Report Public Release EU KLEMS Database

15 March 2007, Albert Borschette Centre, Brussels

Attendants: See appendix 1
Report: Gerard Ypma and Edwin Stuivenwold

14.00-14.15: Opening Words by Hervé Carré (Eurostat) and Marco Buti (DG ECFIN)

Hervé Carré

Eurostat fully supports the EU KLEMS project and asks for a follow-up of this project. The usefulness of the database does depend on the quality of the data. Storage at an appropriate place is another important point. Eurostat is aware of the tremendous potential of the EU KLEMS database and hopes that this is the beginning of what is to come.

Marco Buti

The EU KLEMS project is originally started by DG ECFIN and has been taken over by DG Research later. DG ECFIN has however been active in the project from the beginning, by taking part in meetings, carrying out checks on the data and delivering feedback to the consortium.
The EU KLEMS database has the potential to cause a breakthrough in the statistical and academic world. DG ECFIN will start to create the conditions for continuing the project, because it is considered as an extremely useful tool for measuring the Lisbon goals and policy making both at industry and macro level.
Examples of how the database can be used include the following:
-Comparisons with the United States and show the reasons for deviations between Europe and the United States.
-Measure the effects of many reforms that have been implemented over time.
-Distinguish cyclical influences from other trends.
DG ECFIN is sure that the upcoming revision in December will be even better than this one.

14.15-14.30: Presentation of EU KLEMS Project and results by Bart van Ark (GGDC, University of Groningen)

Bart van Ark

EU KLEMS

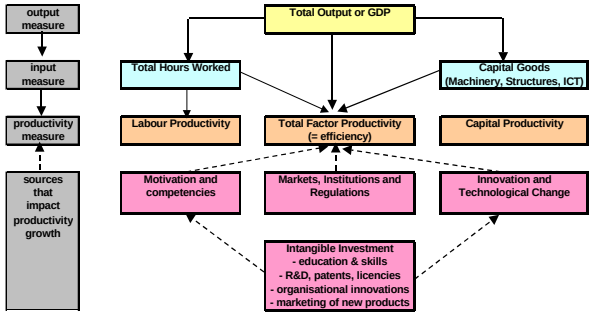
Main characteristics of EU KLEMS

- **EU KLEMS project is 3-year statistical and analytical research project funded by 6th Framework Programme**
- **Purpose is to create a database on growth and productivity accounts by industry (NACE 60+) for EU member states with a breakdown into contributions from capital (K), labour (L), energy (E), materials (M) and service inputs (S)**
- **17 research institutes, with country contributions from consortium partners and coordination, harmonization and processing at RUG Groningen and NIESR/Univ. of Birmingham**
- **Strong co-operation with national statistical institutes, Eurostat and European Commission services (DG EFCIN)**
- **In final phase conduct a number of analytical research projects on labour market & skills, technology and innovation, and links to micro/firm level research**

EU KLEMS

Productivity is the Key Variable of Economic Performance

Measures of Productivity, Input Varables and Sources of Growth



EU KLEMS

What is new in EU KLEMS?

- **Systematic data collection based on national accounts and complementary official sources (LFS and other surveys)**
- **Long time coverage 1970-2004, with greatest detail for post-1995 Harmonized methodologies on industry classification, capital and labour input, deflation and aggregations (e.g. market economy, market services, ICT producing vs. using)**
- **Decomposition of capital and labour input:**
  - Capital assets in 7 asset types
  - Labour input in 18 categories (3 x skill; 3 x age and gender)
- **Broad coverage of EU countries:**
  - Growth accounts coverage of "old" EU-10 (excl. GR, IR, LU, SE, PT) plus 5 new member states (incl. PL, SK, HU, CZ and SI)
  - Limited coverage of other 5 other "old" EU countries and 5 new member states (CY, MT, LT, LV and EE)
  - Also comparisons with U.S. and Japan
- **Distinction between analytical module for all countries (with feedback from NSI's but <u>not</u> official statistics) and statistical modules for individual countries (validated by NSI's)**

