FEATURE

Keith Brook
Department for Business, Enterprise and Regulatory Reform

Developments in measuring the UK service industries, 1990 to 2006

SUMMARY

This article reviews recent developments in the measurement and publication of service sector statistics for the UK, taking into account the recommendations of an interdepartmental review undertaken in 1995, which was chaired by the former Department of Trade and Industry. In recent years, UK service industries have seen considerable growth and now account for nearly 75 per cent of total UK output. Changes are still continuing within the service industries, and in recent years there has been a polarisation between knowledge-based and labour-intensive industries.

The article examines the progress made on the measurement of turnover, gross value added, jobs and international trade within the service sector industries, and also considers where improvements are still needed. Further articles will examine business services in more detail, the relationship between manufacturing and services and performance measures such as productivity, profitability and investment, together with labour market characteristics.

For a number of years, the developed economies of the world have generally seen a steady growth in service sector output and jobs and a corresponding drop in the share of manufacturing output. This has resulted in a diverse range of service activities through the emergence of new industries such as IT and leisure services. A service industry has in fact existed for many years, with the 1861 Census recording that 25 per cent of those occupied were in professional, domestic and commercial activities which are now classified as service activities. By 1901 this had increased to 36 per cent. Over this same period, those occupied in agriculture had reduced from 22 to 8 per cent while those in industrial activities saw only a slight increase, from 53 to 56 per cent.

The service activities in the 19th century were divided between skilled 'learned' professional activities such as legal and educational professions and labour intensive activities such as domestic services. The transport and retail industries were also present. In recent years, there has been a greater polarisation between knowledge-intensive services such as accountancy, legal and computer services and labour intensive services or low-tech industries such as industrial cleaning and fast-food chains. In some cases, markets have also changed, with a shift from being primarily business based to the emergence of a significant market for households, for example, the sale of personal computers and leisure activities.

A review of service sector statistics was undertaken in 1995 by a government Task Force at the request of the then President of the Board of Trade, Michael Heseltine. This was chaired by the Department of Trade and Industry (DTI), the forerunner to the Department for Business, Enterprise and Regulatory Reform (BERR), and its remit was to identify where improvements in the collection and reporting of service sector statistics was required, in order to measure more accurately their contribution to the UK economy and to assess their competitiveness. A summary of the findings and recommendations of the review was discussed by Cave (1997) and are given in **Box 1**, together with a comment on progress.

Since 1995, many new data sources have been introduced, extending the range of service sector statistics available. In many cases, surveys existing before 1995 have been redesigned and renamed, either to specifically cover services or to improve the detail of services outputs. Some new surveys have also been introduced, for example the International Trade in Services (ITIS) inquiry to measure imports and exports, primarily of business services activities. However, as outlined in Box 1, a number of the recommendations from the Task Force paper still require further developments and resources to be fully implemented.

This article reviews existing data sources for services data and considers the developments which have taken place in recent years. Improvements in service sector statistics are highlighted where these have been achieved or are still ongoing,

Box 1

Recommendations from 1995 President's Task Force Review

	Recommendation	Progress to date
1	Greater detail should be collected on international trade in services by country and product.	ITIS survey introduced from 1996 providing detailed services trade data, mainly for business services products.
2	Better service deflators are needed to improve detailed estimates of output at constant prices.	Developments still ongoing – completion for existing Eurostat requirements will result in coverage for about 60 per cent of corporate services.
3	Industry gaps in the coverage of measuring output of marketed services should be filled.	Gaps have been filled through ABI and MIDSS surveys covering market services output, together with monthly IoS output indices for 2-digit SIC industries.
4	Constant price productivity measures should be developed for broad service industries, and in the longer term for 2-digit industries.	Experimental NS productivity published for all services (G–Q), but at section level and below publication is limited to distribution, hotels and restaurants (G–H).
5	Product and industry classification should be improved to meet policy needs.	Major SIC 2007 reclassification now being implemented will introduce a number of improvements for services. Little progress on expanding services products.
6	Costs and compliance costs should be addressed by making more use of administrative data, including the IDBR register, subject to quality improvements.	ONS independence bill makes provision for easier access to administrative data. Register improvements for the IDBR are being achieved as part of the SIC 2007 implementation.
7	Existing compliance costs may be maintained by changing sample sizes for non-service industries.	Recent reductions in sample sizes for business surveys have been applied to all industries, including services.

Box 2

Summary of major sources and frequency of outputs for Services industries

Annual Business Inquiry (ABI) – annual:
www.statistics.gov.uk/statbase/product.asp?vlnk=7381

Inter-Departmental Business Register (IDBR) – annual:
www.statistics.gov.uk/statbase/product.asp?vlnk=933

Distributive and services trades (MIDSS) – monthly:
www.statistics.gov.uk/statbase/product.asp?vlnk=1477

United Kingdom National Accounts (NA)
- The *Blue Book* – annual:
  www.statistics.gov.uk/statbase/product.asp?vlnk=1143
- Quarterly First Release – quarterly:
  www.statistics.gov.uk/statbase/product.asp?vlnk=818
- Input Output tables – annual:
  www.statistics.gov.uk/about/methodology_by_theme/inputoutput/latestdata.asp

Index of Services (IoS) – monthly:
www.statistics.gov.uk/statbase/product.asp?vlnk=9333

Services producer price index (SPPI, experimental) – quarterly:
www.statistics.gov.uk/statbase/product.asp?vlnk=7351

Labour Market Statistics First Release (includes monthly Labour Force Survey (LFS) employment and quarterly Workforce jobs (WFJ) data):
www.statistics.gov.uk/statbase/product.asp?vlnk=1944

Detailed local area employment data are published on the external NOMIS website – annual:
www.nomisweb.co.uk/default.asp

Productivity – quarterly:
www.statistics.gov.uk/statbase/product.asp?vlnk=7476

United Kingdom Balance of Payments (BoP)
- *The Pink Book* – annual:
  www.statistics.gov.uk/statbase/product.asp?vlnk=1140
- Quarterly First Release – quarterly:
  www.statistics.gov.uk/statbase/product.asp?vlnk=1118

International Trade in Services (ITIS) – annual:
www.statistics.gov.uk/statbase/product.asp?vlnk=14407

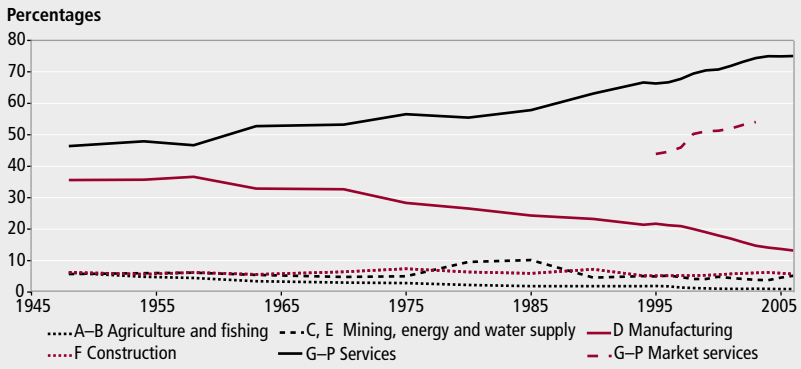
together with improvements which are still outstanding or desirable. Consideration is also given to the 'structural' changes that have taken place in the service sector industries over this time. The article focuses on the level and growth of service industries in terms of turnover, gross value added (GVA) and jobs, together with international trade; a summary of the major survey sources and outputs is given in **Box 2.**

Structure of service sector industries

Detailed service sector industries are defined by the Standard Industrial Classification (SIC), which at the aggregate level cover sections G–Q, as described in the left-hand side of the table in **Box 3**. Within each section, industries are further subdivided into many industries defined at the detailed 2-, 3-, 4- or 5-digit level. In order to develop and monitor policy, BERR requires this very detailed industrial breakdown. The SIC is reviewed and revised about every ten to 15 years, with changes reflecting the growth and decline of existing industries and the emergence of new industries. A review has recently been undertaken and is in the process of being implemented (see Box 3).

