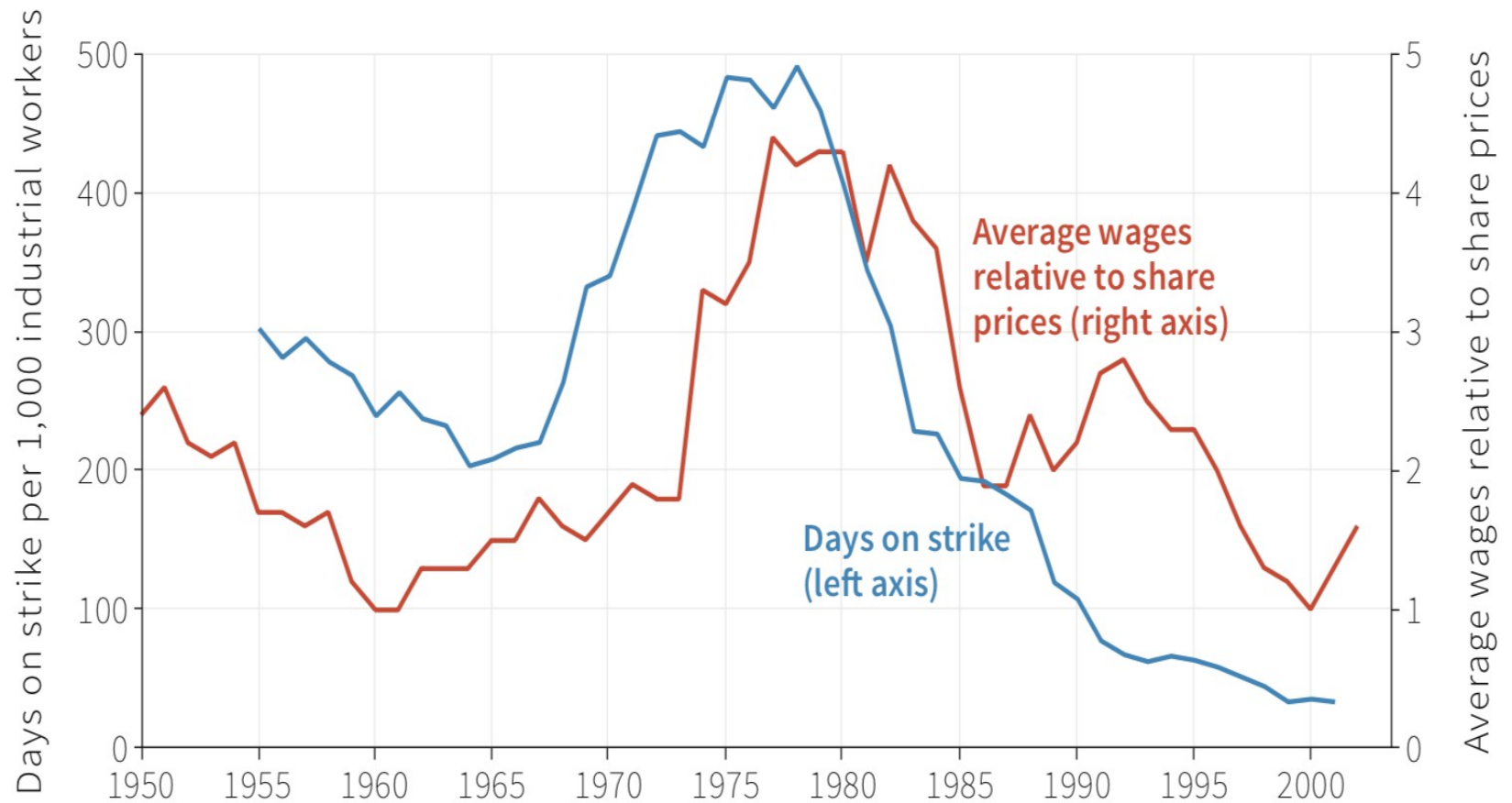
