ARTICLE

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Labour productivity measures from the ABI: 1998 to 2007

SUMMARY

This article presents current price labour productivity estimates using published data from the Annual Business Inquiry (ABI). The article updates the work of Goodridge (2007) and Daffin and Lau (2002) in presenting estimates for the years 2006 and 2007. A new development presented in this article are constant price labour productivity measures which have been formulated using Producer Price Indices (PPI) and the experimental Services Producer Price Indices (SPPI) to deflate output. These enable a more accurate analysis of industry labour productivity trends over time. It is found that capital intensive industries generally exhibit both higher levels and growth in labour productivity over the sample period.

The Annual Business Inquiry (ABI) was introduced by the Office for National Statistics (ONS) between 1998 and 2001. The ABI brings together employment (ABI/1) and financial/turnover (ABI/2) data into one survey where previously it was collected using the Annual Employment Survey, Annual Census of Production, Annual Census of Construction and Distribution and Service Inquiries¹. Although there has since been some divergence between the two parts of the ABI (see Gough 2009), so care should be taken in interpreting changes over time, the development of the ABI has allowed for the aggregates to be collected using a reasonably common methodology, resulting in greater consistency between input and output data. Coherent labour productivity estimates can therefore be produced at a detailed level.

The ONS Productivity Statistical Bulletin contains quarterly labour productivity estimates for the whole economy, broken down into Total production industries, Total manufacturing, Agriculture, forestry and fisheries, Total services, and a number of selected service industries. These estimates are based on chained-volume measures of gross value added (GVA). Breakdowns for subsections of manufacturing are also presented. Additionally, the Statistical Bulletin contains estimates for the market sector on an experimental basis. The Productivity Statistical Bulletin and associated data sets can be found at www.statistics.gov.uk/statbase/product.asp?vlnk=7476.

Labour productivity estimates in the Productivity Statistical Bulletin differ from those presented in this article in the following ways:

- the Statistical Bulletin estimates use an output measure from the National Accounts. The employment measure mainly comes from the quarterly Short Term Employment Survey which are benchmarked to annual ABI data. These data are then joined with estimates of self-employment, government supported trainees and HM forces for the appropriate industries before the totals are constrained to the Labour Force Survey whole economy figures. This results in reduced consistency between the output and input data, largely arising from the coherence and balancing adjustments made to the National Accounts. In contrast, the estimates presented in this article are based on ABI data that have not undergone National Accounts adjustments
- additionally, the estimates presented in the Statistical Bulletin are in constant prices, whereas those presented here are in current prices. While the current price format does not allow for the analysis of trends in productivity over time, it does facilitate comparisons in the levels of productivity across industries for a given reference year
- most importantly, the estimates presented in this article contain a more detailed industry breakdown according

to the Standard Industrial Classification 2003 (SIC 2003), than is available in the Statistical Bulletin

The published ABI data, on which these labour productivity estimates are based, can be found at www.statistics.gov.uk/abi. National, rather than regional, employment estimates from AB1/1 have been used as these are provided on a consistent basis with AB1/2 data. Finalised data are available 18 months after the end of a given reference year. The most recent finalised data available relate to the 2007 reference year. It is important to note that ABI revisions arising from quality and omissions issues are only taken back two years. This means that the ABI is only consistent on a rolling basis for the reference years 2007 and 2006 which should be taken into account when interpreting the time series of estimates. Approximate GVA per job estimates are not available prior to 1998. This is because although approximate GVA data are available from the ABI from 1995 onwards, an employment measure consistent with this is not available until 1998².

Quality issues

The output measure used in the production of these results is 'approximate' GVA in basic prices. This differs from the GVA estimates published in the Input–Output Supply and Use Tables which are compiled in accordance with the 1995 European System of Accounts (ESA 95). The primary differences between the two are that the approximate GVA omits adjustments for taxes and subsidies or income received in kind. Additionally the GVA estimates contained in the Supply–Use framework are subject to conceptual, quality and coherence adjustments. These are described in greater detail in **Box 1**.

