

Breaks in productivity trends: paper by Tristan-Pierre Maury and Bertrand Pluyard

Aim: to study trends in productivity (per employed person) in major industrialised countries

Data: Two samples:
long sample; annual data for US, FR, UK
short sample; quarterly post-war for US, DE, ES, FR, JP, NL, UK

Method: Bai and Perron (1998)

Conclusions:

Long sample

- US productivity growth accelerated in 1920s, slowed at end of the 1960s
- FR, UK productivity growth higher than the US post-war

Short sample

- Lower productivity growth in most countries from early 1970s
- Productivity growth stronger in US in the 1990s, lower in many other countries

Overall short sample results: break dates

	<u>US</u>	<u>DE</u>	<u>ES</u>	<u>FR</u>	<u>JP</u>	<u>NL</u>	<u>UK</u>
hrs worked	employed persons						
1967 -8**	1966**						
		1973***		1973***	1973***		1972**(?)
	1983*					1976***	
			1985**				
1995**			1994-6**	1990-1**	1990*		
		1997**					

Note: Specifications 1,3. Statistical significance denoted by asterisks (***, 1%)
Positive breaks in bold

Overall short sample results: confidence intervals

	Specification 1	Specification 3
<u>Long sample</u>		
US	1907-37 ; 63-69	1915-51 ; 62-71
FR	43-47 ; 68-72	35-55 ; 43-97
UK	40-46	34-52
<u>Short sample</u>		
US	62-70 ; 75-91	57-74
DE	73-74 ; 96-98	66-73 ; 92-02
ES	82-88 ; 93-99	92-96
FR	73-74 ; 90-91	72-74 ; 86-94
JP	72-73 ; 80-00	72-74 ; 79-01
NL	72-80	71-81
UK	71-72	

Estimated Current Trends (per employed), %

US	DE	ES	FR	JP	NL	UK
1.3/ 2.0	0.8	-0.4/-0.1	1.1	1.1/ 1.2	1.3/ 1.4	1.9/ 2.2

Note: Specification 1 in bold

Estimated Trends (and hrs worked)

	US	DE	ES	FR	JP	NL	UK
Per Employed	2.0	0.8	-0.4	1.1	1.2	1.4	1.9
Per Hrs Worked	2.0	1.7	-0.3	2.0	2.0	1.1	2.0

Note: OECD for productivity growth per hours worked, 1995-2002

Decomposition of annual growth in GDP per capita, 1990-1994 <i>(percentages and percentage points)</i>							
	GDP per capita	Working age population/ total population	Labour force/ participation rate	Employment/ labour force	GDP per person employed	Average hours worked	GDP per hour worked
		(a)	(b)	(c)		(d)	
Euro area	1.3	-0.01	0.06	-0.45	1.7	-0.56	2.3
United States	1.1	-0.23	0.22	-0.10	1.3	-0.10	1.4

Source: ECB calculations based on data from the European Commission and the OECD.

Note: Figures may not add up due to rounding.

Decomposition of annual growth in GDP per capita, 1995-1999 <i>(percentages and percentage points)</i>							
	GDP per capita	Working age population/ total population	Labour force/ participation rate	Employment/ labour force	GDP per person employed	Average hours worked	GDP per hour worked
		(a)	(b)	(c)		(d)	
Euro area	2.1	-0.07	0.63	0.30	1.2	-0.45	1.7
United States	2.9	0.19	0.54	0.39	1.8	0.07	1.7

Decomposition of annual growth in GDP per capita, 1990-2003 <i>(percentages and percentage points)</i>							
	GDP per capita	Working age population/ total population	Labour force/ participation rate	Employment/ labour force	GDP per person employed	Average hours worked	GDP per hour worked
		(a)	(b)	(c)		(d)	
Euro area	1.5	-0.07	0.40	0.00	1.2	-0.57	1.9
United States	1.8	0.00	0.27	-0.03	1.6	-0.09	1.7

Average hours worked

