

Orientation in the E3ME Model

**Medium-term Forecasts of Occupational
Skill Needs in Europe**

**3rd Technical Workshop, Maastricht,
The Netherlands**

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Contents

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 - key features
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Key Features of the E3ME Model

- **Modelling principles**
 - regional model of Europe
 - input-output structure
 - detailed interactions
 - based on recognised data sources
- **Comparative advantages**
 - model disaggregation
 - econometric pedigree
 - E3 linkages
- **Assumptions**
 - demographics
 - government variables
 - rest of world variables
 - model coefficients
- **Limitations**
 - data: annual model
 - econometric: dealing with structural change
 - European: modelling global interactions
 - model use: understanding vs forecasting vs scenarios

E3ME Database

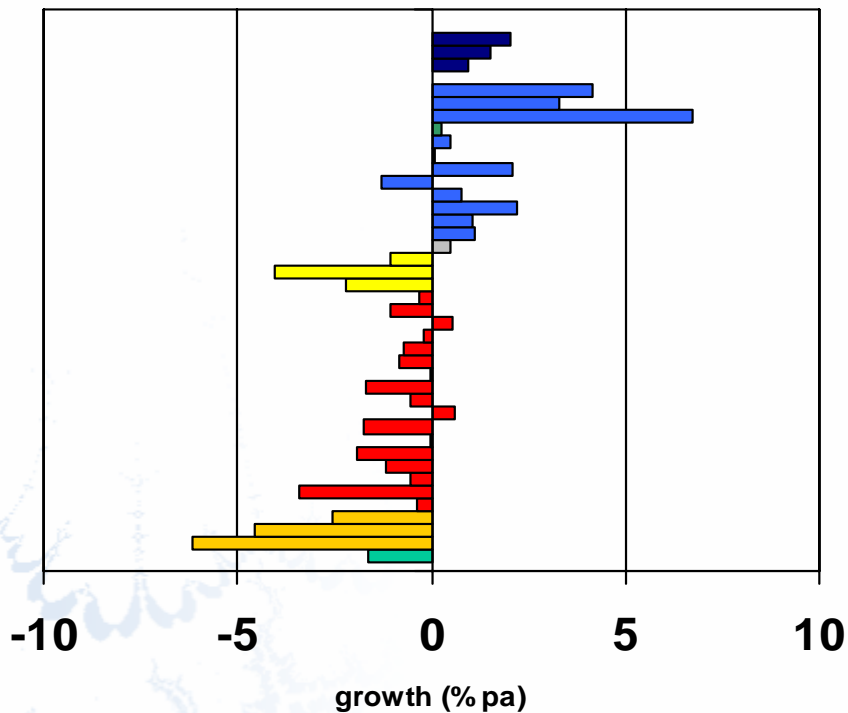
- Based on Eurostat definitions and data, enhanced with data from the EC (AMECO), OECD, IEA, UN and national sources
- Full dataset for 25 EU MS + NO & CH, 1970-2005 covering
 - 42 products/industries for gross output, trade, investment (by user), employment, hours worked, prices (industrial, import, export), wage rates
 - 28 consumer categories, with prices
- Partial data for Bulgaria and Romania
 - not fully integrated into the model as yet