At current prices, output from the UK service sector industries accounted for 75 per cent of total UK output in 2006 (see **Figure 1**). This is an increase of 29 percentage points from 1948, with more than half of the increase occurring since

Figure 1
Share of UK output: by industry sector, current prices, 1948–2006



Source: GVA output data consistent with 2007 Blue Book, Office for National Statistics

1985. Over the same period, output from manufacturing has decreased from 36 per cent in 1948 to 13 per cent in 2005.

Table 1 shows the contribution of the different service industries, defined at section level, to the UK economy between 1990 and 2006. Over this period, the service share has increased by 12 percentage points with by far the largest change, 8 percentage points, coming from section K, real estate, renting and business activities. The service sectors include industries of interest to BERR such as post and telecommunications (SIC 64, part of section I) and computer services (SIC 72), research and development (SIC 73) and other business activities (SIC 74), all part of section K. The development of business services (SIC 72–74) will be discussed in a future *Economic & Labour Market Review* (ELMR) article.

The service sector includes a diverse range of industries covering both the private and public sectors. About 30 per cent of total service output is from the public sector, including all of section L (public administration and defence), most of sections M and N (education, health and social work) and part of section O (other social and personal services), which includes refuse, community and recreation services, and which may now be outsourced to the private sector. The share of GVA output for market services (G–P), although not published, is available from 1995 and is included in Figure 1. While the Office for National Statistics (ONS) publishes a quarterly experimental release for total UK market output (A–Q), there is currently no split between services and other industries. This would be desirable, together with a split within sections M–O, to give consistency with existing constant price indices.

Although the share of manufacturing output has reduced by 10 percentage points since 1990, manufacturing GVA has increased in real terms: between 1992 and 2004 it increased by 13 per cent at constant prices. Over the same period, manufacturing intermediate consumption of services has increased by 59 per cent, more than twice the rate of its current price GVA growth. Hence, UK manufacturing is making an increasing contribution to the growth of the UK service sector through outsourcing. The relationship between manufacturing and services will be explored further in a future ELMR article.

Industry size and growth

Major survey sources

Industry size can be defined by a number of different measures, including the number of businesses or enterprises, turnover, GVA and employment. **Table 2** summarises the major ONS surveys which include an industry breakdown for one or more of these measures. Most of the sources have either been introduced as new surveys in the early 1990s or following the 1995 President's Task Force review. Some existing surveys have seen major developments and improvements to expand coverage to improve service sector outputs.

With the exception of the Labour Force Survey (LFS), a household survey, all of the sources are business surveys which generally draw a stratified sample by employment size from the

Table 1
Share of UK output by service sector and other industries, current prices, 1990–2006

		Percentages					Percentage points change
Section	Industry	1990	1995	2000	2005	2006	1990–2006
A–B	Agriculture and fishing	*1.9*	*1.9*	*1.0*	*0.9*	*0.9*	–0.9
C, E	Mining, quarrying, electricity, gas and water supply	*4.6*	*4.9*	*4.8*	*4.6*	*5.2*	0.6
D	Manufacturing	*23.2*	*21.7*	*17.9*	*13.7*	*13.2*	–10.1
F	Construction	*7.2*	*5.2*	*5.5*	*5.9*	*5.7*	–1.5
G–P	**Services**	*63.1*	*66.3*	*70.7*	*74.9*	*75.0*	12.0
G	Wholesale and retail trade	*11.5*	*11.7*	*12.4*	*12.1*	*12.1*	0.6
H	Hotels and restaurants	*2.8*	*2.5*	*3.1*	*3.0*	*3.1*	0.3
I	Transport and communication	*8.4*	*8.0*	*8.2*	*7.5*	*7.2*	–1.2
J	Financial intermediation	*7.2*	*6.6*	*5.5*	*8.8*	*9.4*	2.3
K	Real estate, renting and business activities	*17.3*	*18.8*	*23.1*	*24.7*	*24.8*	7.5
L	Public administration and defence	*6.6*	*6.0*	*5.1*	*5.0*	*5.1*	–1.5
M	Education	*4.9*	*5.6*	*5.7*	*5.8*	*5.6*	0.7
N	Health and social work	*5.9*	*6.4*	*6.6*	*7.4*	*7.3*	1.4
O–P	Other social, personal and private households	*3.7*	*4.2*	*5.0*	*5.4*	*5.4*	1.7
FISIM	Adjustment for financial services	*–5.1*	*–3.6*	*–4.0*	*–4.7*	*–5.0*	0.1
A–P	All industries (=100%) (£ million, current prices)	£505,025	£640,416	£840,979	£1,096,629	£1,154,959	

Source: GVA output data consistent with 2007 Blue Book, Office for National Statistics

Box 3

Summary of sections and number of classes and subclasses in existing SIC 2003 and revised SIC 2007, currently under implementation

A review of the SIC has recently been completed and is currently being implemented in the UK under the terms of a binding EU directive for the NACE2 classification, which covers detailed industries down to the 4-digit class level. In addition, the UK has agreed to implement a number of 5-digit subclasses. The table below summarises the existing SIC sections, classes and UK subclasses together with the changes which are currently being implemented for the SIC 2007. These will be phased in from 2008 for annual and short-term survey collection and their outputs, and will be completed in September 2011 for the UK National Accounts.
Many existing UK subclasses will become classes, resulting in a drop in the total number from 285 to 191, but this should improve the availability of detailed outputs and increase international comparability. However, the combined number of classes and subclasses has increased, and for services will be 422. Other improvements for services include the formation of four sections from three existing sections leading to separate sections for information and communication (J), real estate (L), professional, scientific and technical (M), and arts and recreation (R). These will give major improvements to the existing section K, real estate and other business activities, and provide more coherence within the sections in terms of professional skills and labour intensive activities.

