

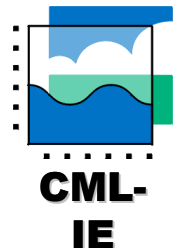
*Redefining
Growth and Prosperity
Workshop 21 April 2009*

Crisis, Growth and Degrowth:
Coupling and Decoupling
Mechanisms through Crisis

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Contents of presentation

- 1. History of growth and crisis: long term statistics**
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- 5. Prospects for Degrowth after Crisis**

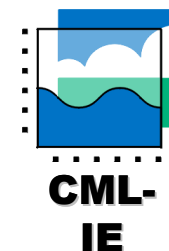


Figure 3 The McEvedy & Jones estimates of world population in the past 12,000 years (millions; logarithmic scale)

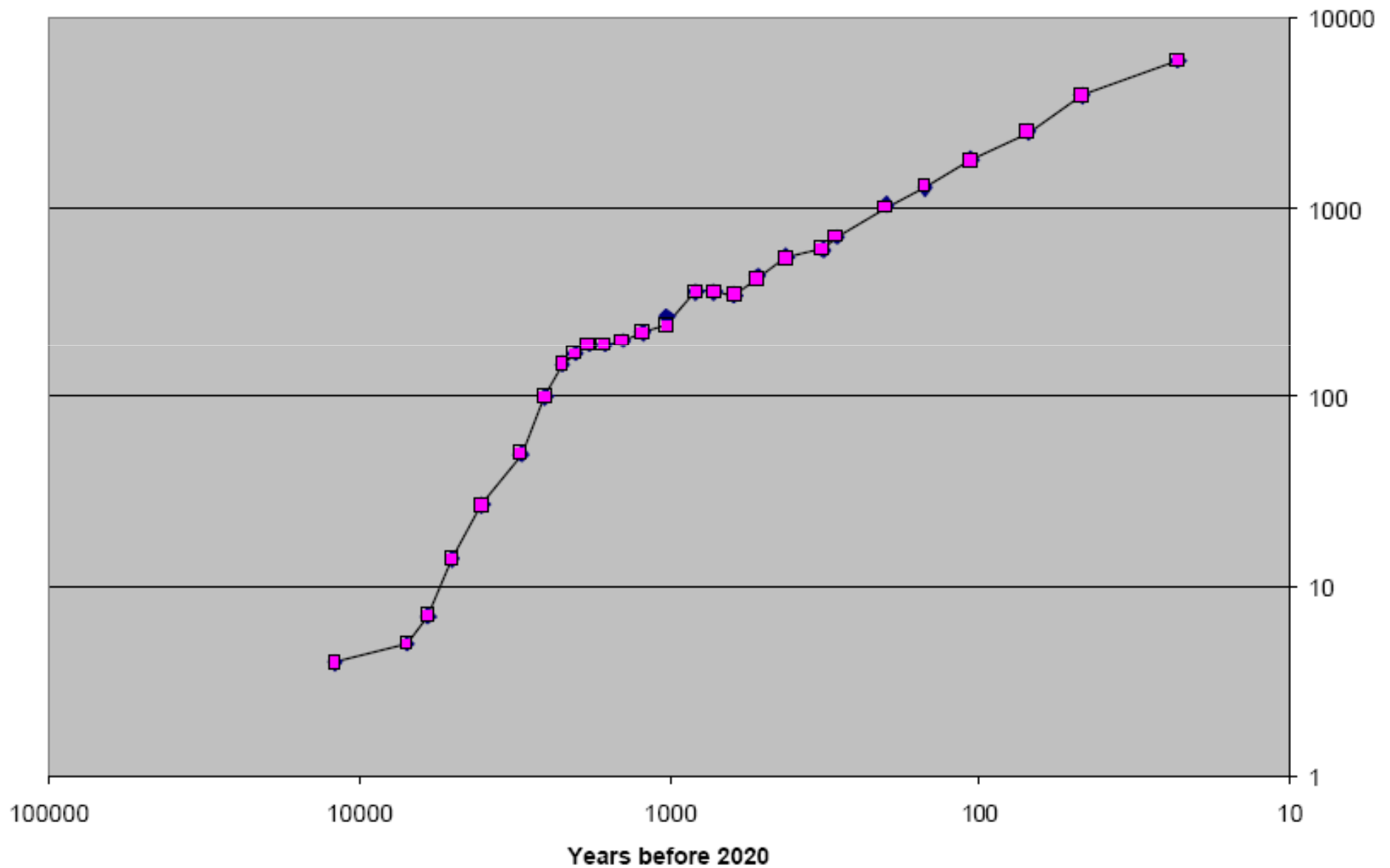


Figure 2 The same two sets of estimates of world population AD 1 to AD 1997 (in millions; logarithmic scale)

