e-Business W@tch panel

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Unit A5 "Competitiveness Analysis and Benchmarking"

- In this presentation I will refer exclusively to work carried out as part of the work programme of Unit A5 "*Competitiveness analysis and Benchmarking*" of the Enterprise Directorate-General, in charge of competitiveness analysis. More precisely I will refer to areas of work directly related to the topic of today's *e-business w@tch* event.

- Unit A5's activity focuses on the analysis of competitiveness of the EU economy at large and at sectoral level, and obviously ICT-related issues play an important role in this analysis. Within the 8-10 minutes of my intervention I will refer briefly to three items.

- **I) First**, we have recently extended the scope of the analysis of the EU competitiveness to incorporate a sectoral dimension. As result of this approach we have published a sectoral study on EU competitiveness elaborated by a research team under the direction of Mary O'Mahony (National Institute of Economic and Social Research, London) and Bart Van Ark (University of Groningen, Netherlands): "*EU Productivity and Competitiveness: A Sectoral Perspective, 2003 – Can Europe resume the catch-up process?*". This study is a response to the increasing interest in understanding the contribution of each industry, and groups of industries, to the performance of the EU economy at large.

- In this study the economy is subdivided in 57 sectors, covers EU15 as a whole, and its member states, as well as the US, and focuses on the analysis of productivity. How are ICT-related topics dealt with?: two aspects can be mentioned here:

    - **A)** Sectors are grouped into taxonomies, which are used to summarise the results obtained for the 57 sectors and to characterise EU Sectoral growth and performance. Two taxonomies are relevant in relation with what we are discussing today:

        - ICT skills taxonomy:
        - ICT taxonomy

    - **B)** The role of ICT in EU industries' growth is also analysed in a framework of sectoral growth accounting. The purpose of this is to measure the contribution of various factors of production to labour productivity growth. The ICT dimension is captured here by sub-dividing the capital stock (6 assets) into ICT capital (computer equipment, software and communication equipment), and non-ICT capital (non-residential buildings and equipment, transport equipment, other non-ICT equipment). In addition to these two categories of capital the growth accounting exercise incorporates on the right-hand side of the accounting equation the quality of labour and Total Factor Productivity (some results are presented below in graph format).

- For those interested in this topic I should mention that the book is accompanied by the following three databases, of which the first two are particularly relevant for today's topic.

    - The first database (*Industry Labour Productivity Database*) is an industry database on labour productivity including series on value added and labour input covering 56 industries for all 15 EU member states and the US allowing output and labour productivity growth comparisons.

- The second database (*Industry Growth Accounting Database*) was constructed for four European countries (France, Germany, Netherlands and UK) and the US allowing calculation of the contribution to growth from labour skills, ICT-capital and total factor productivity.

- The third database (*Manufacturing Productivity and Unit Labour Cost Database*) contains relative measures of levels of productivity and unit labour cost in manufacturing, with relative levels being derived on the basis of unit value ratios (UVRs).