EU KLEMS

Future steps in EU KLEMS

- **Implementation phase:**
  - Development of statistical modules for individual countries
  - Maintenance and prolongation of analytical module
  - Extension of database (more country detail, intangibles incl. human capital, link with micro data)
- **Development of WORLD KLEMS**
  - Other OECD: US, Japan, Canada, Australia
  - Link to existing projects: Asian ICPA
  - Emerging economies: China, India, Russia, Latin America
- **Challenges ahead**
  - Measurement of non-market services
  - Extended integration with input-output framework
  - Extended integration with trade and FDI flows
  - What does MFP really mean? (intangibles, regulations, innovation)

Other points

-Sector contributions to labour productivity growth in the market economy confirm the existing view. The EU-US differential is not in manufacturing and minor in ICT production, but huge in market services. New member states show a transitional productivity growth in manufacturing, agriculture, utilities and distribution.
-Sector contributions to labour productivity in the market economy drive cross country differences. Typical "catching up" countries (Ireland and Greece) are at top of growth range, just like several Nordic countries (Finland and Sweden) notably due to ICT production. Market services account for the productivity growth differential between UK and France/Germany. Growth in Spain and Italy is keeping the EU average down and is across the board.
-Sources of growth to GDP in the market economy also confirm existing views. There is acceleration in the labour input growth in the old EU-15. The contribution of ICT to growth is slightly higher in the US, but the main EU-US differential is largely in Multi Factor Productivity.
-Market services make up important part of the EU-US story. Market services in the EU show a collapse of MFP in the period 1995-2004 compared to a strong acceleration in the US.
-Country variation in sources of growth in market economy points at role of employment and MFP. Germany and Spain are at opposite ends on the scale of employment creation, but MFP contribution makes the big difference between fast and slow growth.

<u>14.30-14.45: Presentation by Dale Jorgenson (Harvard University)</u>

Dale Jorgenson

Economic Growth in the Information Age

<u>INTRODUCTION:</u>

Prices of Information Technology

<u>ROLE OF INFORMATION TECHNOLOGY:</u>

IT Prices and the Cost of Capital

<u>WORLD GROWTH RESURGENCE:</u>

IT Investment and Productivity Growth

<u>ECONOMICS ON INTERNET TIME:</u>

The New Research Agenda

ROLE OF INFORMATION TECHNOLOGY: IT Prices, Investment, and Productivity.

<u>INPUT SHARES OF IT:</u>

Computers, Communications Equipment, and Software.

<u>CAPITAL CONTRIBUTION:</u>

IT versus Non-IT Capital Services.

<u>CAPITAL CONTRIBUTION BY TYPE:</u>

Computers, Communications Equipment, and Software.

WORLD GROWTH RESURGENCE:
IT Investment and Productivity Growth.

TOTAL FACTOR PRODUCTIVITY:

IT-Production versus Non-IT Production.

SOURCES OF ECONOMIC GROWTH:

Capital Input, Labor Input, and TFP.

LABOR INPUT GROWTH:

Hours Worked and Labor Quality.

ECONOMICS ON INTERNET TIME:
The New Research Agenda.

•The Solow Paradox -- we see computers everywhere but in the productivity statistics -- versus the Information Age.

•Equity Valuations and Growth Prospects: accumulation of intangible assets versus irrational exuberance.

•Widening Wage Inequality:capital-skill complementarity versus skill-biased technical change.

• Modeling IT-Producing and IT-Using Industries: investment versus TFP as sources of economic growth.

Other points:

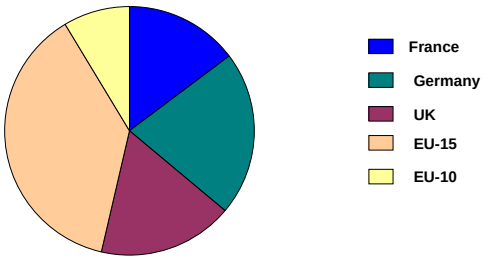
-EU KLEMS has designed a standardized methodology for TFP calculations, which will be applied internationally from now onwards by a large group of researchers.
-The data presented in this presentation differ somewhat from the data presented in the EU KLEMS database, due to the additional detail available in the EU KLEMS set.
-Next steps after EU KLEMS will be to develop these statistics for the whole world.