Summary of SIC 2003 and SIC 2007 classes and subclasses

SIC 2003				NACE 2 (SIC 2007)			
Section		Number of classes[1]	Number of subclasses[1]	Section		Number of classes[1]	Number of subclasses[1]
A	Agriculture and forestry	14	4	A	Agriculture, forestry and fishing	39	2
B	Fishing	2	0				
C	Mining and quarrying	16	3	B	Mining and quarrying	15	2
D	Manufacturing	242	80	C	Manufacturing	230	51
E	Electricity, gas and water	7	0	D	Electricity and gas	8	0
				E	Water supply and sewerage	9	0
F	Construction	17	3	F	Construction	22	6
G	Wholesale and retail trade	79	46	G	Distribution	91	23
I	Transport and communication	21	25	H	Transport and storage	23	16
H	Hotels and restaurants	8	14	I	Accommodation and food services	8	8
				J	Information and communication	26	10
J	Finance intermediation	12	20	K	Finance and insurance	18	22
K	Real estate and other business activities	39	60	L	Real estate	4	3
				M	Professional, scientific and technical	19	20
				N	Administrative and support services	33	20
L	Public adminstration and defence	10	0	O	Public adminstration and defence	9	0
M	Education	6	5	P	Education	11	2
N	Health and social work	7	7	Q	Health and social work	12	2
				R	Arts and recreation	15	4
O	Other community and personal activities	30	18	S	Other services	19	0
P–Q	Household and extra-territorial	4	0	T–U	Household and extra-territorial	4	0
Total (non-services, A–F)		298	90	Total (non-services, A–F)		323	61
Total (services, G–Q)		216	195	Total (services, G–U)		292	130
Total (A–Q)		514	285	Total (A–U)		615	191

Notes:

1 Class and subclass totals within sections differ partly due to movement of classes between sections, mainly for the service sectors; some SIC 2003 subclasses have been merged in NACE2 and many have become new NACE2 classes, with some revision of content.

Counts are based on the published NACE2 classification and the reported outcomes from the ONS evaluation subclass working group.

Inter-Departmental Business Register (IDBR). The current register was developed in the mid-1990s and is based on two administrative sources:

- businesses registered for value-added tax (VAT) or a pay-as-you-earn scheme with HM Revenue and Customs, and
- incorporated businesses registered with Companies House

The IDBR was the subject of a National Statistics Quality Review in 2001 and a number of recommendations were made to improve the quality and outputs of the register, see ONS (2001). The register is currently maintained through the annual Business Register Survey (BRS), but developments are underway to replace this with the Business Register Employment Survey (BRES), which will combine the register inquiry with the employment part of the Annual Business Inquiry (ABI).
The register is currently being revised and updated as part of the implementation of the new SIC 2007, which requires that all existing businesses are allocated to the new revised classification. To achieve this, a new automated coding tool has been developed which will result in quality improvements to the register.

Turnover

Turnover is collected in the ABI and is used as an intermediate measure in the derivation of GVA. The ABI was introduced in 1995 to replace the Annual Census of Production, which was limited to manufacturing and other production industries. ABI coverage was extended to cover market services and so excludes all of public administration and defence (L), most of health (M) and education (N) and parts of other services (O). Section J, financial services, is also excluded since

Table 2
Summary of major sources of ONS data for turnover, GVA and employment

Source	Major outputs	Start date	Frequency	Industry coverage
Annual Business Inquiry (current prices)	Number of enterprises Turnover GVA Employment	1995	Annual	Most sections, including SIC 2-, 3- and 4- digit detail, excluding sections: J Financial Intermediation L Public administration and defence
Short-term turnover surveys (current prices)	Turnover	1991/92 2001	Quarterly Monthly	Mainly at 3-digit SIC for sections G; H; I (part); K (excluding SIC 70); M (part); N (part); O (part)
National Accounts (*Blue Book*) (constant prices)	GVA output indices	Most by 1980s[1]	Annual Quarterly	All sections and most 2-digit industries
National Accounts (*Blue Book*) (current prices)	GVA output	1992	Annual Some quarterly	All sections, weights available for some years from 1948
National Accounts Input-Output Tables (current prices)	Intermediate consumption GVA Final demand Imports/exports	1992	Annual	123 products by 123 industries, consistent with 2-digit SIC industries
Index of Services (constant prices)	GVA output indices	1995	Monthly	All sections and most 2-digit industries, some with experimental status
Workforce jobs (some seasonally adjusted)	Total workforce jobs[2] Employee jobs	1978	Quarterly	All sections, with further subdivision mainly at 2-digit SIC
Annual Survey of Hours and Earnings	Hourly, weekly and annual pay Paid hours worked	1997	Annual	Section and 2-digit SIC
Labour Force Survey[3] (some seasonally adjusted)	Employment characterisitics including employees, self-employment, unemployed inactivity, full-time, part-time, second jobs, hours worked, age, sex, ethnicity, occupation, qualifications, region and local area	1992	Quarterly	Industry self-defined by respondent which may not be consistent with IDBR classification, available at section and 2-, 3-, 4- and 5-digit SIC

Notes:
1 Some indices are available from 1948.
2 Includes employees; self-employment measured by the LFS; HM Forces and government-supported trainees from administrative data.
3 The LFS is a household survey, all other sources listed are business surveys.

the concept of turnover is not directly relevant. Eurostat have, however, recently extended the Structural Business Statistics regulation, under which detailed turnover data is collected, to include financial services. ONS is currently considering how this requirement will be met, including, if appropriate, extending the existing ABI survey to include financial services.

Since 1991, estimates of turnover for the distribution and other market services have also been collected quarterly and published for many of the market services covered by the ABI, mainly at the 3-digit SIC level and above. The frequency of this short-term turnover survey (MIDSS) has been changed to monthly in a number of stages between 1994 and 2001.

In collaboration with ONS, BERR has recently undertaken an extensive evaluation of the turnover measured by the annual ABI and the short-term MIDSS data, where monthly data have been aggregated to annual estimates. Generally this shows reasonable agreement at the higher 2-digit division level but, as might be expected, there is poorer agreement in some cases for detailed 3-digit divisions and 4-digit classes. A detailed investigation by ONS indicates that these differences are due to adjustments included in the short-term MIDSS data to take account of sample rotations and which are designed to track growth rates, which is generally being achieved. Adjustments are needed since, within a particular stratum, the new business enterprise may have a significantly different level of turnover than the outgoing enterprise.

GVA current price data

Where turnover is collected in the annual ABI and short-term MIDSS surveys, this is used as the source to derive GDP using the output approach. A summary of the survey sources, output indicators and deflators is published by ONS (see ONS 2007a). Where appropriate, this is specified at the detailed 4- or in some cases 5-digit SIC level, including those not covered by the ABI and MIDSS surveys. The detailed weights are currently published at 2000 basic prices although monthly IoS and quarterly National Accounts GVA outputs are now based on 2003 basic prices, and these 2003 weights are available from ONS on request.

Table 3 shows the size of the service sector industries at the section and division level (2-digit SIC), as measured by the 2005 ABI, defined in terms of the number of enterprises, turnover, GVA and employment. The number of VAT-based enterprises recorded in the IDBR is also shown to give some indication of size for those industries not covered by the ABI, which excludes financial and non-market services. It is noted that the number of enterprises is published on a different basis for the IDBR and ABI, although consistent counts can be obtained on request for the IDBR. As noted earlier, ONS is currently developing BRES which will combine the employment part of the ABI with the BRS which updates the IDBR. Outputs from BRES will be extended to the whole economy which will be a major improvement over the ABI's more limited market sector coverage.