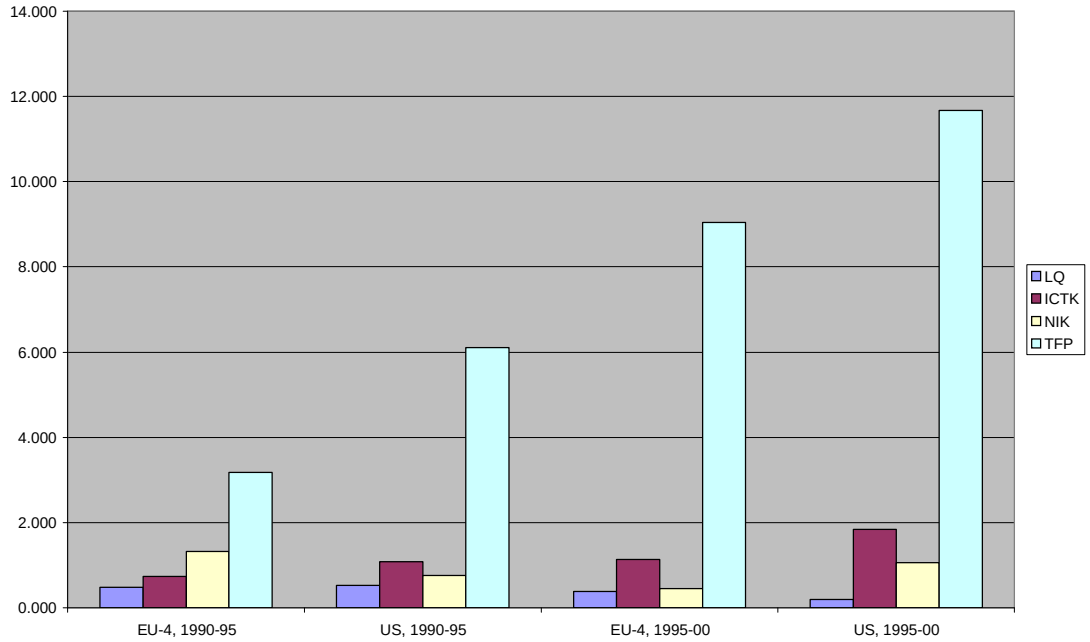
- For the sake of brevity I will not dwell on presenting the conclusions of the study, although I present below three graphs, which summarise some interesting information concerning. Those interested in detailed results, as well as on methodological aspects, can consult the book, which can be downloaded from:

http://europa.eu.int/comm/enterprise/library/lib-competitiveness/series_competitiveness.htm

- **An example of results**: contribution to labour productivity growth in three categories of industries[1]:

[1] LQ: labour quality; ICTK: ICT capital; NIK: non-ICT capital; TFP : Total Factor Productivity.

Figure III.2.a Labour productivity contributions*: ICT producing industries, EU-4 and US, 1990-2000



*Percentage point contributions

Figure III.2.b Labour productivity contributions*: ICT using industries, EU-4 and US, 1990-2000