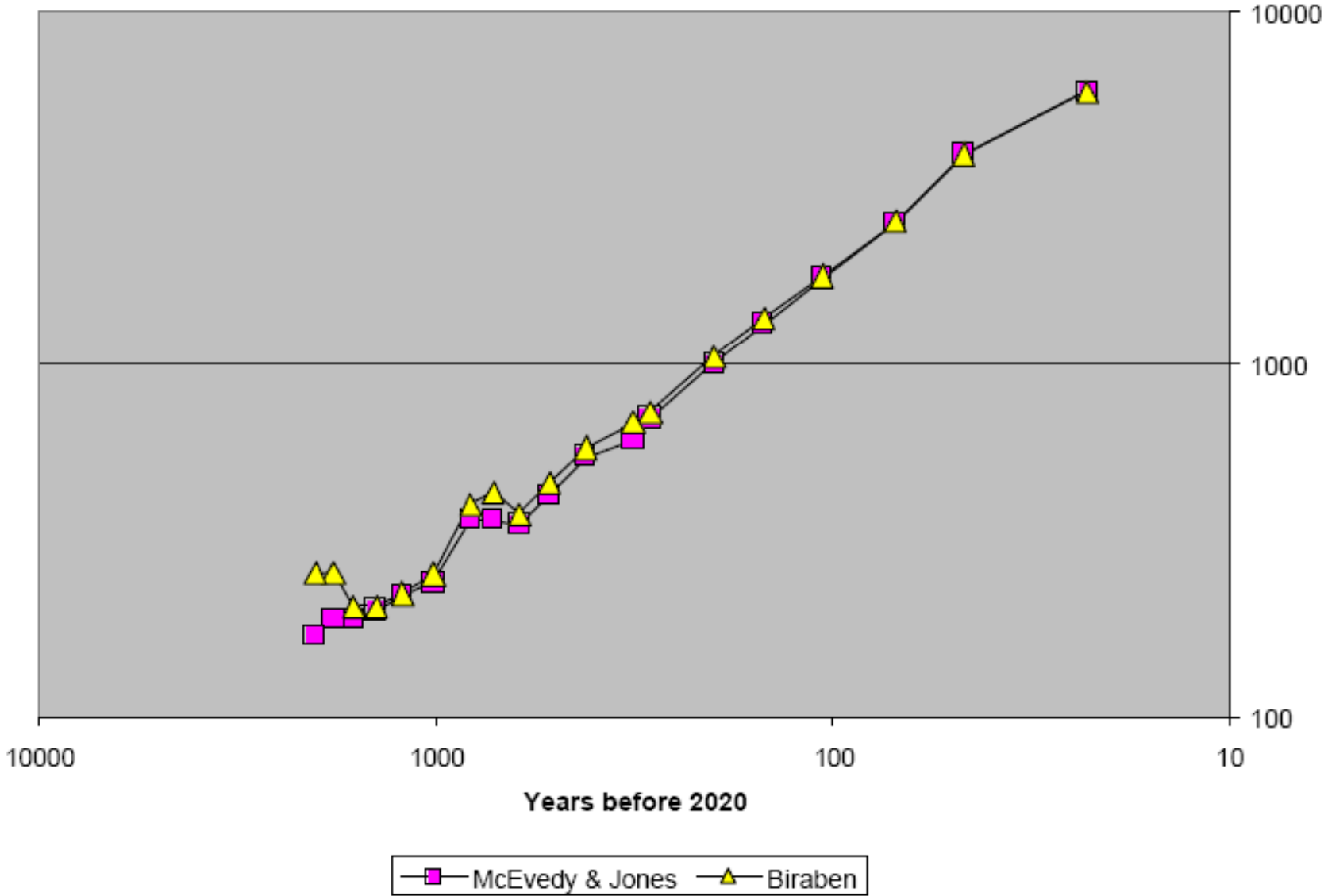


Figure 1 Two sets of estimates of the development of world population, AD 1 to AD 1997 (in millions)