Product/Industry Classification in E3ME

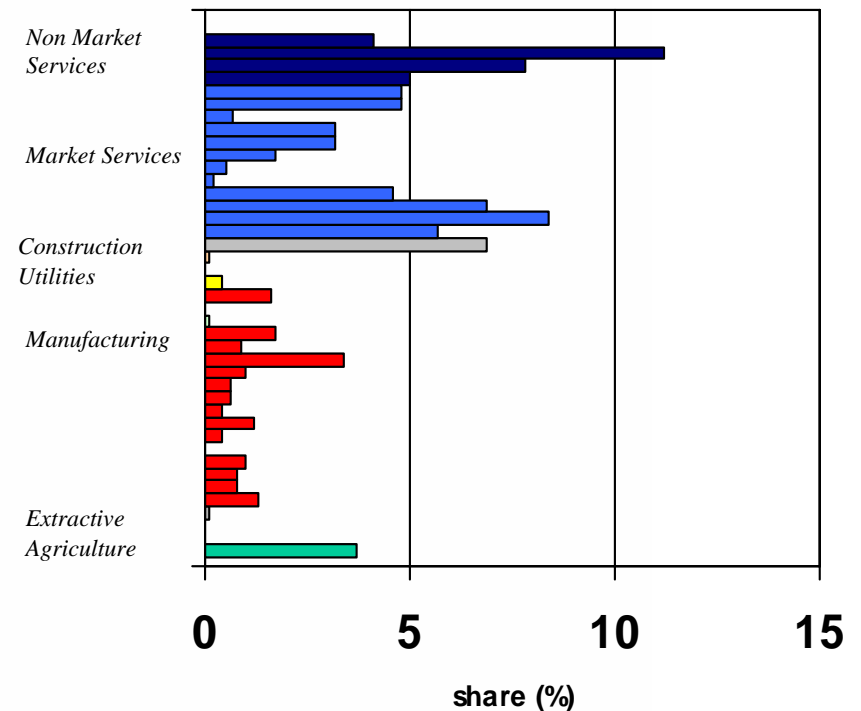
1	Agriculture etc	15	Metal Goods	29	Land Transport etc
2	Coal	16	Mechanical Engineering	30	Water Transport
3	Oil & Gas etc	17	Electronics	31	Air Transport
4	Other Mining	18	Electrical Engineering & Instruments	32	Communications
5	Food, Drink & Tobacco	19	Motor Vehicles	33	Banking & Finance
6	Textiles, Clothing & Leather	20	Other Transport Equipment	34	Insurance
7	Wood & Paper	21	Manufacturing nes	35	Computing Services
8	Printing & Publishing	22	Electricity	36	Professional Services
9	Manufactured Fuels	23	Gas Supply	37	Other Business Services
10	Pharmaceuticals	24	Water Supply	38	Public Administration & Defence
11	Chemicals nes	25	Construction	39	Education
12	Rubber & Plastics	26	Distribution	40	Health & Social Work
13	Non-Metallic Mineral Products	27	Retailing	41	Miscellaneous Services
14	Basic Metals	28	Hotels & Catering	42	Unallocated