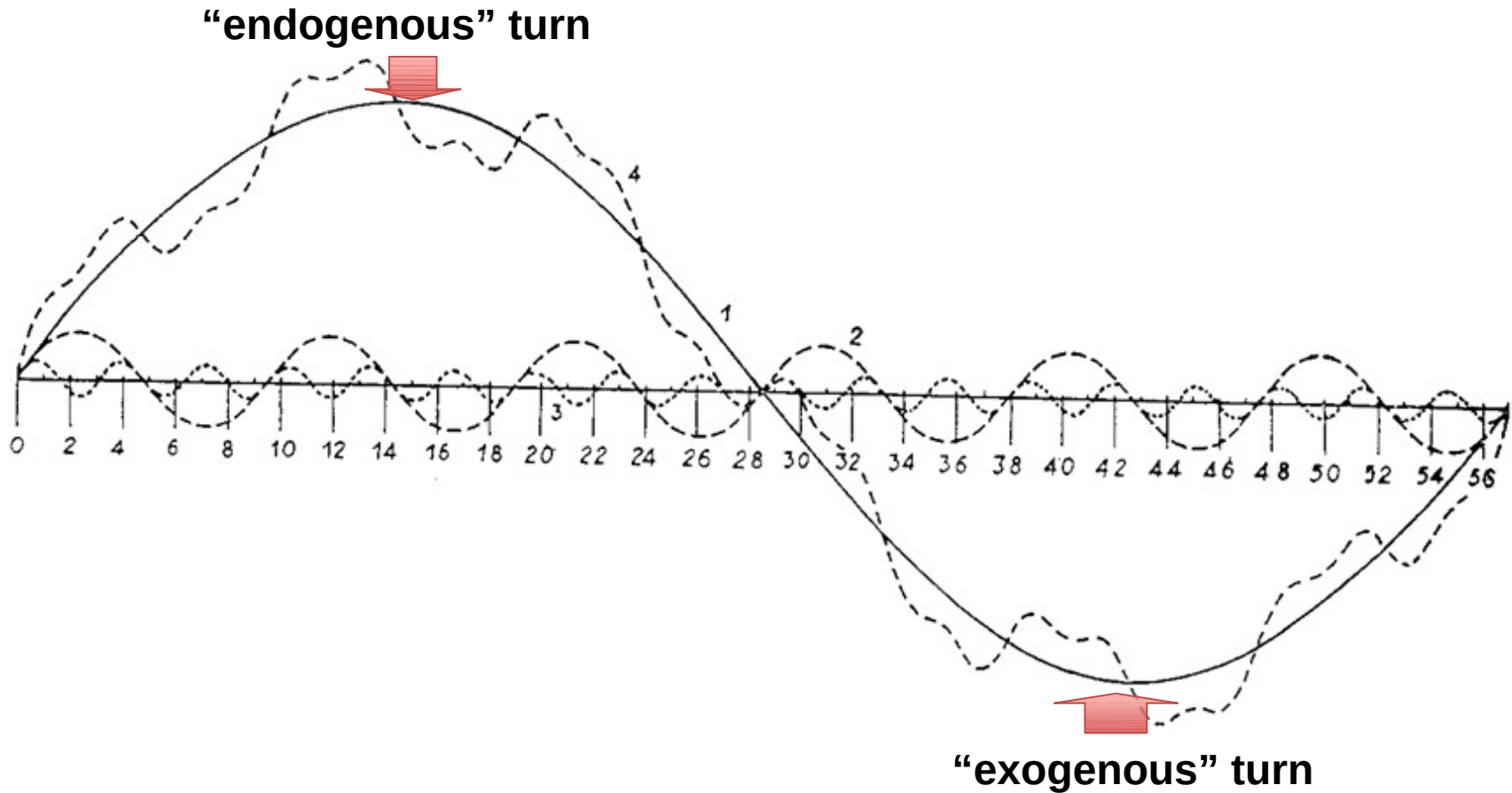