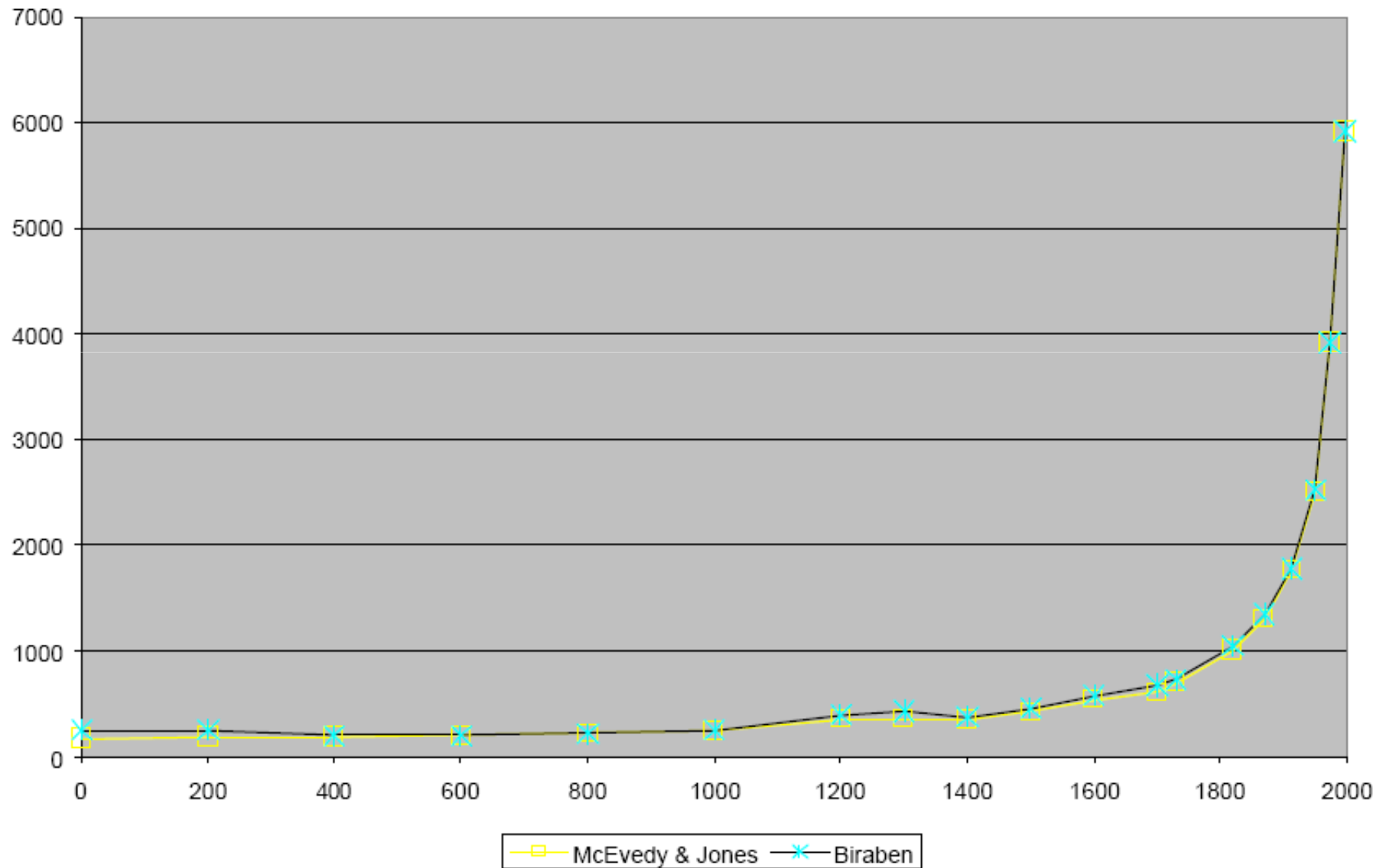
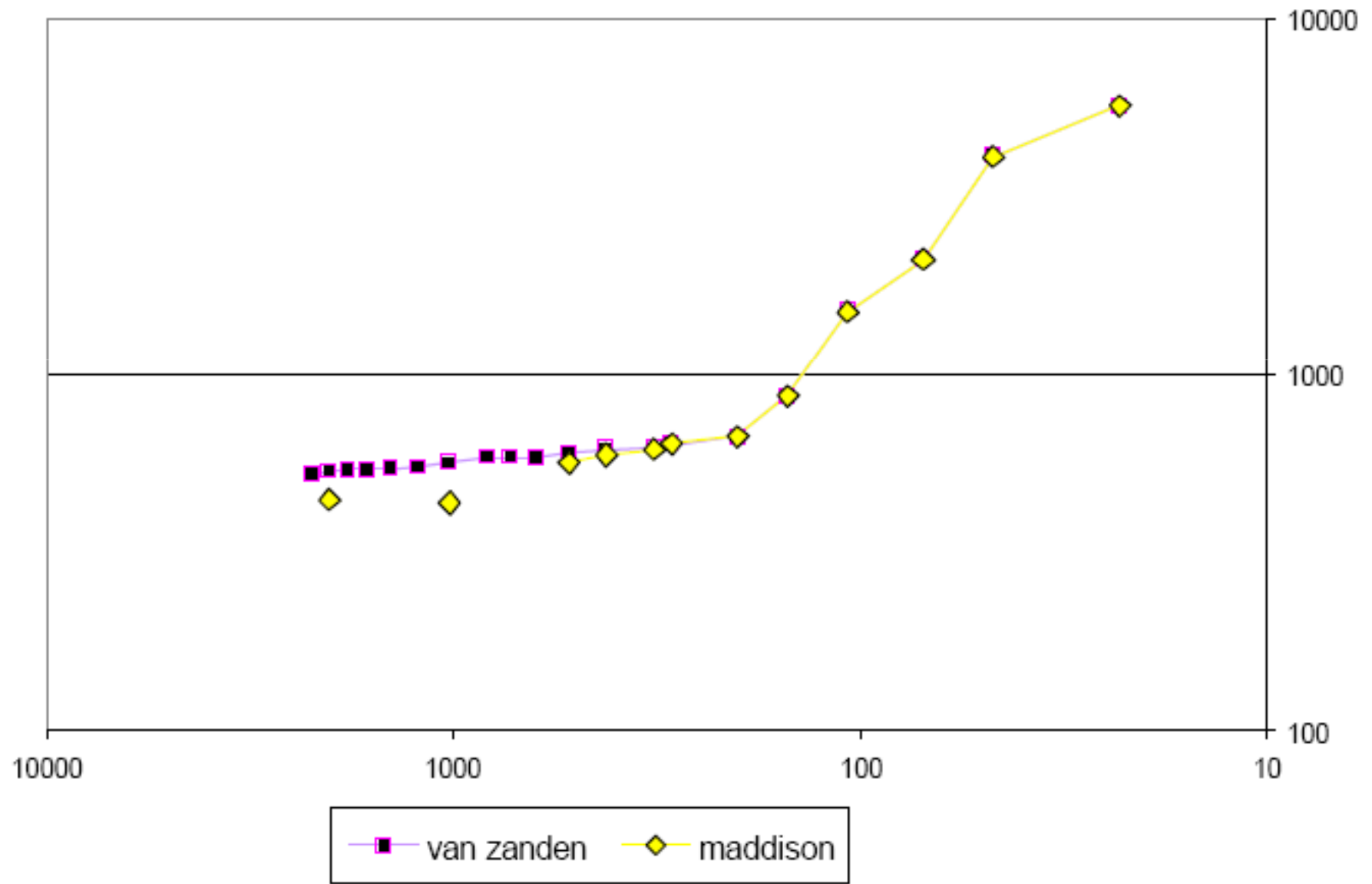
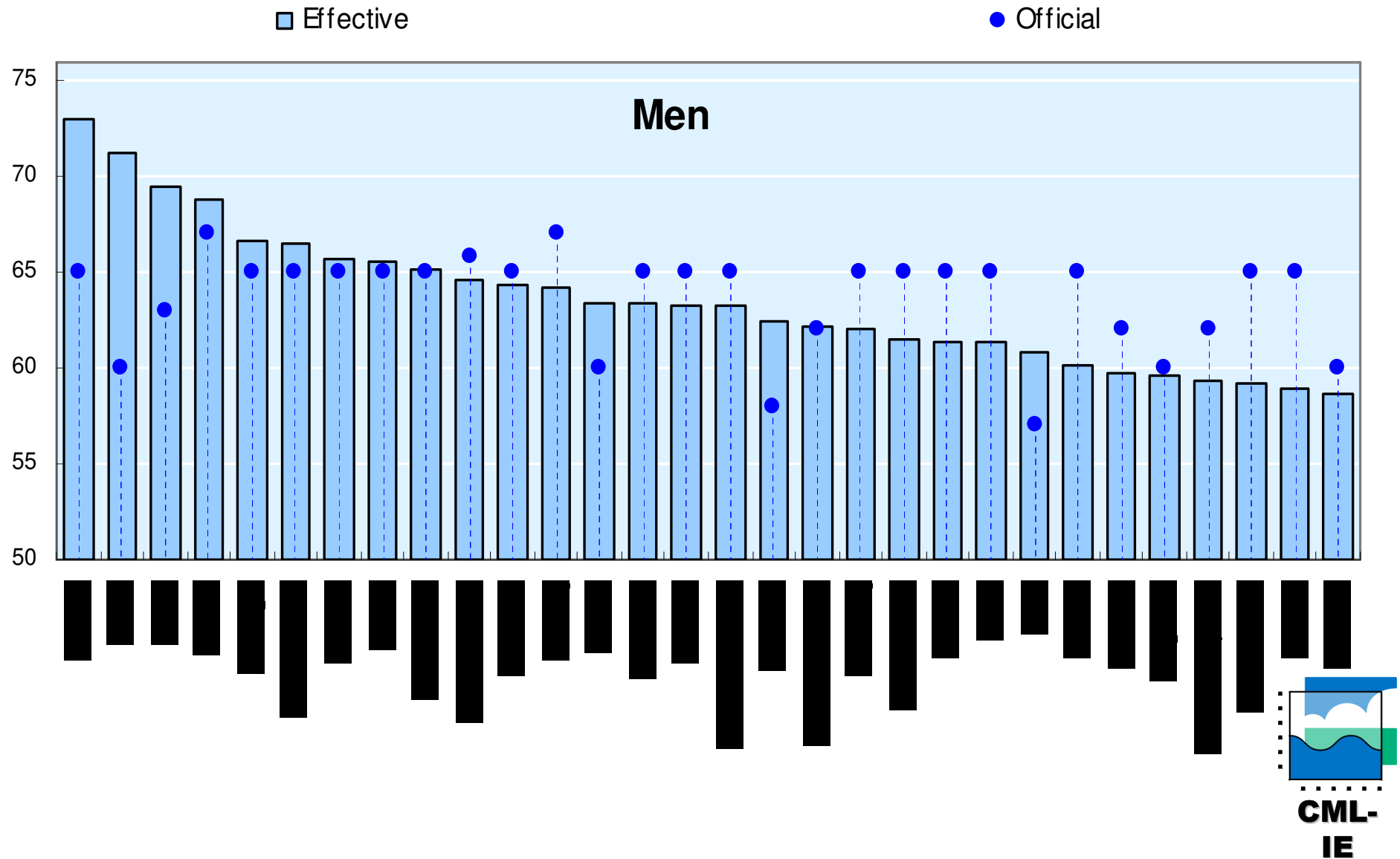