The preferred source for GVA data is from National Accounts which are published in current prices in the *Blue Book* at section level and for 123 industries and product groups in the Input-Output tables (I-O), mainly corresponding to 2 digit division level for the service industries. The latest 2007 *Blue Book* includes GVA output for 2006. Normally outputs for the latest year are published on a provisional basis due to the absence of balancing and ABI data being provisional at the time of publication. However, for 2007, the last two years' output have been published on a provisional basis, since balancing has not yet been undertaken for 2005 due to the

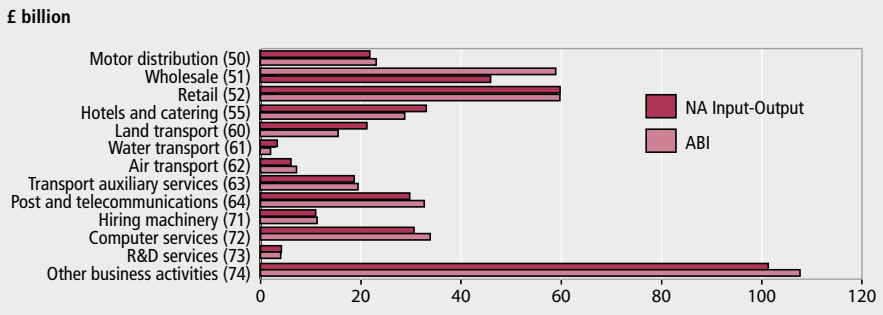
Table 3
Size of service sector industries: by various measures, 2005

Section/ division	Industry	Number of VAT-based enterprises (IDBR)	Number of enterprises	Total turnover excluding VAT	GVA at basic prices	Average employment during the year	Total employment costs	Cost per employment
		Numbers[1]	Numbers	£ million	£ million	Thousands	£ million	£ thousand
G	**Distribution**	**350,265**	**383,004**	**928,852**	**142,558**	**4,948**	**75,495**	**15**
50	Motor distribution		70,993	157,409	22,463	628	10,674	17
51	Wholesale		110,591	505,620	59,588	1,212	30,100	25
52	Retail		201,420	265,822	60,507	3,109	34,721	11
H/55	**Hotels and catering**	**114,815**	**130,180**	**61,743**	**28,511**	**1,916**	**16,414**	**9**
I	**Transport and communication**	**73,665**	**81,744**	**213,047**	**82,301**	**1,634**	**43,869**	**27**
60	Land transport		46,420	40,596	17,820	581	11,913	21
61	Water transport		1,393	6,809	2,144	18	828	46
62	Air transport		989	19,845	7,042	90	3,306	37
63	Transport auxiliary services		16,992	72,948	21,554	416	11,288	27
64	Post and telecommunications		15,950	72,849	33,742	529	16,535	31
J	**Financial services**	**9,600**			***Not included in ABI survey***			
65	Financial intermediation	3,160						
66	Insurance and pension funds	625						
67	Financial auxiliaries	5,820						
K	**Real estate, renting and business**	**495,965**	**616,973**	**337,695**	**n/a**	**4,776**	**103,515**	**22**
70	Real estate		99,187	46,324	n/a	498	8,559	17
71	Hiring machinery		16,476	22,774	12,470	175	3,458	20
72	Computer services		102,502	58,969	36,004	585	20,095	34
73	R&D services		3,006	10,083	4,740	102	4,247	42
74	Other business activities		395,802	199,545	121,690	3,416	67,157	20
L/75	**Public administration and defence**	**925**			***Not included in ABI survey***			
M/80	**Education[2]**	**12,775**	**26,838**	**20,509**	**7,949**	**3,308**	**22,436**	**7**
N/85	**Health and social work services[2]**	**10,570**	**43,895**	**23,017**	**14,995**	**1,157**	**11,959**	**10**
O	**Other community and personal[2]**	**126,415**	**166,162**	**128,133**	**44,289**	**1,376**	**22,651**	**16**
90	Sewage and refuse disposal		3,006	11,856	7,268	81	2,301	28
91	Membership organisations n.e.c.		21,512	6,714	2,158	207	3,528	17
92	Recreational and cultural		71,096	92,782	25,687	723	12,918	18
93	Personal services		70,548	16,781	9,177	365	3,905	11
P/95	**Domestic services**	**n/a**			***Not included in ABI survey***			

Notes:
1 2-digit division totals may not sum to section totals due to rounding.
2 Excludes public sector activities.

Source: Annual Business Inquiry and Inter-Departmental Business Register, Office for National Statistics

Figure 2
Comparison of ABI and National Accounts I-O GVA output for selected service sector industries, 2004



Source: Annual Business Inquiry and National Accounts Input-Output tables, 2004

ongoing work on National Accounts re-engineering (see Beadle 2007).

The latest I-O tables are for 2004, and GVA data differ from ABI data due to the National Accounts data being balanced and adjusted to take account of the three different measures of GDP, based on input, output and expenditure. **Figure 2** shows a comparison of the ABI and National Accounts current price GVA data for the 2-digit SIC service sector industries, which have full coverage in the ABI. The National Accounts data are considered to be the best source for showing the share of an industry or size in a given year, together with the change in share over time (see Figure 1 and Table 1). For industries not covered by the National Accounts I-O tables, ABI data can be used for these measures, but there is a lack of coherence and data are only available from 1995.

The need for users such as BERR to use GVA estimates from the ABI for detailed service industries rather than the preferred National Account outputs should be reduced following the implementation of National Accounts re-engineering, where it is proposed to expand the number of I-O industries to 197. Much of the increased detail is in services with industries defined at 3-or 4-digit SIC, although in some cases industries are aggregated due to the small size of some industries. While it is proposed that the I-O products groups will also see a significant expansion to 397, there will be limited improvements in services with generally a one to one correlation with industry due to the lack of data for detailed service products.

Constant price output indices

Growth over time is more meaningful at constant prices in order to remove the effect of price changes. Constant price indices are published by ONS at section and 2-digit SIC level for the service industries on an annual and quarterly basis. The annual

Table 4
GVA growth in service and other industries, 2003 prices, 1981–2006[1]

Percentages

Section	Industry	1 year 2005–06	5 years 2001–06	10 years 1996–2006	25 years 1981–2006
A–B	Agriculture and fishing	*2.8*	*16.8*	*14.7*	*34.3*
C	Mining and quarrying	*–8.1*	*–26.8*	*–29.4*	*–14.2*
D	Manufacturing	*1.3*	*-0.4*	*4.1*	*38.2*
E	Electricity, gas and water supply	*–2.6*	*0.1*	*14.5*	*69.7*
F	Construction	*1.0*	*15.7*	*23.6*	*91.6*
G–Q	All services[2]	*3.6*	*17.2*	*43.5*	*118.5*
G	Wholesale and retail trade	*2.7*	*18.7*	*38.7*	*133.2*
H	Hotels and restaurants	*6.2*	*22.8*	*41.7*	*89.0*
I	Transport and communication	*3.8*	*14.4*	*74.5*	*202.5*
J	Financial intermediation	*8.5*	*36.9*	*76.4*	*177.5*
K	Real estate, renting and business activities	*5.5*	*24.6*	*68.5*	*n/a*
L	Public administration and defence	*0.5*	*11.1*	*9.2*	*0.0*
M	Education	*0.3*	*4.3*	*9.1*	*33.9*
N	Health and social work	*3.0*	*18.8*	*34.9*	*92.0*
O–Q	Other social, personal and private households	*2.9*	*7.6*	*24.1*	*129.4*
A–Q	All industries[2]	*2.9*	*13.2*	*32.0*	*93.6*

Notes:
1 2005 and 2006 data are provisional.
2 Includes adjustment for financial services (FISIM).
Source: National Accounts constant price GVA indices, 2007 Blue Book, Office for National Statistics

growth derived from these indices is shown in **Table 4** over one, five, ten and 25-year periods for each service industry defined at section level, together with the other non-service industries. Financial intermediation (section J), real estate, renting and business activities (section K) and hotels and restaurants (section H) experienced the highest growth over a one- or five-year period – in excess of 5 per cent over one year and more than 20 per cent over five years.

