

Information Technology and the G7 Economies

By Dale W. Jorgenson

Some comments and questions

By Jacques Mairesse

Divergences in Productivity between Europe and the United States
Royaumont Abbey, 21-23 March 2004

Out of Curiosity (1)

- Life-long perspective on D.J. work in growth accounting: from capital measurement, to education, energy, environment, IT, ...; from U.S. to Japan, Europe...
- Why not Research and Innovation ?

Out of Curiosity (2)

- Semantics: “Productivity” instead of “Total Factor Productivity” (“TFP”): Since When and Why ?
- Should “Productivity” (“TFP”) be ideally zero ?
(i.e., Jorgenson-Griliches versus Denison controversy . Here Productivity about 10% of output growth in U.S. and 25% in France)

(3) Out of Curiosity

- Are shares of capital in value added and elasticity of output with respect to capital close to roughly $1/3$ and equal ? WHY??

[from Paul Douglas original work to recent “growth regressions” .See section 4.2 of paper : $2/3$ in Paul Romer’s (1987) “growth regressions” ; $1/3$ again on Mankiw-David Romer-Weil (1992)]

About usually maintained assumptions in growth accounting framework

- Non constant returns to scale ?
- Product markets imperfections?
[R. Hall (1985)... showing an average market power of 1.2]
- Labor markets imperfections?
[S.Nickell (...) ...showing substantial degree of workers bargaining power and rent sharing]

Queries about data and robustness of results (1)

- Differences in statistical methodologies in time, across countries ? ...
- ... And differences in underlying quality of statistics in time, across countries ??

Queries about data and robustness of results (2)

- Do we believe in using very detailed information, mostly « manufactured », such as labor quality (using weights by age, sex, education, employment status,...) ...??
- What do we gain in overall fiability ???

Contribution of IT Capital to Output Growth for France (and U.S.)

	Cette-Kocoglu- Mairesse¹ (2002)	Colecchia- Shreyer¹ (2002)	Jorgenson² (2003)
1980-2000	0.25 (0.48)*	0.23	0.28³ (0.59)**
1990-1995	0.17 (0.30)*	0.18	0.19 (0.47)**
1995-2000	0.36 (0.68)*	0.35	0.42 (0.93)**

¹Private Economy ²Whole Economy ³Average obtained from table 13.

*Variant on the decomposition of software and computers between investment and intermediate consumption (same shares as U.S.). **U.S.