Figure 4 Estimates of GDP per capita of the world population, AD 1 -AD 1998 (log-scale)



Official and effective retirement age OECD Men

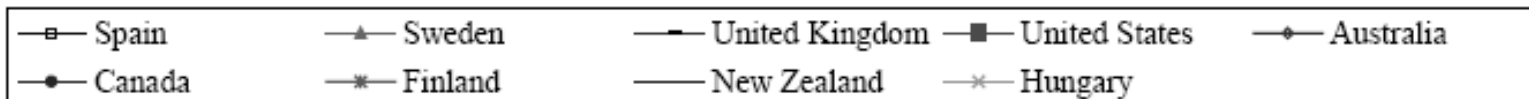
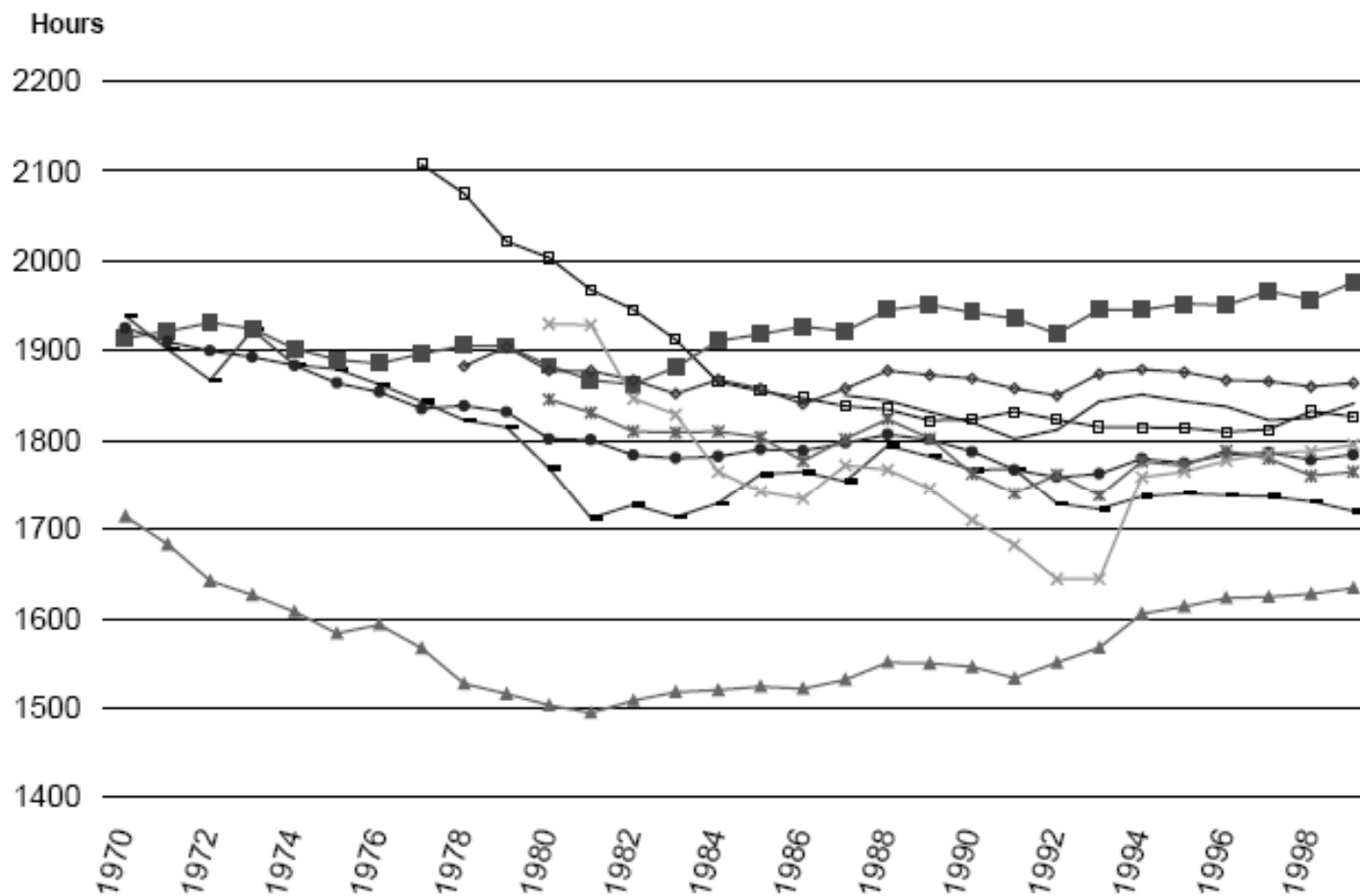