Over a longer timescale of ten or 25 years, transport and communication (section I) has experienced some of the highest growth together with sections J and K. Within the non-service industries, manufacturing (section D) has grown by 4 and 38 per cent over the last ten and 25 years, respectively, but has shown only growth of 1.3 per cent over the one-year period with a slight decline of 0.4 per cent over five years. Mining and quarrying (section C) has shown the greatest decline of all industries, due to the considerable drop in coal production in the 1980s and, in more recent years, some decline in oil and gas output from the North Sea.

Monthly indices are also published in the Index of Services (IoS) where the aggregated index has recently been changed from experimental status to a National Statistic. Where individual 2-digit IoS indices remain experimental, industry reviews are ongoing and it is hoped that most series will have National Statistics status by the end of 2008 although, due to quality issues, some 2-digit indices may remain experimental. A review of recent IoS developments is given by Drew and Morgan (2007), including a discussion of the deflators used. The need for monthly outputs is mainly a macroeconomic requirement to improve the monthly estimate of overall GDP. BERR's need is primarily for improved quality at the detailed industry level on a quarterly and annual basis for microeconomic analysis.

Deflators based on individual price indices are available for a number of service industries using the individual components of the services producer price index (SPPI), and in many cases more general or proxy indicators are used as deflators. This is one area where further developments are still needed to fulfil the recommendations of the 1995 President's Task Force report, ideally to achieve a comparable level of detail to the manufacturing industries. **Table 5** shows the available detailed price indicators and their annual growth for the last three years. The table also indicates where the index is being used as the GDP(O) deflator. Where the deflator is being applied in 'part', this is mainly because the outputs from the industry include consumer services where the RPI or other deflators are more appropriate. In some cases, the existing price indicators are still under development or are being evaluated before being used as deflators.

SPPI coverage is currently limited to those industries shown in Table 5. Price indices are being developed for other industries in accordance with Eurostat's Short-term Statistics Regulation (STR) which places an obligation on the UK to develop price indices for specified industries by 2008. Ongoing major developments include computer services (SIC 72). Other industries which are covered by the STR include most of the outstanding business services in SIC 74 such as legal services, accountancy, management consultancy, architecture and engineering activities. Completion of these developments will result in coverage for about 60 per cent of corporate market services.

The UK, through ONS and BERR, is also an active member of Voorburg, an international group devoted to the development of service sector statistics. In recent years, the work programme has been devoted to developing methods for the measurement of prices for individual service industries, particularly with reference to National Accounts needs for detailed industry deflators. The group has recently produced a prices thesaurus and a general methodology report as well as undertaking studies on the collection of turnover and prices data for products within individual industries (see Voorburg 2007).

Employment

As shown in Table 2, employment data are measured by three different ONS surveys: the LFS, WFJ and the ABI. The LFS, a household survey, is ONS's recommended source for estimating the total employment in the UK and is used by the Monetary Policy Committee of the Bank of England to measure and monitor monthly economic activity and unemployment. Industry classification in the LFS is, however, self-defined and is considered to be of poorer quality than a business survey, where the industry classification is defined from the IDBR and is used as a stratifier in the sample design of the survey. Business surveys, however, count jobs rather than employees so that individuals who hold more than one job will be counted more than once, and this is not directly comparable with the LFS employment measure. The quarterly WFJ series incorporates self-employment from the LFS and can be compared with total LFS employment by including first and second jobs, subject to a number of other reconciliation adjustments.

ABI data are the only source which provide consistent employment, turnover and GVA data for very detailed industry sectors defined by the 4- or 5-digit class

Table 5
Detailed service industries currently covered by the SPPI

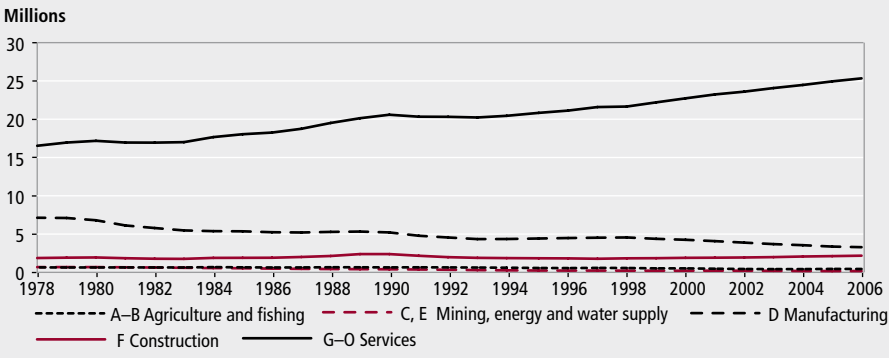
SPPI service/SIC industry	SIC (2003)	IoS weight (2003) parts per 1,000	Used as all or part of GDP(O) deflator	Percentage change (latest year on previous year) 2004	2005	2006
Experimental top level SPPI (net)				*2.2*	*3.4*	*2.7*
Maintenance and repair of motor vehicles	50.2	5.5	Part	*4.5*	*4.0*	*4.0*
Hotels	55.1	10.9	Part	*3.7*	*2.6*	*0.5*
Canteens and catering	55.5	4.7	Part	*0.8*	*1.2*	*4.4*
Business rail fares	60.10/1	3.3 (all of 60.1)	No	*4.2*	*4.9*	*6.4*
Rail Freight	60.10/9		No	*0.6*	*2.1*	*4.1*
Bus and coach hire	60.23/1	1.0 (all of 60.23)	Part	*2.9*	*3.9*	*5.4*
Freight transport by road	60.24 / 60.30	15.6 (combined)	All	*1.8*	*4.6*	*1.7*
Commercial vehicle ferries	61.10/1	1.1	No	*–0.2*	*2.1*	*0.1*
Sea and coastal water freight	61.10/2	2.2	Part	*–1.9*	*0.0*	*3.5*
Business air fares	62.10/1	4.1	No	*1.8*	*3.5*	*4.6*
Freight forwarding	63.22/63.4	6.3 (combined)	All	*3.2*	*4.7*	*1.2*
National post parcels	64.11	7.1	No	*5.4*	*3.1*	*3.2*
Courier services	64.12	3.8	All	*4.0*	*4.1*	*2.0*
Business telecoms services	64.2	29.2	Part	*–4.0*	*–4.0*	*–5.1*
Property rental payments (non-dwellings)	70.2	23.4	No	*4.0*	*3.2*	*3.4*
Real estate agency	70.31	6.5	Part	*6.6*	*8.3*	*12.8*
Management of real estate on a fee or contract basis	70.32	4.3	All[1]			
Construction plant hire	71.32	3.2	All	*–0.4*	*–0.2*	*1.1*
Computer services	72.00	38.7	No	*–0.5*	*0.8*	*0.8*
Market research	74.13	1.0	All	*0.9*	*2.8*	*3.1*
Technical testing	74.3	2.4	All	*1.9*	*1.2*	*3.2*
Advertising placement	74.4	8.4	Part	*4.8*	*4.0*	*0.6*
Employment agencies	74.5	19.7	All	*1.7*	*2.8*	*3.0*
Security services	74.6	4.2	All	*4.3*	*3.0*	*6.6*
Industrial cleaning	74.7	4.7	All	*1.3*	*1.2*	*2.3*
Commercial film processing	74.81/4	1.1 (all of 74.81)	Part	*3.6*	*–2.1*	*3.2*
Contract packaging	74.82	0.8	All	*2.0*	*5.0*	*2.2*
Direct marketing/secretarial	74.85(pt)	1.1 (combined 74.85 & 74.86)	All	*1.6*	*2.7*	*4.3*
Translation and interpretation services	74.85(pt)		All	*0.7*	*-0.3*	*0.7*
Call centre activities	74.86		All[2]			
Adult education	80.42	6.8 (all of 80.4)	Part	*3.3*	*1.4*	*3.2*
Sewerage services	90.01	9.0 (all of 90)	Part	*5.9*	*11.6*	*9.4*
Waste disposal	90.02		Part	*5.7*	*13.0*	*6.3*
Commercial washing and dry cleaning	93.01	2.5	All	*2.7*	*0.5*	*1.7*

