

EU KLEMS Growth and Productivity Accounts

2012 release¹

Description of methodology and country notes for United Kingdom

Prepared by
Reitze Gouma and Marcel Timmer
(Groningen Growth and Development Centre)

Introduction

The 2012 EU KLEMS release follows up from the previous release in 2009 which showed detailed growth accounts up to 2007. This new release is similar in concepts and methodologies to calculate the various growth and productivity variables as its predecessors, but it also has a number of new features;

- It provides updates to 2010 and revisions of longer time-series in case national statistical institutes (NSIs) provided these.
- The data on output, value added and employment in EU KLEMS is now fully consistent with the series in the OECD Structural Analysis Database (STAN) at the corresponding industry levels.
- For labour composition use has been made of the micro-data underlying the European Labour Force Survey (LFS) for recent years.
- New investment data up to 2009 has been provided by the EU KLEMS consortium partners
- Most importantly, a new industrial classification is used.

Since last year many European NSIs started to produce data based on the new NACE 2 industry classification, which is consistent with the international standardized ISIC Revision 4 industry classification. Accordingly, we adjusted the industrial classification used in EU KLEMS. We distinguish between 35 industries covering the total economy. Many of the industries are a near perfect match with previous NACE 2 industries, but the definition of various other industries has changed and some new industries have been introduced (see below). The NACE 2 output and labour data used in this release is based on OECD Structural Analysis Database (STAN) insofar available. The National Accounts (NA) data in the new classification is provided for shorter time series than were previously available in the NACE 1 classification. Earlier releases of the EU KLEMS databases provide time series back to 1970 with estimations of Total Factor Productivity (TFP) generally starting in 1980. In order to produce estimations of TFP in the new industry classification, back-casts of the time series of output and labour data have been made. These back-casts are based on data in the NACE 1 classification

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split of the 'Transport and Storage' industry (H) was available from STAN. Further splits have been calculated based on Value Added shares.

Back casts for output and labour variables prior to 1997 have been done based on the output data from the 09ii file, using the 'many to one' concordance table shown in **appendix table 1**. Shares of Labour and Capital compensation in Value Added for 1970-1996 are derived following the same method as for later years. This was done since the investment data has been heavily revised by ONS⁵ for the whole period.

Output and labour data have changed for the period 1997-2007, although most of the revisions have occurred in the later years, 2005-2007. A slight drop in output and labour growth can be observed.

Capital

New UK investment data has been supplied by NIESR⁶ for the period 1949-2009. Revisions have been implemented for the whole series and across all asset types. For total assets, the changes range from an upward revision of between 6 and 12 percent for the 1970-2009 period. The initial capital stock based on Capital stocks to Value Added ratios is estimated for 1970. Growth rates for non-IT capital services have declined and IT capital services have been strongly increased in the more recent years.

Labour composition

LFS data is available for 2002-2009. For the period prior to 2002 the labour composition per hour worked growth rate from EU KLEMS 09ii has been applied.

Total Factor Productivity

Even though the investment data has been revised considerably, TFP has changed only moderately for broad sectors, generally less than 1 percent, except for agriculture where changes are mainly due to revisions in employment. Especially in the years prior to 1997, where output and labour data is based on growth rates from the 09ii release, TFP has remained comparable to earlier results. The contributions of the different factors of production, the contributions of IT and non-IT capital in particular, have changed somewhat, in line with the revisions of the growth rates of capital services.