Medium term development in retirement age Selected OECD countries: Men

	1972-77	1977-82	1982-87	1987-92	1992-97	1997-02	2002-07
France	65,0	63,1	61,1	59,8	59,6	58,5	58,7
Austria	63,1	60,7	59,8	59,4	58,2	59,9	58,9
Belgium	62,9	61,0	59,4	58,0	58,5	58,5	59,6
Finland	65,8	64,9	62,2	61,2	59,4	60,8	60,2
Italy	62,4	62,5	63,6	61,9	60,0	61,2	60,8
Spain	66,6	64,9	62,8	61,7	61,4	61,7	61,4
Poland	69,4	67,0	66,5	66,1	62,2	61,1	61,4
Netherlands	63,7	62,0	60,1	60,6	61,0	60,5	61,6
Germany	60,7	60,9	62,1
United Kingdom	66,5	64,4	62,7	62,5	62,3	63,1	63,2
Denmark	65,8	66,0	64,8	64,2	63,1	62,4	63,5
United States	66,5	66,0	65,5	64,8	64,7	65,0	64,6
Switzerland	70,2	69,0	68,1	67,6	66,0	66,6	65,2
Ireland	69,4	67,3	65,5	63,3	64,4	65,1	65,6
Sweden	66,2	63,8	64,4	63,5	63,8	63,5	65,7
Japan	71,0	70,7	69,7	71,1	70,5	69,7	69,5

Source: OECD (adapted)

Average annual hours actually worked per person in employment, 1970-1999



Source: [http://www.oilis.oecd.org/oilis/2000doc.nsf/LinkTo/NT00002EB2/\\$FILE/JT00105261.PDF](http://www.oilis.oecd.org/oilis/2000doc.nsf/LinkTo/NT00002EB2/$FILE/JT00105261.PDF)

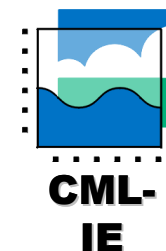


Table 1. Trends in average annual hours worked per person in employment

Average change, in numbers of hours, from year to year

	Cycle ^a	Average change per year	Cycle ^a	Average change per year	Cycle ^a	Average change per year
Canada	1975-82	-12.2	1982-91	-1.8	1991-97	1.2
France	1975-85	-17.5	1985-93	-5.4	1993-98	-7.6
Italy ^b	1975-83	-9.3	1983-93	-3.7	1993-99	..
Japan	1975-83	-2.1	1983-94	-17.9	1994-98	-14.0
Netherlands ^b	1975-83	-12.1	1983-94	-12.9	1994-99	-9.0
Norway	1978-83	-10.4	1983-91	-7.2	1991-99	-4.0
Spain	1975-84	..	1984-93	-5.6	1993-99	1.9
Sweden	1978-83	-1.9	1983-93	5.0	1993-99	11.1
United Kingdom	1975-82	-21.8	1982-92	0.2	1992-99	-1.3
United States	1975-82	-3.9	1982-91	8.2	1991-99	5.0
western Germany	1975-82	-10.0	1982-93	-13.9	1993-99	-3.9

.. Data not available

a) The cycles shown run from one major trough to the next.

The interpretation of the table is as follows: in France, the annual duration of work dropped by $(17.5 \times 10) = 175$ hours between 1975 and 1985, while it dropped by $(5.4 \times 8) = 43.2$ hours between 1985 and 1993.

b) The data are for employees only.

Source : OECD database on annual hours of work.

In percentages: up to over 1% per annum seems easily possible.