Notes:

1 Uses SPPI indices for canteens and catering; security services; industrial cleaning and property rental payments.
2 Uses SPPI indices for direct marketing/secretarial.

Source: Experimental services producer price index, Office for National Statistics

Figure 3
UK workforce jobs: by industry sector



Source: Workforce jobs series, Office for National Statistics

and subclass level. ABI employment data include employees and sole proprietors and this total employment figure is published by ONS together with corresponding turnover and GVA estimates for detailed SIC industries. Sole proprietors may be classified as self-employed in the LFS and so there are consistency issues between the ABI and LFS data. ABI employee data, excluding sole proprietors, are published via the NOMIS website (see Box 2) and ABI employee data are used to benchmark the quarterly WFJ series in an annual benchmarking exercise.

Figure 3 shows the total number of UK Workforce jobs in the service sector industries between 1978 and 2006, together with manufacturing and the other non-service industries. The number of service sector jobs, including employee jobs and the self-employed, has increased from 16.5 million in 1978 to 25.0 million in 2006 and now accounts for over 80 per cent of all jobs. Over the same period, manufacturing has seen a decrease from 7.1 million to 3.3 million jobs.

Total Workforce jobs are available on a consistent basis from 1978 for the aggregated industry sections given in **Table 6**, which shows the growth in workforce jobs over the last 25 years up to 2006. Self-employment is included from the LFS from 1986 and before this from the Census. Armed forces and government-supported trainees are also included from administrative sources but both are relatively small in terms of total job levels. Table 6 shows that sections J

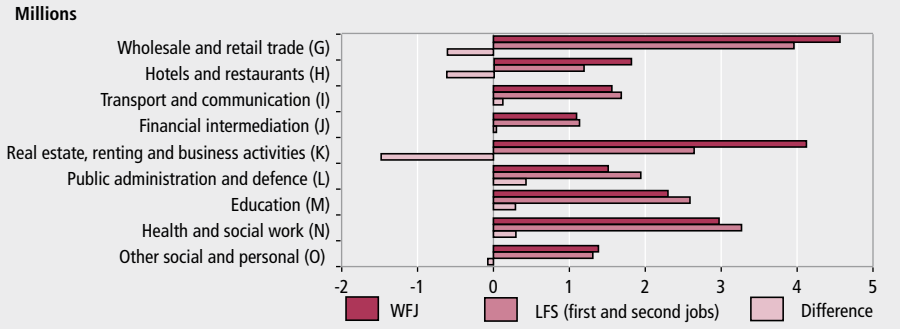
Table 6
Growth in workforce jobs in service industries, 1981–2006

Percentages

Section	Industry	1 year 2005–06	5 years 2001–06	10 years 1996–2006	25 years 1981–2006
A–B	Agriculture and fishing	*–2.2*	*–7.4*	*–21.3*	*–31.8*
C, E	Mining, quarrying, electricity, gas and water supply	*1.8*	*–22.4*	*–26.4*	*–74.2*
D	Manufacturing	*–2.3*	*–19.4*	*–26.7*	*–46.3*
F	Construction	*2.7*	*13.7*	*19.4*	*17.9*
G–O	All services	*1.6*	*9.0*	*19.9*	*49.4*
G–H	Distribution, hotels and restaurants	*–0.5*	*3.2*	*9.8*	*28.8*
I	Transport and communication	*1.8*	*2.3*	*19.5*	*13.3*
J–K	Financial, real estate, renting and business activities	*2.4*	*11.1*	*32.6*	*115.1*
L–N	Public administration, defence, education, health and social	*2.3*	*14.1*	*19.4*	*40.0*
O	Other social and personal	*3.6*	*11.8*	*24.8*	*77.1*
A–O	All industries	*1.2*	*5.0*	*11.3*	*19.7*

Source: Workforce jobs series, Office for National Statistics

Figure 4
Difference between LFS and WFJ employee jobs within service sector industries, September 2004



Source: Labour Force Survey and Workforce jobs data, Office for National Statistics

and K, financial and real estate, renting and business activities have experienced the highest increase in jobs over the last 25 years, at 115 per cent, followed by section O, other social and personal activities, at 77 per cent. In recent years, sections J and K have continued to experience some of the highest growth, although sections L–N, which are mainly public sector jobs, experienced the highest growth of 14 per cent between 2001 and 2006.

At a more detailed industry level, employee jobs are available from 1978 at each 2-digit section and, until recently, for some 3- or 4-digit SIC groups or classes. Detailed self-employment data can be obtained from the LFS from 1992 and added into the employee jobs series to provide an estimate approximating to the published total WFJ series. Minor differences will exist due to the omission of armed forces and government-supported trainees and due to the published series being seasonally adjusted.

The introduction of both the LFS and ABI surveys greatly improved the availability of employment and job data for service sector statistics, with the LFS providing many additional characteristics such as age, ethnicity, occupation and second jobs. These measures will be discussed in a future ELMR article, together with other performance characteristics such as productivity and profitability.