Figure 17.14 *The end of the golden age: Strikes and wages relative to share prices in advanced economies (1950-2002).*

Source: Glyn, Andrew. 2006. *Capitalism Unleashed: Finance, Globalization, and Welfare*. Oxford: Oxford University Press.

“Endogenous” or “exogenous” change?

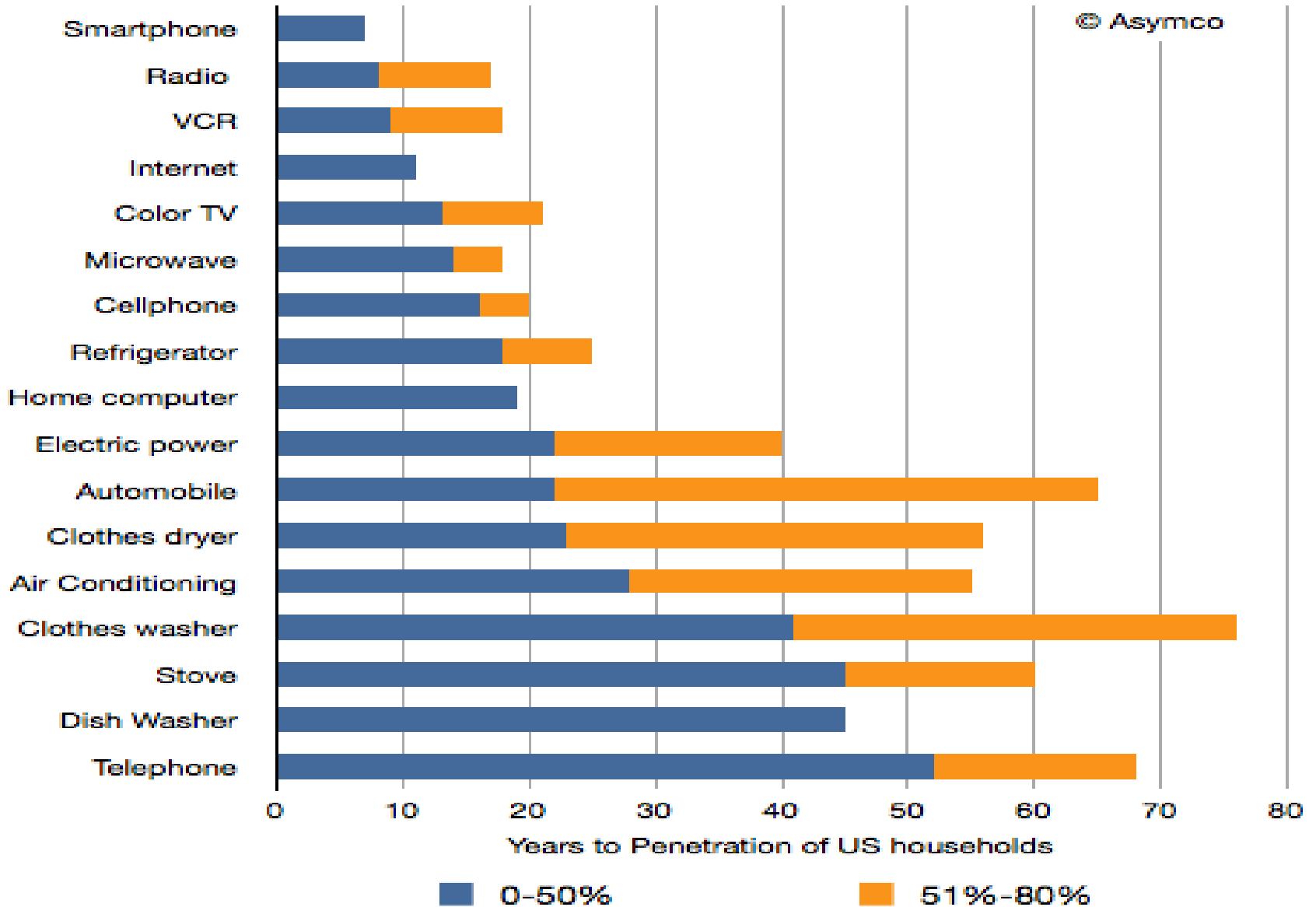


Freeman-Perez: a summary

Constellation of technical and organisational innovations	Examples of highly visible, technically successful, and profitable innovations	'Carrier' branch and other leading branches of the economy	Core input and other key inputs	Transport and communication infrastructure	Managerial and organizational changes	Approx. timing of the 'upswing' (boom) ----- 'downswing' (crisis of adjustment)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Water-powered mechanisation of industry	Arkwright's Cromford mill (1771) Henry Cort's 'puddling' process (1784)	Cotton spinning Iron products Water wheels Bleach	Iron Raw cotton Coal	Canals Turnpike roads Sailing ships	Factory systems Entrepreneurs Partnerships	1780s-1815 ----- 1815-1848
2. Steam-powered mechanisation of industry and transport	Liverpool-Manchester Railway (1831) Brunel's 'Great Western' Atlantic steamship (1838)	Railways and railway equipment Steam engines Machine tools Alkali industry	Iron Coal	Railways Telegraph Steam ships	Joint stock companies Subcontracting to responsible craft workers	1848-1873 ----- 1873-1895
3. Electrification of industry, transport, and the home	Carnegie's Bessemer steel rail plant (1875) Edison's Pearl St. New York Electric Power Station (1882)	Electrical equipment Heavy engineering Heavy chemicals Steel products	Steel Copper Metal alloys	Steel railways Steel ships Telephone	Specialized professional management systems 'Taylorism' Giant firms	1895-1918 ----- 1918-1940
4. Motorisation of transport, civil economy and war	Ford's Highland Park assembly line (1913) Burton process for cracking heavy oil	Automobiles Trucks Tractors, tanks Diesel engines Aircraft Refineries	Oil Gas Synthetic materials	Radio Motorways Airports Airlines	Mass production and consumption 'Fordism' Hierarchies	1941-1973 ----- 1973- [(1992)]*