Source: [http://www.oilis.oecd.org/olis/2000doc.nsf/LinkTo/NT00002EB2/\\$FILE/JT00105261.PDF](http://www.oilis.oecd.org/olis/2000doc.nsf/LinkTo/NT00002EB2/$FILE/JT00105261.PDF)

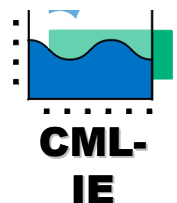


Table 2. Contribution of part-time employment to recent changes in average annual hours of employees, 1989-1999

Average change in hours from year to year, over the ten-year period

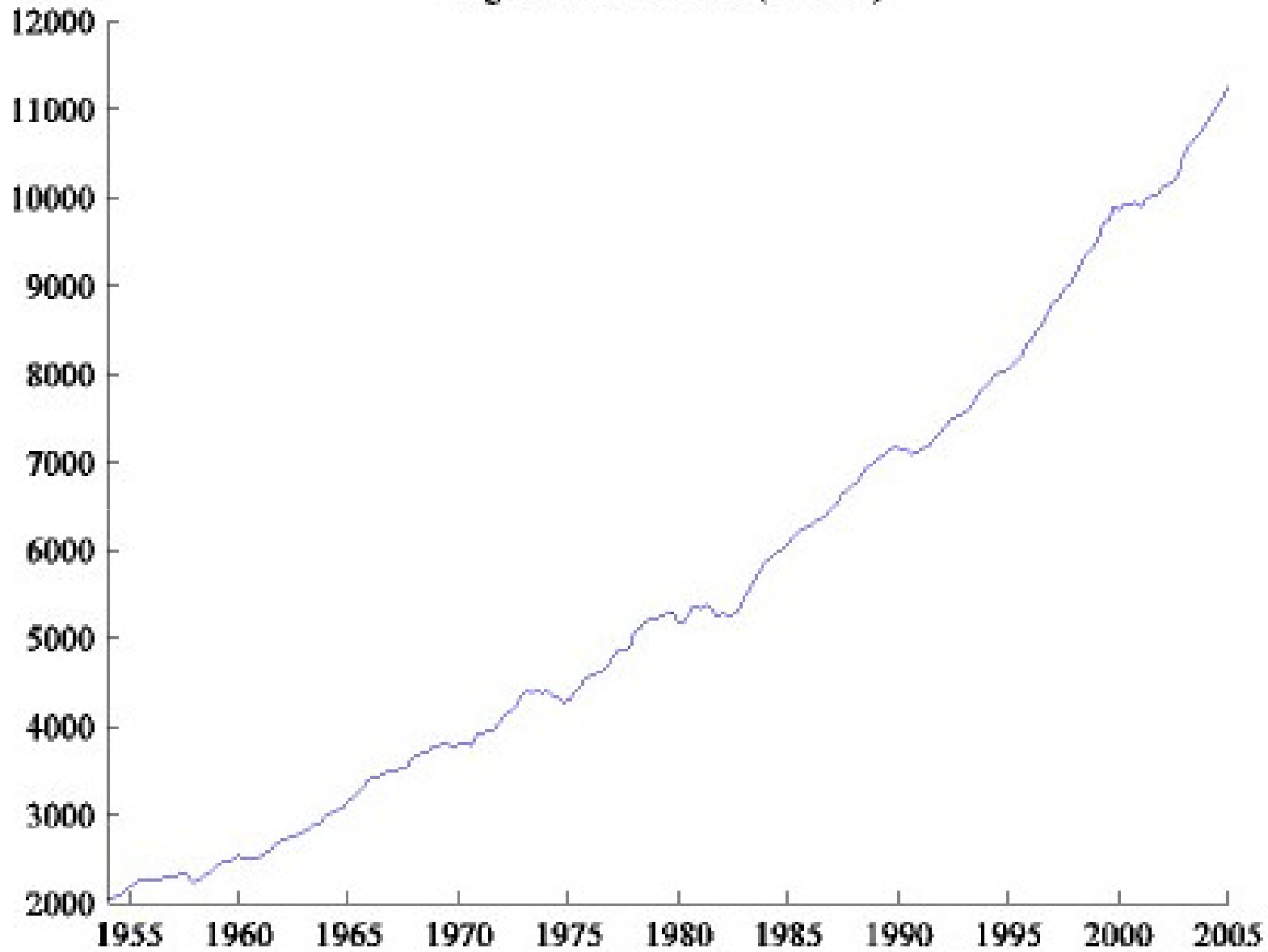
Overall change in hours	Change attributable to:			
	Change in hours of full-timers	Change in hours of part-timers	Change in the share of part-timers	
Belgium (1989-1998) ^a	-6.5	-1.4	0.4	-5.1
Denmark	5.3	2.2	0.8	2.3
France	-7.8	-3.4	0.2	-4.4
Germany (1991-1999)	-8.7	-2.7	-1.7	-4.4
Greece	5.3	6.3	0.1	-1.0
Ireland	-11.0	-0.8	0.0	-9.7
Italy	-3.0	-1.3	0.3	-2.1
Luxembourg	-5.7	-1.7	-0.7	-2.9
Netherlands	-14.5	-6.9	-0.2	-7.7
Portugal	-6.5	-5.5	0.3	-1.6
Spain	-3.6	0.3	0.1	-4.0
United Kingdom	-2.3	-0.2	0.8	-2.8

Shifts between full time work and part time work as a major factor

Source: [http://www.oilis.oecd.org/oilis/2000doc.nsf/LinkTo/NT00002EB2/\\$FILE/JT00105261.PDF](http://www.oilis.oecd.org/oilis/2000doc.nsf/LinkTo/NT00002EB2/$FILE/JT00105261.PDF)



Figure 1: Real GNP (billions)