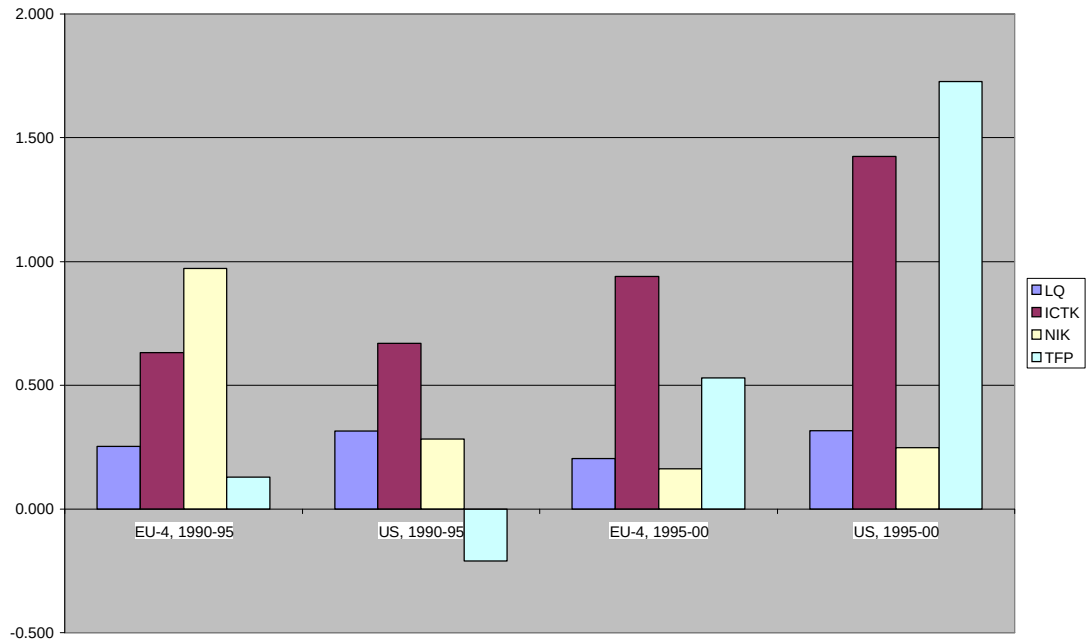
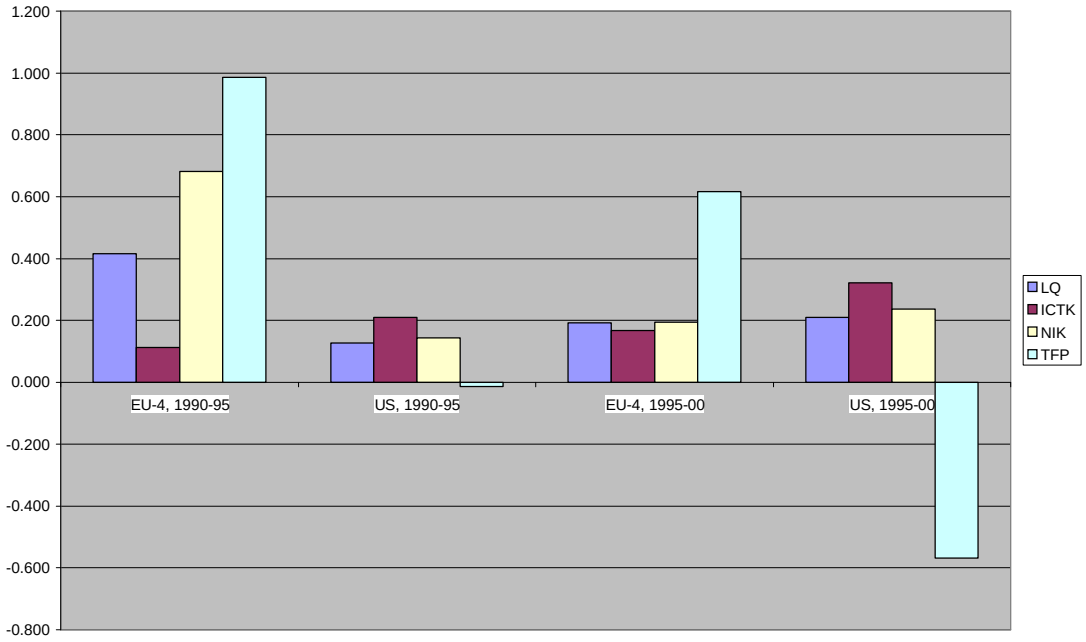


Figure III.2.c Labour productivity contributions*: non-ICT industries, EU-4 and US, 1990-2000



*Percentage point contributions

- **II)** The **second topic** I would like to mention is a chapter of the ***Competitiveness Report 2003***. Chapter 2 of this publication is devoted to *ICT-linked firm reorganisation and productivity gains*. I am glad to mention this today since this chapter is partially based on data from the 2002 ***e-business w@tch*** survey, as well as on ***e-business w@tch*** sector impact studies. The approach in this chapter is to combine data from ***e-business w@tch database*** and from the OECD STAN database (productivity growth). More specifically, the topic covered is the relationship between new business practices and productivity performance, and the extent to which these new business practices are associated with organisational changes in the firm. The countries covered are Germany, France, Italy and the UK. The objective is to analyse the relationship between *e-practices* and productivity growth. Those interested in this topic and on the detailed results are invited to consult this report, which can also be found in the net:

http://europa.eu.int/comm/enterprise/library/lib-competitiveness/series_competitiveness.htm

- **III)** Finally, the **third topic** I will refer to is work internally done in Unit A5, which focuses, among others, on the use of Input-Output tables to gain insight into the role of ICT industries in the EU economy, and particularly better understand industry interrelations in the EU economy between various categories of ICT and non-ICT sectors, and ICT diffusion across sectors. One objective of this analysis is to gain insight into the role of ICT in the competitiveness of other industries and of the EU economy at large.