5. Computerisation of entire economy	IBM 1401 and 360 series (1960s) Intel microprocessor (1972)	Computers Software Telecommunication equipment Biotechnology	'Chips' (integrated circuits)	'Information Highways' (Internet)	Networks: internal, local and global	----- [(1992)]* -.....

Fastest Growing Consumer Technologies

© Asymco



Or no cycles at all?

What is “modern macro”?

The *New Consensus*

- **NC macro (RBC) + New Keynesian macro**
 - *RBC: technological shocks and fluctuations of Y*
 - *NK: nominal rigidities (prices and wages)*
- **Synthesis:**
 - 1 intertemporal optimization with rational agents
 - 2 imperfect competition with costly price adjustments
 - 3 DSGE, dynamic stochastic general equilibrium

Mechanics (Lucas)

“One exhibits understanding of business cycles by constructing a model in the most literal sense: a fully articulated, **artificial economy** which behaves through time so as to imitate closely the time series behavior of actual economies”. (Lucas 1977)

Lucas: toy economies

“On this general view of the nature of economic theory then, a ‘theory’ is not a collection of assertions about the behavior of the actual economy but rather an explicit set of instructions for building a parallel or analogue system—a **mechanical, imitation economy**. A ‘good’ model, from this point of view, will not be exactly more ‘real’ than a poor one, but will provide better imitations”. (Lucas 1980, 697)

A mechanical economy: RBC, the dominant view in business cycles analysis

The RBC models represent a **stationary process** around a stochastic trend.

The **shocks** are thus considered as real and persistent on the supply side; long-run “innovations” of the trend affect the short-run cyclical behavior of the system.

RBC: more Slutsky than Frisch

“In contrast with modern business cycle theory, he [Frisch] emphasized damped oscillatory behavior” (Kydland and Prescott 1990), defining **equilibrium as a system of rest**. Moreover, in Frisch’s model there is **neither individual maximization nor a representative agent**.

By contrast, **Slutsky** proposed “an entirely different way of generating cycles” as the **sum of random causes**.