14.30-14.45: Presentation by Mary O'Mahony (NIESR and University of Birmingham)

Mary O'Mahony

EU KLEMS

France, Germany and the UK
Large share of EU value added



Developments in these countries important in understanding EU productivity

EU KLEMS

France, Germany and the UK Prospects

UK: Shows some signs of following US lead in reaping benefits from ICT

France: No immediate signs of a US style productivity growth acceleration

Germany: Prospects of US style growth spurt are dim

Better prospects for an acceleration in other EU countries such as the Netherlands, Ireland and Finland – but small share of EU value added

European productivity revival may be held back by some larger economies, including Spain and Italy

Other points

-France, Germany and the UK all show deceleration or no change in labour productivity growth between the periods 1970-1995 and 1995-2004, in contrast to an acceleration in the United States.
-All countries show an acceleration in Electrical Machinery and Post and Telecommunications.
-European countries have a poor performance in MFP growth relative to the US.
-France and the United Kingdom both show increases in employment, but Germany is not.
-MFP gains have especially been located in Manufacturing for France and in Finance and Business for the United Kingdom.
-The United Kingdom has a large contribution to the EU ICT Capital stock.

14.45-15.05: Intervention by EU Commissioner Joaquín Almunia

Joaquín Almunia

The EU KLEMS database can help to improve the knowledge of all researchers, policy makers and the academic area. The project should assist in giving better advice to policy makers. In the end this would lead to better decision making in the whole area of the European Union.

The database can give answers on questions like which part of the productivity recovery is due cyclical movements. Not correcting for such influences can lead to wrong decisions at the policy level. The database can furthermore be very useful as an instrument in detecting the effects of all kinds of policies.

15.05-15.40: Questions and discussion led by Wolfgang Munchau (Financial Times)

1. Assume we are in 2008 now and looking back to the current period. Can you expect the same patterns of growth?

Bart van Ark: There are trends emerging that will continue, especially the growing importance of market services is one of these factors. Productivity is picking up there. Improving performance can lead to better results.
Mary O'Mahony: It is a matter of time till the EU starts to gain again, but I am not sure if and when it happens.
Dale Jorgenson: Transitory elements were important in the US. Cyclical recovery is now on the way. The overall picture shows a large resurgence of the EU to the US economy. Growth is especially concentrated in IT using industries.

Mathias Dewatripont (Université Libre de Bruxelles): How are differences in price measurement dealt with?

Bart van Ark: The problems of measuring price in IT are gradually diminishing. US numbers were overstated to some extent. Most European countries have recently improved their price deflators.

2. Italy and Spain show growth in employment. Is it possible that we missed something due to bad data quality?

Bart van Ark: It is not justified to say that the statistics are worse in these countries, huge efforts are made to improve the statistics. Migration is a serious problem in these countries, leading to high volatility in the labour market. It is for sure that both Italy and Spain face important challenges as the problems are not located in a single sector.

Marco Buti: Quality is not in doubt. Regulation of the workforce, leading to less illegal and more legal workers is part of the reason in Italy.

3. What is the reliability of the service sector data and can it be improved?

Bart van Ark: The service sector has for sure measurement problems that are larger than in manufacturing. However, this differs by industry. Data on distribution and transport is of high

quality. The financial sector is still difficult to measure. The largest challenge is how to get a good measure of quality improvements.

Mary O'Mahony: Market services make up a huge part of the economy. Measurement is not yet harmonized across the world.

4. There is a boom in the financial services. Can we expect a return to a normal situation in this sector and can it influence the financial markets?

Dale Jorgenson: The financial services do not really stand out. Real innovation is showing up especially in distribution and transport and not at non-market services.

15.05-15.40: Policy Panel chaired by Wolfgang Munchau (Financial Times) with Michel Fouquin (CEPII), Bernd Görzig (DIW), Peter Havlik (WIIW), Matilde Mas (IVIE), Jürgen Kröger (DG ECFIN) and Andrew Tank (The Conference Board Brussels)

Bernd Görzig

The upswing of European productivity has not done so much in Germany. The data show two findings: the general skill level increased, but the firms do not make use of it. We should look into the driving forces of the firm to find out what the reason for this is. Micro analysis can give additional insights.