For certain industries, the ABI estimate

of approximate GVA per job is judged to be of low quality and in these cases the measure has been withdrawn. This applies for the following industries:

- Agriculture, hunting and related service activities (SIC 01); Forestry, logging and related service activities (SIC 02); and Fishing (SIC 05). These measures have primarily been withdrawn due to the prevalence of grants and subsidies in these industries. Additionally, data for these divisions has only been collected since 2000/2001, and as such the data are relatively new
- Air transport (SIC 62). For this division the ABI series is of poor quality. Changes in time tend to reflect improvements in measurement rather than real economic change
- Financial intermediation (SIC 65–67); and Public administration, defence and compulsory social security (SIC 75). In the first case financial data is not currently published and in the second case it is not collected by the ABI
- Real estate activities (SIC 70). The approximate GVA measure excludes capital expenditure, and as such, is not a representative measure due to the nature of the real estate industry. For example, there will typically be high levels of capital expenditure and low levels of turnover during the early stages of a project's development and vice-versa in the latter stages
- Research and development (SIC 73) and subdivisions of Activities of membership organisations (SIC 91.1 and 91.3). For these industries, much of their activity takes place within the non-market sector. Since government grants are excluded from the approximate GVA measures the estimates for these divisions have been withdrawn

- Education (SIC 80) and Health and social work (SIC 85). The exclusion of government grants from the data often results in negative values of GVA for these sectors. Furthermore, since the ABI is not distributed to public bodies the estimates are not considered representative of these divisions

For the following industries, although labour productivity estimates are published, users should exercise caution when interpreting the results:

- Manufacture of beverages (SIC 15.9); Manufacture of tobacco products (SIC 16); and Wholesale of food, beverages and tobacco (SIC 51.3). Due to the desire of firms to minimise duty payments, the timing of the release of goods from bonded warehouses is subject to considerable variation. This results in volatile estimates of GVA for these industries
- Manufacture of refined petroleum products (SIC 23.3). Firms in this division tend to change the time at which they report their duty payments. The result is that for some years payments may appear in wholesale and for others they may appear in refining. Despite ONS attempts to minimise the differences in reported duty payments, the GVA estimates are subject to considerable volatility

Due to issues with data quality and volatility the following SIC(2003) divisions have been aggregated as follows:

- Extraction of crude petroleum and natural gas (SIC 1110) and Service activities incidental to oil and gas extraction excluding surveying (SIC 1120) have been aggregated to SIC 1100 level

Box 1

National Accounts adjustments

Conceptual adjustments

These are the adjustments required to translate data sources into National Accounts concepts. These include adjustments to allow for undeclared income in the income measure and adjustments to retail sales to exclude spending by businesses in shops in the household final consumption expenditure measure. These well-established adjustments take place as part of the national accounts compiling process and are made prior to the balancing exercise which takes place under the Supply–Use framework.

Quality adjustments

These adjustments take place after conceptual adjustments are made and are intended to correct for known biases and

discontinuities in the source data. Such adjustments often occur as a result of revisions analysis, for example, correction for systematic under reporting of a component.

Coherence adjustments

These adjustments are applied at the final stage of the balancing process, once the data has been scrutinised and validated against other data sources. The adjustments, which are carried out at a detailed industry and product level, are used to secure a balance between supply and demand, outputs and inputs and reflect the known relative weaknesses in the accounts.

For further information on the National Accounts adjustments see Penneck and Mahajan (1999).

- Manufacture of pulp (SIC 2111) and Manufacture of paper and paperboard (SIC 2112) have been aggregated to SIC 2110 level
- Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi finished goods to Agents involved in the sale of a variety of goods (SIC 5111 to 5119) have been aggregated to SIC 5100 level
- Wholesale of grain, seeds and animal feeds to Wholesale of un-manufactured tobacco (SIC 5121 to 5125) have been aggregated to SIC 5120 level
- Wholesale of tobacco products to Wholesale of coffee, tea, cocoa and spices (SIC 5135 to 5137) have been aggregated to SIC 5135-5137 level.
- Repair of boots, shoes and other articles of leather to Repair not elsewhere Classified (SIC 5271 to 5274 have been aggregated to SIC 5270 level
- Hotels and motels, with restaurants (licensed) (SIC 5511) and Hotels and motels, with restaurants (unlicensed) (SIC 5512) have been aggregated to 5510 level
- Data processing (SIC 7230) and Database activities (SIC 7240) have been aggregated to SIC 72.3/72.4 level.