Real GNP in the US Source: Wikipedia http://en.wikipedia.org/wiki/Business_cycle

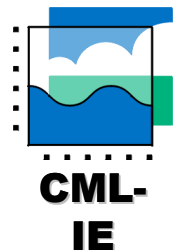
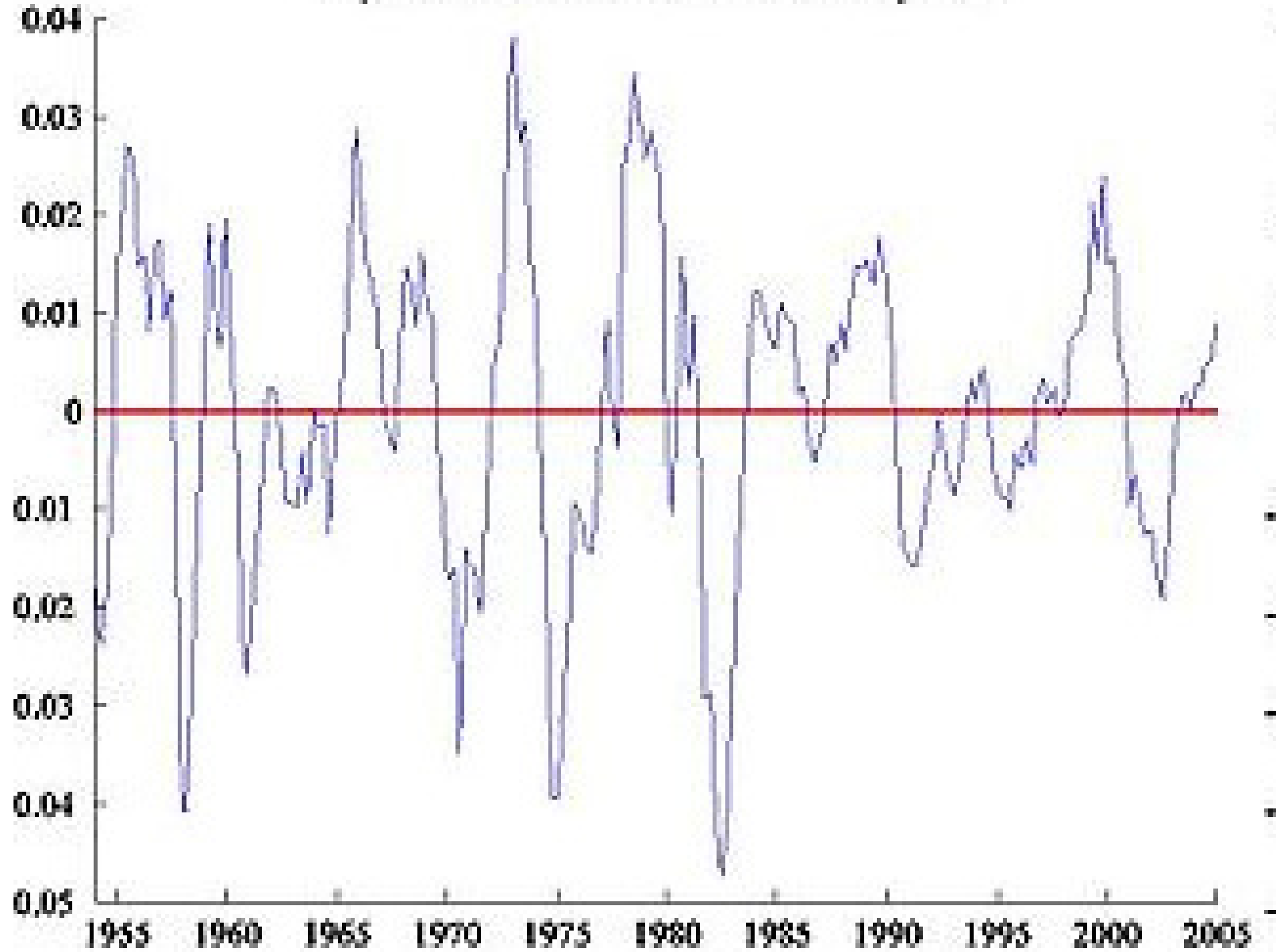
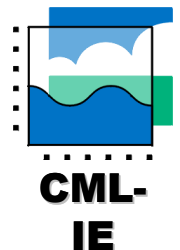


Figure 3: Deviations from Trend in Log GNP



Business cycles in the US

Source: Wikipedia http://en.wikipedia.org/wiki/Business_cycle



Cycle of expansion and recession (period)	Average annual GDP growth during cycle	Expansion (period)	Average annual GDP growth during expansion	Recession (period)	Average annual GDP growth during recession	Type of recession
1856-1862	2.2	1856-1860	4.6	1860-1862	-2.4	minirecession followed by depression
1862-1866	3.5	1862-1865	5.4	1865-1866	-1.9	contraction
1866-1868	-4.3	1866-1867	2.5	1867-1868	-10.6	depression
1868-1875	4.8	1868-1874	5.7	1874-1875	-0.8	contraction
1875-1878	1.1	1875-1876	7.0	1876-1878	-1.7	depression
1878-1880	3.0	1878-1879	5.9	1879-1880	0.3	minirecession
1880-1882	1.0	1880-1881	2.9	1881-1882	-0.9	contraction
1882-1884	3.0	1882-1883	7.4	1883-1884	-1.3	contraction
1884-1887	1.2	1884-1885	3.9	1885-1887	-0.1	minirecession followed by depression
1887-1889	2.9	1887-1888	4.9	1888-1889	0.9	minirecession
1889-1892	2.0	1889-1891	3.2	1891-1892	-0.3	contraction
1892-1900	3.2	1892-1899	3.7	1899-1900	-0.5	contraction
1900-1902	1.4	1900-1901	2.7	1901-1902	0.2	minirecession
1902-1905	2.4	1902-1904	3.9	1904-1905	-0.5	contraction
1905-1909	3.4	1905-1907	7.4	1907-1909	-0.5	depression followed by minirecession
1909-1918	1.5	1909-1916	4.0	1916-1918	-6.5	depression
1918-1921	0.7	1918-1920	5.6	1920-1921	-8.5	depression
1921-1925	5.4	1921-1924	7.1	1924-1925	0.6	minirecession
1925-1932	3.0	1925-1930	5.1	1930-1932	-2.1	depression
1932-1941	2.8	1932-1939	5.3	1939-1941	-5.5	depression
1941-1953	3.6	1941-1952	3.9	1952-1953	0.7	minirecession
1953-1978	3.6	1953-1976	4.0	1976-1978	-0.8	depression
1978-1981	1.1	1978-1979	3.2	1979-1981	0.1	minirecession followed by contraction
1981-1993	1.3	1981-1990	2.3	1990-1993	-1.7	depression
1993-2001	3.1	1993-2000	3.5	2000-2001	0.9	minirecession