Employment Across E3ME Industries

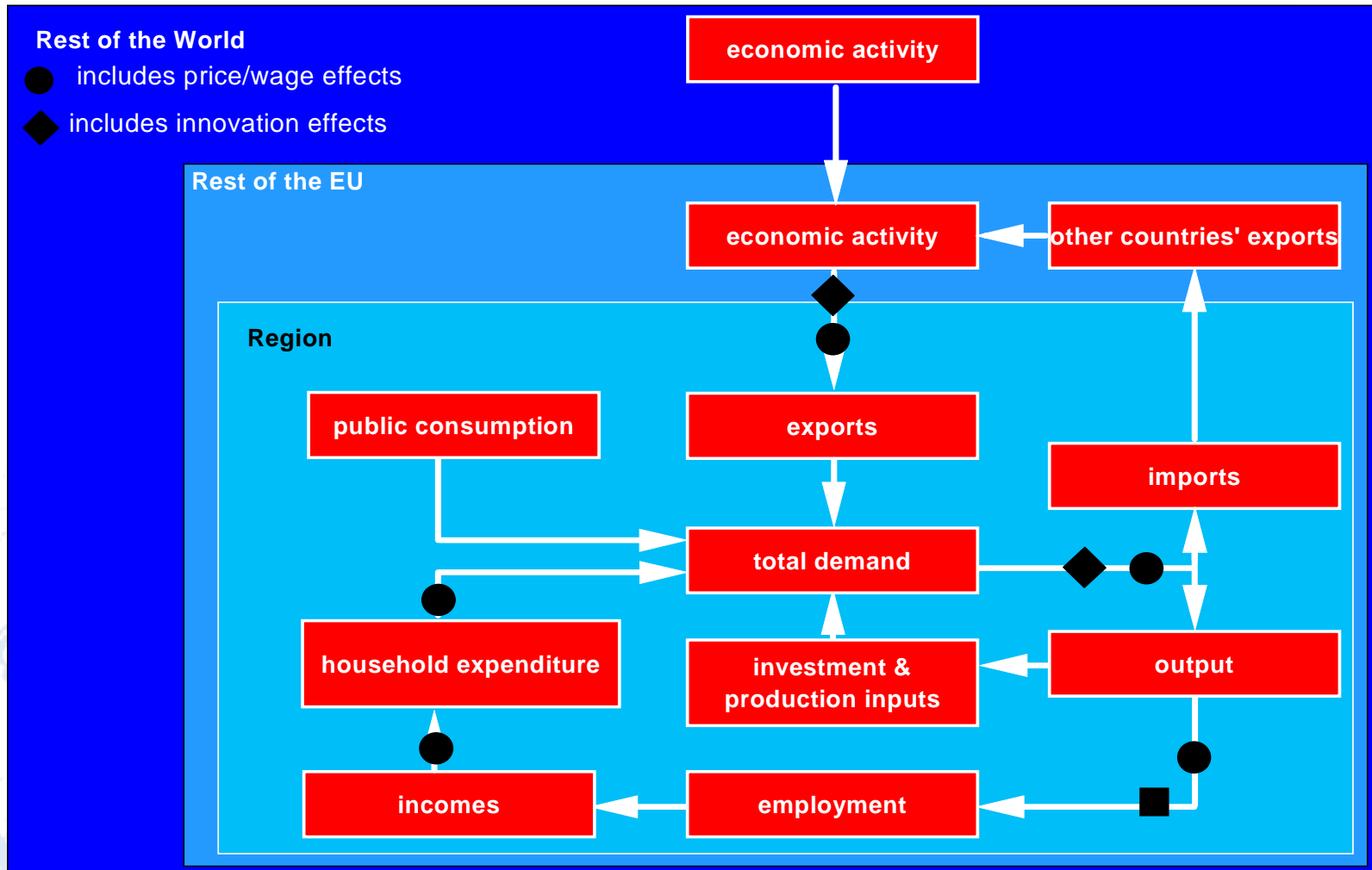
EU 25 + CH and NO
Sectoral Employment Growth (1995-2005)