Andrew Tank

The EU KLEMS database is of great interest to the business community. Provision of good data is important for companies, financial institutions and government. The ability to locate firms around the world has led to a lot of outsourcing. Location is not important anymore, so information about compensation rates and the competitive position of Europe will become a serious issue in all debates. Another important subject is the quality of human capital and the way it is used. The EU KLEMS database can provide a clear picture of these issues.

Peter Havlik

The coverage of Central and Eastern European countries in the EU KLEMS database is very good, thanks to the excellent cooperation of the national statistical institutes in this region. Data show high value added and productivity growth for this region. This was combined for a long period with falling employment. In the most recent years however, growth in productivity and growth in employment occur simultaneously.

Michel Fouquin

Productivity is hard to compare between countries with high unemployment and countries with low unemployment rates. Governments often give priority to growth of employment instead of growth in productivity, when unemployment is high. For these countries income level comparisons are more important than productivity levels, as they include the employment content of growth.

Matilde Mas

It is difficult to measure a changing economy. Spain has welcomed a lot of immigrants in recent years. This holds back the productivity results. In the Spanish case productivity is an

instrument and not a goal. Per capita income has grown because Spain has been able to increase the working age population, activity rates and lowered unemployment. These achievements are hidden by the low productivity level.

Jürgen Kröger

Up to this moment European Policy has often been based on model analysis, which always shows positive results of reforms. The current database gives the opportunity to check on a sectoral level if the reforms work. This can help to convince countries to reform. In the financial sector this can lead to a proof of the Anglo-Saxon model. One of the questions in the productivity debate is if we really want to go the same way as the US in terms of the quality of life. Outsourcing of manufacturing and business services, efficient energy use and different catching up processes are some of the current issues in the policy debate that can be supported by the EU KLEMS database.

Pierre Valette

Part of the growth in the European Union will be endogeneous. It is useful to find a proof that economy can be modeled. Other factors of production like services and energy use can also be included in such models. The database has the potential to become a key tool for measuring the Lisbon targets.

Wolfgang Munchau

The policy reaction is rather reserved, reactions of all panel members can be classified in the category ‘Yes, but there are special circumstances in my country’. Of course cultural effects play a role, but should we not just prioritize market service growth in Europe?

The main problem in the largest European Countries is how to improve the rate of employment. Especially the drop-out of experienced persons between the 55 and 65 years should be stopped. The discussion is not on productivity in most countries. In Germany the large range of reforms of the previous years restrict the possibility to do additional reforms. In Spain the sectoral composition (large shares of construction and hotels and restaurants) is lowering productivity, while the low skill level is another serious problem. In Eastern Europe the oversized state enterprises have collapsed, leading to a loss in employment and growth in productivity. The current growth of both productivity and employment may even lead to challenges to solve labour shortages. In Scandinavian countries like Finland there is however a large focus on the improvement of labour productivity as an instrument to keep the welfare at the current level.

Is there a fundamental trend going on in Europe and the Euro zone that leads to a catch up to the US?

Europe shows signs of learning its lessons. It has to justify the high wages with high value added activities. The emerging economies force us to focus on high skilled work. Especially the countries with large low-skilled industries will see a challenge to keep competitive. Countries like Ireland, Finland and Sweden do already show the same growth pattern as the US. It is less sure that the reasons for lower productivity in other countries are convincing however. The high of labour contributed largely to recent growth, which makes the shrinking working population even more worrisome. In the future Europe should get a larger contribution of TFP to growth in order to catch up. The European Commission should be aware that the market services are the main driver of the gap in productivity between Europe and the US. Opening up the service markets is essential to close the gap, although this will

lead to a lot of discussion in France and Germany. As this idea will not be very popular by the small firms with low productivity and a lot of voters, politicians will not put it on the agenda. Changing the language from productivity to raising brand value may facilitate the discussion.

17.15-17.35: Closing remarks by Zoran Stancic (Deputy Director General, DG Research

Zoran Stancic

Economic research has been a success story, of which the importance and necessity has always been emphasized. The EU KLEMS project has delivered the tools to make economic research even more important in the international policy world. It would be very important that the database will be continued and the new framework program does give opportunities for that with a large focus on Socio-Economic Research and the role of knowledge.