In addition, some approximate GVA per worker estimates for SIC(2003) divisions at the four-digit level have been suppressed, due to their disclosive nature. This is also true of those divisions where employment is less than 500. However, data for these industries are still included within broader aggregates.

Employment

Labour productivity estimates presented in this article use ABI year-average employment as their input measure. This variable is derived by adjusting the ABI

point-in-time employment estimate using employment measures from the quarterly STES data. This removes elements of seasonality that may be present from using the point-in-time ABI estimates which refer to the month of December. However, it also results in the loss of some consistency between input and output data. The methodology used to calculate this year average employment measure is outlined in **Box 2**. It should be taken into account that the labour productivity estimates are based on output per worker, as opposed to output per hour worked. This will result in underestimates of productivity for those sectors in which part time work is more prevalent and overestimates for those industries in which part time work is less prevalent.

Analysis

In contrast to the estimates contained in the Productivity Statistical Bulletin, the results presented in this article allow for a much more detailed breakdown by industry and service subdivisions. This is particularly true of the service sector, for which the Productivity Statistical Bulletin only contains breakdowns by Distribution, hotels and restaurants; Transport, storage and communication; and Business services and finance. Note, however, that sections J and L (Financial intermediation and Public administration and defence respectively) are not covered by the ABI, and the data for sections M and N (Education and Health and social work respectively) are not considered representative of their industries.

An inspection of the broad sector level results, presented in **Table 1**, show that labour productivity in the service sectors is well below that of the production sectors (excluding SIC 2003 sections A,B,J,L,M,N and divisions 62 and 70 (section K)).

This empirical phenomenon has been a pervasive feature of productivity estimates and is often attributed to the *Baumol Effect*, (Baumol 1967). Also known as *Baumol's Disease*, this is the theory that lower levels (and growth rates) of labour productivity in the service sector are due to higher levels of labour intensity. That is to say that service industries typically use a higher proportion of labour relative to capital inputs in their production process. This relatively high labour intensity means that service industries tend to be worse placed to benefit from advances in technology.

However, these estimates are expressed in current prices and as such do not allow for a consistent assessment of growth in labour productivity. Deflating the manufacturing sector estimates of GVA by the output Producer Prices Index (PPI), and selected service divisions by the relevant experimental Services Producer Prices Index (SPPI) series, allows us to broadly gauge the growth in labour productivity over the period. It must be emphasised that only broad trends in time can be inferred from this deflated data since, as previously mentioned, the revisions to the ABI arising from quality issues or omissions are only taken back two years. Furthermore the coverage of the deflators used for the selected service sector divisions do not perfectly match.

Figure 1 plots the labour productivity estimates for the manufacturing sector and an aggregation of selected service sector divisions,³ for which the output measures have been deflated to constant 2005 prices. In line with the predictions of Baumol's theory, growth over the entire period in the service divisions' productivity is below that of the manufacturing sector. Specifically, using 1998 as the base year, the index of labour productivity for the service industries in 2007 is 123 compared

Box 2

Calculation of ABI year-average employment

ABI year-average employment = ABI year average employees + ABI working proprietors + ABI unpaid workers

ABI year-average employees is calculated by taking the ABI point-in-time data at the reporting unit level and applying local unit level factors from the STES.

As an example, the STES factor for 2005 would be calculated as below:

$$\frac{(\text{STES December 2004} + (3 \times \text{STES March 2005}) + (3 \times \text{STES June 2005}) + (3 \times \text{STES September 2005}) + (2 \times \text{STES December 2005}))}{12 \times \text{STES December 2005}}$$

The calculation is performed separately for each of the male/female/full-time/part-time splits by STES SIC section building blocks. They are then applied to each of the December returns before grossing to generate year-average employment levels.

The ABI unpaid workers and ABI working proprietors series cannot be adjusted for seasonality since there is no data available on them from the STES. Although the IDBR (Inter Departmental Business Register) and Labour Force Survey (LFS) contain data on working proprietors and unpaid workers, respectively, it is not considered reliable enough to adjust ABI data at a detailed level.