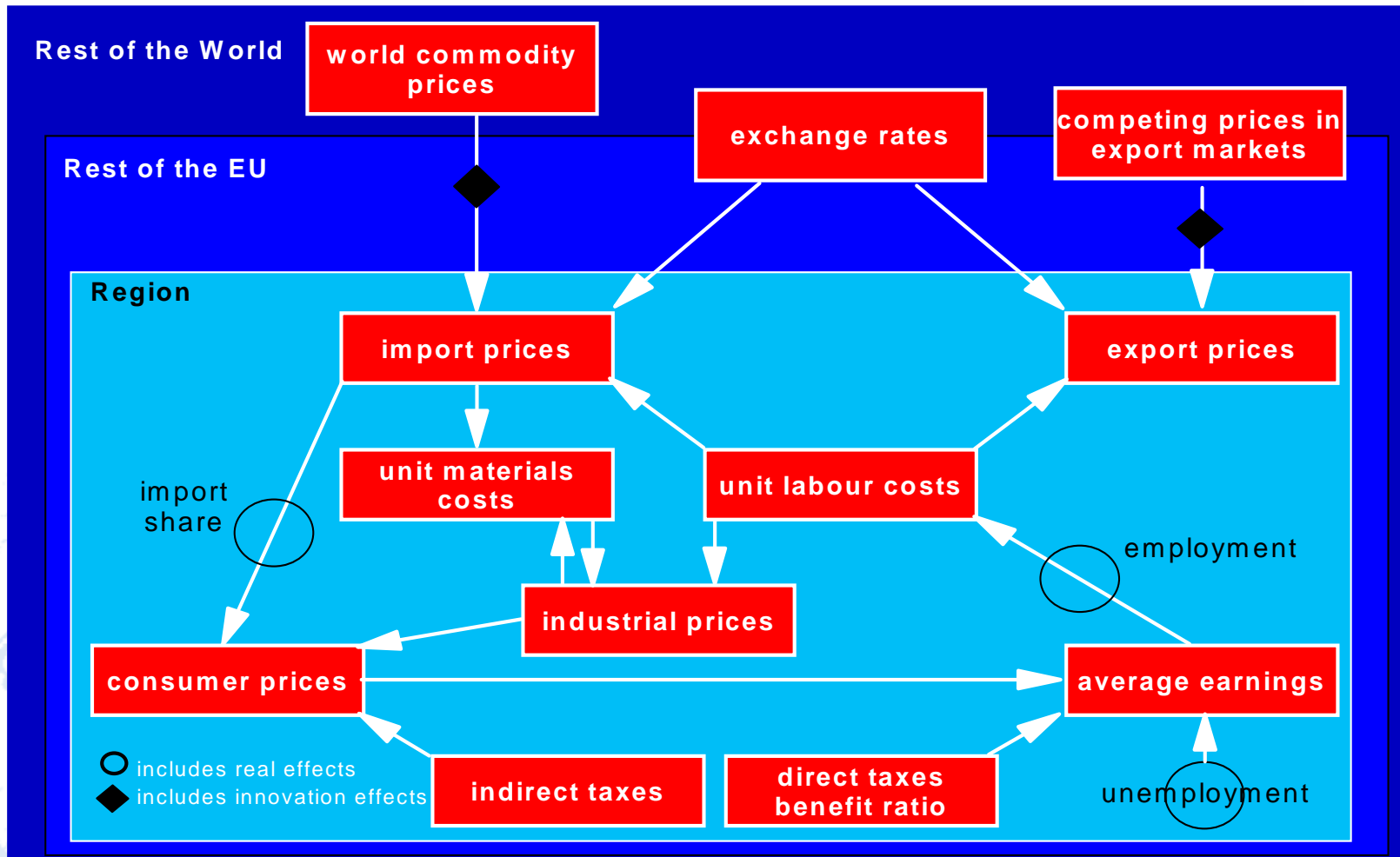
EU 25 + CH and NO
Sectoral Employment Share (2005)



Economy Inter-linkages within E3ME



Price Effects within E3ME



Use in the CEDEFOP Project

- **Provision of a baseline employment forecast**
 - need for annual employment forecasts to feed into medium-term projections of skills demand
 - need for detailed sectoral forecasts by Member State to identify structural change occurring around Europe
 - need for a consistent approach to producing the numbers to compliment and contrast the individual approaches currently adopted by skills agencies around Europe

Use in the CEDEFOP Project (contd)

- **Running a variety of scenarios**
 - variations surrounding baseline (most likely) outcome
 - construction of alternative views of the world
 - use of model forces user to think about connections and implications

Scenario	Economic growth and competitiveness	Social welfare and govt	Technological change	Globalization and mobility	Demography
A: Baseline	Base	No change	Medium	Base	Base (ageing population)
B: Optimistic	Higher	Lower taxes and benefits	Higher	Higher	Higher working age population
C: Pessimistic	Lower	Higher taxes and benefits	Lower	Lower	Higher life expectancy, even higher dependency

Summary

- **E3ME key features**
 - sector disaggregation and IO methodology
 - European (coverage and recognised data sources)
 - econometric estimation of key parameters
- **Use on CEDEFOP project**
 - employment forecasts to 2020
 - employment scenarios to explore alternative possibilities
- **Usefulness on CEDEFOP project**
 - capability of producing consistent and detailed employment forecasts by Member State
 - capability of running integrated scenarios to look at alternative views of the world
 - credibility of having a well-established and respected model