ONS has recently published an Employment and Jobs Review (see ONS 2006), which reports that between 1992 and 2004, total UK jobs reported by WFJ data have been consistently higher than LFS estimates by an average of 750,000. A reconciliation of the two series at the UK level, taking into account known differences in coverage and definitions, results in a considerable reduction in this difference, but this cannot be undertaken at the detailed industry level that BERR needs. Hence, as reported by Avery (2006), the WFJ series, which is published quarterly for the service industries, is the preferred source for detailed jobs data for industries within the service sector.

Figure 4 shows the difference between LFS and WFJ employee jobs for each section in the service industries. Section K, real estate, renting and business activities has the largest difference, with LFS jobs being significantly below WFJ employee jobs. It is known that employees working for contractors in support service industries can incorrectly classify themselves in the LFS as working in the industry of their place of work, often in the public sector, rather than their actual employer. ONS has recently investigated the feasibility of linking LFS respondent workplace details to the IDBR to provide a more reliable and consistent industry classification for the LFS, and in the longer term it is hoped that this could be achieved. The large difference in section K may also be due to the LFS not recording some temporary foreign workers, who in principle are included in the business survey estimate of employees in WFJ. There may also be some misclassification of employee jobs as self-employment in the LFS, which is also self-defined by the respondent.

LFS employment data are weighted to population totals after each decennial census and, between censuses, following major revisions to mid-year population estimates. Following the 1991 and 2001 Censuses, this weighting resulted in movements in the employment levels which affected the reconciliation or agreement with workforce jobs. Similarly, workforce job levels were affected by changes in survey methodology at the time of the changes from the Annual Employment survey to the ABI. It is possible that there will be similar effects when the BRES survey is introduced to replace the ABI and also when the 2011 Census data are used to weight the LFS data. While inconsistencies remain between the LFS, ABI and WFJ data, users such as BERR would benefit from the publication of coherent employment and jobs data, which take into account known differences and, where necessary, balance the different estimates similar to existing National Accounts practices for GVA.

International trade

Since 1990, global international trade in goods has increased by nearly 400 per cent, with the IMF reporting world exports of US$3,400 billion in 1990 increasing to US$12,000 billion in 2006 (at current prices). Over a similar period, reported world exports of services have more than tripled from US$800 billion in 1990 to US$2,500 billion in 2005 (at current prices). Exports of services are mainly undertaken by the developed countries, and in 2005 the G7 countries accounted for 45 per cent of world exports of services.

This growth in trade has partly been brought about through free trade

agreements made through a series of trade negotiations or rounds under the General Agreement on Tariffs and Trade, established after the Second World War. The 1986–94 Uruguay round led to the creation of the World Trade Organisation in 1995. Existing trade agreements are primarily based on the Uruguay round, as only limited progress has been made since 2000 in the current Doha round, due to disagreements on the way forward between the developing and developed economies of the world.

The EU was established to promote and establish the free movement between member states of goods, services, persons and capital. It has enjoyed a free market for goods since its creation but there have been a number of barriers to trade in services, for example, difficulties in establishing businesses in other member states. This has been addressed through the adoption of the 2006 EU services directive which requires member states to remove unjustifiable barriers. It also requires the establishment of a single point of contact to provide support on establishing a presence in the member state. In addition, it puts in place arrangements for more streamlined regulation between countries.

The expansion in international trade contributes to the concept of globalisation, defined by the IMF as 'the process through which an increasingly free flow of ideas, people, goods, services and capital leads to the integration of economies and society'. The growth in globalisation can be an incentive to governments to make free trade agreements and liberalise labour markets, as international corporations enjoy increased power to relocate activity to more favourable locations (see DTI 2004).

Migration policy within individual countries may also have an influence by either protecting the domestic labour force or allowing the movement of labour and increasing competition. The effect of migration into the UK on the services industries will be considered in a later article which will include a discussion of labour market characteristics. The OECD has produced a handbook on globalisation indicators and also publishes indicators covering measures such as trends in trade in goods and services and the activity of multinationals in the service sector (see OECD 2005).

UK trade in services

In 2005, the UK accounted for more than 8 per cent of world exports of services, surpassed only by the United States. Consistent trade in services data has been available for the UK since 1996 following the introduction of a new survey, International Trade in Services (ITIS), which primarily covers business services. This marked a major improvement in coverage for trade in services. Over the last ten years, the UK has enjoyed a positive trade balance in international trade in services with exports consistently exceeding imports (see **Figure 5**). In fact, this positive balance makes a major contribution to improving the overall UK trade balance since the UK balance in goods has been in deficit since 1983. It is noted, however, that about 10 per cent of service exports are undertaken by manufacturing rather than service industries, primarily royalties and consulta ncy services.

Trade in services is reported primarily in terms of products, rather than on an industry basis, and **Figure 6** shows the exports, imports and balance in 2006 of each major product, defined according to agreed international standards. Business and financial services comprise the largest UK export groups, followed by travel and transportation. Both of the latter have a negative balance, with imports into the UK exceeding exports. With the exception of government services, all other product groups have a positive trade balance.

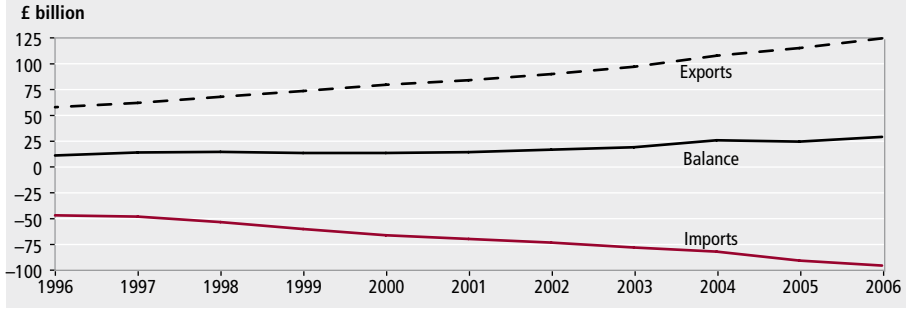
The partner or destination country for UK exports of services includes many of the developed and developing countries throughout the world. In 2006, the US was the top partner country receiving over 20 per cent of UK service exports. The UK enjoys a healthy services trade surplus with the US. The European Union (EU27) also accounted for over 40 per cent of UK service exports, although these are primarily received by members of the original EU15. Other non-EU top ten partner countries include Switzerland, Japan and Singapore.

Regional exports

BERR undertakes a partial regional analysis of service exports, mainly covering business services, which is based on the ONS ITIS survey. This is of interest to the Regional Development Agencies, which are BERR agencies. **Table 7** shows the level of selected services exports for 2005, allocated to the UK regions defined by Government Office Region. This limited analysis covers about 30 per cent of UK exports of services, with London and the South East accounting for about 40 and 25 per cent, respectively, of these service exports.