⁵ [Office for National Statistics](#)

⁶ [National Institute of Economic and Social Research](#)

Appendix Table 1

Industry concordance for back casts of nominal output and labour data		
NACE 1 list (many to 1 mapping)	NACE 2	NACE 2 Description
Aggregate	TOT	TOTAL INDUSTRIES
AtB	A	AGRICULTURE, FORESTRY AND FISHING
C	B	MINING AND QUARRYING
Aggregate	C	TOTAL MANUFACTURING
15t16	10-12	Food products, beverages and tobacco
17t19	13-15	Textiles, wearing apparel, leather and related products
20	16-18	
21	16-18	Wood and paper products; printing and reproduction of recorded media
22x	16-18	
23	19	Coke and refined petroleum products
24	20-21	Chemicals and chemical products
25	22-23	Rubber and plastics products, and other non-metallic mineral products
26	22-23	
27t28	24-25	Basic metals and fabricated metal products, except machinery and equipment
30t33	26-27	Electrical and optical equipment
29	28	Machinery and equipment n.e.c.
34t35	29-30	Transport equipment
36	31-33	Other manufacturing; repair and installation of machinery and equipment
37	D-E	
E	D-E	ELECTRICITY, GAS AND WATER SUPPLY
90	D-E	
F	F	CONSTRUCTION
Aggregate	G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
50	45	Wholesale and retail trade and repair of motor vehicles and motorcycles
51	46	Wholesale trade, except of motor vehicles and motorcycles
52	47	Retail trade, except of motor vehicles and motorcycles
Aggregate	H	TRANSPORTATION AND STORAGE
60t63	49-52	Transport and storage
64	53	Postal and courier activities
H	I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES
Aggregate	J	INFORMATION AND COMMUNICATION
221	58-60	Publishing, audiovisual and broadcasting activities
921t2	58-60	Publishing, audiovisual and broadcasting activities
64	61	Telecommunications
72	62-63	IT and other information services
J	K	FINANCIAL AND INSURANCE ACTIVITIES
70	L	REAL ESTATE ACTIVITIES
71	M-N	
73	M-N	PROFESSIONAL, SCIENTIFIC, TECHNICAL, ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
74	M-N	
Aggregate	O-U	COMMUNITY SOCIAL AND PERSONAL SERVICES
L	O	Public administration and defence; compulsory social security
M	P	Education
N	Q	Health and social work
Aggregate	R-S	ARTS, ENTERTAINMENT, RECREATION AND OTHER SERVICE ACTIVITIES
923t7	R	Arts, entertainment and recreation
91	S	
93	S	Other service activities
P	T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
Q	U	Activities of extraterritorial organizations and bodies

Appendix Table 2

Industry concordance for UK Investment data			
UK industry	EU KLEMS NACE 1 concordance	EU KLEMS NACE 2 concordance	Description
1	1	A	Agriculture
2	2	A	Forestry
3	5	A	Fishing
4	10	B	Coal extraction
5	11, 13	B	Oil & gas & metal ores extraction
6	12, 14	B	Other mining & quarrying
7	15	10-12	Food and drink
8	16	10-12	Tobacco
9	17	13-15	Textiles
10	18	13-15	Wearing Apparel, Dressing And Dying Of Fur
11	19	13-15	Leather, leather products and footwear
12	20	16-18	Wood and products of wood and cork
13	21	16-18	Pulp, paper & paper products
14	22	J	Printing & publishing
15	23	19	Coke, refined petroleum products and nuclear fuel
16	24	20-21	Chemical products and man-made fibres
17	25	22-23	Rubber and plastic products
18	26	22-23	Other non-metallic mineral products
19	27	24-25	Basic metals
20	28	24-25	Fabricated metal products
21	29	28	Machinery and equipment not elsewhere classified
22	30	26-27	Office machinery and equipment
23	313	26-27	Insulated wire
24	31x, 321	26-27	Other electrical machinery and apparatus nec
25	322, 323	26-27	Radio, TV and communication equipment
26	33	26-27	Medical, precision and optical instruments
27	34t35	29-30	Transport equipment
28	36	31-33	Other manufacturing
29	37	D-E	Recycling
30	40	D-E	Electricity & Gas
31	41	D-E	Water supply
32	F	F	Construction
33	50	45	Motor vehicle distribution & repairs, fuel
34	51	46	Wholesale distribution
35	52	47	Retail distribution
36	H	I	Hotels and restaurants
37	60	49-52	Land transport& transportvia pipelines
38	61	49-52	Water transport
39	62	49-52	Air transport
40	63	49-52	Ancillarytransport services
41	64	53	Post &tele-communications
42	65	K	Financial intermediation
43	66	K	Insurance &pension funds
44	67	K	Auxiliaryfinancialservices
45	70	L	Real estateactivities
46	71	M-N	Renting ofmachinery etc
47	72	J	Computer services
48	73	M-N	Research and development
49	74	M-N	Otherbusiness services
50	L	O	Public administration& defence
51	M	P	Education
52	N	Q	Health and social work
53	90	D-E	Sewage &sanitaryservices
54	91	R-S	Membership organisations
55	92	J	Recreationalservices
56	93	R-S	Other service activities