Business cycles in Sweden

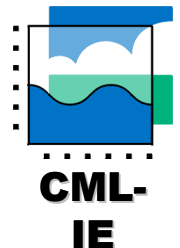
Source:
<http://www.historicalstatistics.org/htmldata11/index.html>

What can we learn from historical data?

- Population growth
Not relevant for medium term growth discussion
Industrialised and China: Declining
- GDP growth
Not really influenced
- Retirement age
Counteracting mechanisms
- Weekly working hours
Not really influenced
- Business cycles:
Limited effect on long term development

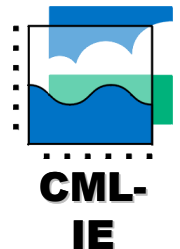
General conclusion:

Substantial variations in working times possible!



2. Causes of Growth

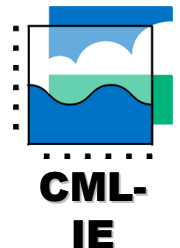
- *Direct causes*
- *Proxy causes*
- *Embedding of growth*



2.1 Direct causes of growth

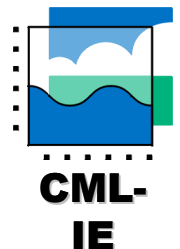
- Specialisation/Globalisation: Ricardo, and
- Volume of savings = investments:
19th Century Economics, and
- Growth of working population, and
- Productivity growth by technological progress:
20th Century Economics, and
- Knowledge based growth:
Romer & the New Chicago Agreement, 21th Century
Economics), and
- Also: Shifts to new services
Eg materials decoupling

Related to crisis?



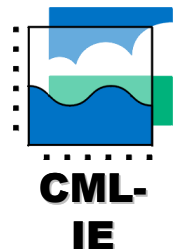
2.2 Proxy causes of growth

- Research, R&D, Product development
- Practical knowledge development (Mokyr)
 - In written form
 - In heads (schooling)
 - In organisations



2.3 Institutional embedding of growth

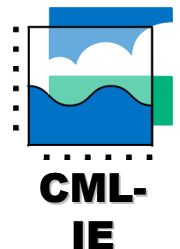
- Broadening of education
 - *Good in itself*
- Focus on research and R&D
 - *Increasing*
- Intellectual ownership rules
 - *Between small scale dynamics and large scale applicability of new knowledge*
(US discussion, stalemate, growth as reference)
- Full employment policies
 - *Increasingly effective*
- Financial system
 - *Actively developed and improved*



3. Direct effects of crisis

- Volume reductions, temporary up to 10%
In some sectors only
- Saving/Investment reductions
Resolved by macro-econ policies
- Scrapping of costs: reduced overheads
Basis for increased growth
- Micro-level labour productivity growth (=lower education labour fired first)
Not a structural effect

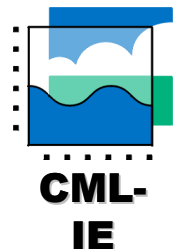
**Not much at all,
even in short term perspective**



4. Indirect effects of crisis

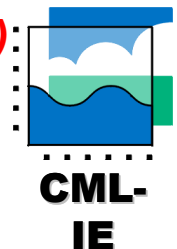
- Macro-economic policy well-established
- Micro *views* prevail, due to uncertainty
 - *“We need longer working hours”*
 - *“We need later pension age”*
- Resource prices plummeting,
 - *Some medium term slow down due to underinvestment in resource extraction due to uncertainty*
- Energy prices plummeting, due to inelastic supply
 - *Some medium term slow down due to underinvestment in fossil and fissile extraction due to uncertainty*
 - *Renewable investment collapsing*

*Oil price peak and and collapse of Eighties:
no renewable energy investment for 15 years*



5. Prospects for Degrowth after Crisis: Discussion

- Uncertainty major factor
 - *Detrimental to active Degrowth*
 - *Stable banking and monetary system required*
- Micro-level reasoning dominant
 - *Relevant discussion delayed*
- Pension payments core factor in ageing populations
 - *Key issue to be resolved in Degrowth discussion*
 - *Capital system (possibly individualised)*
 - *More savings, more investments, higher growth*
- *Working less stable factor for degrowth:*
How to get it:
 - *not through crisis but through well reasoned institutional development*
- *Getting aligned with ecoboundaries: Carbon tax, or cap equivalent, prime measure (would slow down growth ??)*
 - *For technochange: in the order of €200 per ton Carbon (€50 now)*
 - *For behavioral change: in the order of €2000 per ton of Carbon*



Long term statistics from:

Jan Luiten van Zanden, On global economic history. A personal view on an agenda for future research.
Amsterdam: International Institute for Social History

At: <http://www.iisg.nl/research/jvz-research.pdf>

And: OECD.

Please come to November conference on eco-efficiency and (de)growth:

www.eco-efficiency-conf.org