The ITIS sample typically comprises 20,700 enterprises, with about 20,000 being surveyed annually, accounting for about 40 per cent of the total ITIS exports of services. The remaining 700 enterprises consist of a panel of known traders which are included in the sample each year and are surveyed quarterly; a high proportion of these are

Figure 5
UK trade in services



Source: Pink Book 2007, Office for National Statistics

Figure 6
UK trade in service products, 2006

Source: Pink Book 2007, Office for National Statistics

Table 7
Value[1] of selected regional exports of services, 2005

£ million

	Government Office Region										
Services	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	Eastern	London	South East	South West	Rest of UK	UK
Computer and information	50	230	100	135	290	280	2,300	2,200	180	420	6,185
Royalties and licence fees[2]	50	565	70	120	85	435	1,650	2,675	780	185	6,615
Merchanting and other trade-related services	40	230	35	30	45	105	1,535	500	45	155	2,720
Legal, accounting and management consulting	125	205	140	130	240	285	4,920	840	175	310	7,370
Advertising and market research	25	50	35	30	25	100	1,590	345	175	30	2,405
Research and development	*	*	110	280	35	860	395	1,345	195	435	4,705
Architectural, surveying and construction[3]	15	25	30	25	15	70	110	250	15	390	945
Property management[4]	80	45	40	30	40	80	420	365	65	40	1,205
Services between affiliated enterprises, n.i.e.	20	110	45	25	55	175	1,085	550	55	260	2,380
Services not currently regionalised											80,650
Total exports of services											115,180

Notes:

1 Figures are not National Statistics and may not be accurate to the level shown. Regional data and UK totals are rounded to the nearest £5 million and are consistent with Tables 3.1, 3.7, 3.8 and 3.9 in the 2007 *Pink Book*, except for property management which is not given separately in the *Pink Book* and is unadjusted ITIS data.
2 Excluding film and television royalties and licence fees, see Table 3.8 in the *Pink Book*.
3 Construction figures from Table 3.1 in the *Pink Book* have been combined with figures for architectural and surveying from Table 3.9.
4 Part of other miscellaneous business services, see Table 3.9 in the *Pink Book*.
* disclosive data.

Source: BERR analysis of the ONS International Trade in Services (ITIS) Inquiry, adjusted to Pink Book totals

consolidated returns, accounting for about 60 per cent of the total ITIS exports of services. For the regional analysis, BERR combines the annual and quarterly returns treating all data as annual returns. The ITIS sample is not stratified by region; the regional allocation is undertaken by linking individual anonymised enterprises in the ITIS micro-data set into the IDBR and apportioning the export value to regions, using the employment in each local unit. The published results are subject to primary and secondary disclosure testing using ONS procedures.

It is recognised that this approach may not reflect actual practices since it is possible that not all local units within a particular enterprise will contribute to the exports of services. However, about 50 per cent of enterprises in the ITIS survey have only one local unit, and another 30 per cent have two, three or four local units which have over 60 per cent of their local units in the same region as the enterprise unit. Overall, about 50 per cent of local units are in the same region as the enterprise unit, which helps to reduce the uncertainty brought into the analysis through the proportional allocation of the exports across all local units.

The data can be used to show the relative size of exports between regions for a particular product or between products within a region. Annual variations in the data can be due to individual enterprises obtaining new or ending existing export contracts, but may also reflect the level of reliability of the data. Consideration is being given to extending the analysis to other service exports such as travel, transportation and financial services, although it is recognised that, for some of these products, the recorded place of transaction and location of the business unit providing the service may differ.

Ongoing developments and need for further improvements

At the time of the 1995 President's Task Force review (see Cave 1997), a number of significant developments to improve UK service sector statistics were either being undertaken or planned; these have now been completed. They include the ABI survey which was introduced in 1995 and which collects turnover and employment data, giving much improved coverage for market services. Collection of trade in services data has also seen a significant improvement with the introduction of the ITIS survey from 1996.

Other more recent developments include the monthly IoS which will soon be published to National Statistics standards for most service industries at 2-digit SIC level, with outputs being available from 2002. This has included a comprehensive quality review for all 2-digit industries, with a number of improvements in the collection of data and the quality of outputs. There have also been a number of improvements in services outputs for topics such as research and development, profitability and, most notably, labour market characteristics through the LFS. These developments will be discussed in a further article.

While these developments are welcome, as summarised in Box 1, for some of the key recommendations from the review there is still the need for further developments or expansion of detail. This need has recently been highlighted by ONS following a consultation, which is still ongoing, on its priorities for its four-year work programme between 2008 and 2012. The report of the first stage of the consultation highlights the need for further work and resources for the development of service sector statistics (see ONS 2007b). This includes the development of detailed SPPIs, detailed sales product data through SERVCOM and the implementation of SIC 2007.

Resources may allow for the development of SERVCOM incrementally, with coverage built up over time and focusing initially on those sectors where SPPIs are considered to be most deficient. It is noted that the EU has recently completed a review of the products version of NACE (CPA) which includes a comprehensive list of service products (see Eurostat 2007). Service product data are needed to develop meaningful price deflators and the UK National Accounts would benefit from developing deflators for an extensive range of service industries.

There has been little progress in expanding outputs for productivity for the detailed service industries and to date there are only experimental series giving growth for all services and for distribution, hotels and restaurants, sections G–H. While BERR

is able to derive productivity estimates using published GVA and employment data for a number of detailed service industries, it is desirable that these are published by ONS in the longer term using consistent series. In addition, productivity estimates for detailed SIC industries can be estimated from ABI outputs; the result of such an analysis has recently been published by ONS (see Goodridge 2007). This will be discussed further in the future article on business services.

A number of ongoing developments at ONS will lead to further improvements in service sector outputs. These include National Accounts re-engineering, where it is proposed that the supply and use tables covering services industries and products are increased from the existing 35 to 97. As discussed in Box 3, the implementation of the new SIC 2007 classification between now and 2011 will also bring significant increases to the number of service industries for which data need to be collected and reported. The SIC 2007 review will also make welcome improvements for services at the section level, particularly for the existing section K, which currently lacks homogeneity in terms of the detailed industries covered in terms of size, productivity and skills.

BERR's needs for detailed industry outputs may be affected by quality; some limited quality data is already published for some surveys, for example ABI and ITIS outputs. To this end, it is desirable that ONS publishes more extensive quality measures, either directly in terms of standard errors or for other indicative measures. Recent reductions in sample sizes for a number of ONS business surveys have also affected the service industries, although in some cases methodological changes have helped to compensate for any reduction in quality. In the longer term, it is desirable to address the historical imbalance between services and non-services coverage and precision.

With the need to still expand and improve the quality of services outputs, consideration could be given to new approaches to supplement sample surveys. While the Presidential Task Force recommended the use of administrative data, experience in other areas may suggest caution and that this approach is not necessarily a panacea, usually requiring extensive resources to address quality and data-linking issues. Possible alternatives may be to use model-based estimates at the UK and subnational level, to improve existing survey estimates for detailed industry outputs which are of poorer quality. Such an approach could build upon the successful work that ONS has recently done using model-based estimates for neighbourhood statistics, for example, unemployment data.

Finally, some immediate benefits could be gained by reviewing existing outputs from a number of sources, to publish data on a more coherent basis. For example, quarterly WFJ and annual ABI employment data are in some cases currently published on an inconsistent basis. Where possible, major developments should also ensure that past time series are updated to ensure that their start dates are consistent across outputs, for example, GVA and employment measures. These coherence issues could be considered as part of a wider remit of a possible services user group which may be organised by ONS to cover the development and implementation of a coordinated strategy for service sector outputs.

CONTACT

elmr@ons.gsi.gov.uk

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