Appendix Table 3

Industry concordance for the estimation of initial stocks		
NACE 1 list (1 to 1 mapping)	NACE 2	NACE 2 Description
Aggregate	TOT	TOTAL INDUSTRIES
AtB	A	AGRICULTURE, FORESTRY AND FISHING
C	B	MINING AND QUARRYING
Aggregate	C	TOTAL MANUFACTURING
15t16	10-12	Food products, beverages and tobacco
17t19	13-15	Textiles, wearing apparel, leather and related products
21t22	16-18	Wood and paper products; printing and reproduction of recorded media
23	19	Coke and refined petroleum products
24	20-21	Chemicals and chemical products
26	22-23	Rubber and plastics products, and other non-metallic mineral products
27t28	24-25	Basic metals and fabricated metal products, except machinery and equipment
30t33	26-27	Electrical and optical equipment
29	28	Machinery and equipment n.e.c.
34t35	29-30	Transport equipment
36t37	31-33	Other manufacturing; repair and installation of machinery and equipment
E	D-E	ELECTRICITY, GAS AND WATER SUPPLY
F	F	CONSTRUCTION
Aggregate	G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
50	45	Wholesale and retail trade and repair of motor vehicles and motorcycles
51	46	Wholesale trade, except of motor vehicles and motorcycles
52	47	Retail trade, except of motor vehicles and motorcycles
Aggregate	H	TRANSPORTATION AND STORAGE
60t63	49-52	Transport and storage
64	53	Postal and courier activities
H	I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES
Aggregate	J	INFORMATION AND COMMUNICATION
21t22	58-60	Publishing, audiovisual and broadcasting activities
64	61	Telecommunications
71t74	62-63	IT and other information services
J	K	FINANCIAL AND INSURANCE ACTIVITIES
70	L	REAL ESTATE ACTIVITIES
71t74	M-N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
Aggregate	O-U	COMMUNITY SOCIAL AND PERSONAL SERVICES
L	O	Public administration and defence; compulsory social security
M	P	Education
N	Q	Health and social work
Aggregate	R-S	ARTS, ENTERTAINMENT, RECREATION AND OTHER SERVICE ACTIVITIES
O	R	Arts, entertainment and recreation
O	S	Other service activities
P	T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
Q	U	Activities of extraterritorial organizations and bodies

Appendix Table 4

Industry concordance for labour composition by broad sectors		
NACE 1	NACE 2	NACE 2 Description
A,B	A	AGRICULTURE, FORESTRY AND FISHING
C	B	MINING AND QUARRYING
D	C	TOTAL MANUFACTURING
E	D-E	ELECTRICITY, GAS AND WATER SUPPLY
F	F	CONSTRUCTION
G	G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
I	H	TRANSPORTATION AND STORAGE
H	I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES
K	J, L, M-N	INFORMATION AND COMMUNICATION, REAL ESTATE, PROFESSIONAL, SCIENTIFIC, TECHNICAL, ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
J	K	FINANCIAL AND INSURANCE ACTIVITIES
L	O	REAL ESTATE ACTIVITIES
M	P	EDUCATION
N	Q	HEALTH AND SOCIAL WORK
O,P,Q	R-U	OTHER SERVICE ACTIVITIES