Table 1

ABI 'approximate GVA per job' in current prices

		£ thousands									
SIC03 section	Description	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
C-O ¹	All sectors covered by the ABI	28.7	30.1	31.1	32.1	32.8	34.0	36.1	38.0	40.6	42.8
C-E	Production sector	38.5	40.4	42.7	43.7	46.5	47.2	51.7	57.5	60.3	64.3
D	Manufacturing	33.9	35.2	35.9	36.6	39.3	40.2	43.7	44.6	48.2	51.4
F	Construction	27.2	29.8	31.6	35.9	36.7	40.0	41.9	45.4	48.5	52.2
G-O ¹	Service sector	25.2	26.5	27.2	28.1	28.6	29.8	31.4	33.1	35.0	36.8

Note:

Source: Office for National Statistics

1 Excludes SIC03 sections A,B,J,L,M,N and divisions 62 and 70 (section K).

Figure 1

ABI labour productivity estimates using GVA at constant prices

Note:

Source: Office for National Statistics

* See Note 3.

Figure 2

ABI labour productivity annual growth rates using GVA at constant prices

Note:

Source: Office for National Statistics

* See Note 3.

Figure 3

Scatter plot of labour productivity and capital intensity by industry¹

Note:

Source: Office for National Statistics

1 The data point for section 11 (Extraction of crude petroleum and natural gas; Service activities incidental to oil and gas extraction excluding surveying) has been omitted from this plot in order to allow for a more detailed scale.

with 136 for the manufacturing sector. The year on year growth rates in **Figure 2** show that, for the majority of the period, annual growth rates of labour productivity in the manufacturing sector outstripped those in the service sector.

Turning towards a lower level of analysis, **Table 2** details the five best and worst performing divisions in terms of labour productivity levels at the two digit SIC level. Certain SIC sections at the two digit level have consistently ranked highly in terms of productivity performance. Section 11 (Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying) has ranked at the top for the whole period. Section 41 (Collection, purification and distribution of water) has also ranked consistently highly. At the other end of the spectrum sections 55 (Hotels and restaurants) and 52 (Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods) have ranked consistently low in labour productivity estimates.

These results are broadly consistent with Baumol's theory that more capital intensive industries are better placed to take advantage of technological advances. For example, in 2006 the ratios of capital expenditure to the sum of capital expenditure and employment costs in SIC sections 11 and 41 were 0.72 and 0.78, respectively. The corresponding ratios for sections 55 and 52 were 0.18 and 0.19, respectively. This relationship is explored further in **Figure 3**, which is a scatter plot of labour productivity levels for 2007 against capital expenditure as a proportion of capital expenditure plus employment costs for 2006⁴. Although the ratio is an imperfect means of capturing capital intensity, **Figure 3** suggests a broadly positive correlation between this ratio and labour productivity.

Taken as a whole the results of this tentative analysis suggest that the symptoms of Baumol's disease are still very much a feature of UK labour productivity. A more

Table 2
Rankings of 'approximate GVA per job' for two digit SIC¹

Panel A: Top Five

Rank	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	11	11	11	11	11	11	11	11	11	11
2	16	16	16	16	16	16	16	41	16	16
3	41	23	23	23	41	41	41	61	41	41
4	23	41	61	41	61	61	61	23	61	23
5	61	90	41	61	23	23	23	90	23	61

Panel B: Bottom Five

Rank	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	91	91	91	91	91	91	91	91	91	91
2	55	55	55	55	55	55	55	55	55	55
3	52	18	52	52	52	52	52	52	52	52
4	93	52	18	18	93	93	93	93	93	93
5	18	93	93	93	39	39	17	17	19	92

Note:

1 Excluding SIC divisions 12, 13, 40, 62, 65-67, 70, 73 and 75-85.

Source: Office for National Statistics

comprehensive analysis of productivity growth and its drivers would take the form of a multi-factor productivity approach. Although the required data to perform this analysis at a 4 digit level are not currently available, Turvey (2009), performs this analysis at a broad sector level using National Accounts and labour market data.

Conclusion

Estimates of labour productivity derived from the ABI are useful in allowing for a much more detailed industry breakdown than headline productivity estimates. They also differ from the headline productivity estimates in that they are not subject to the National Accounts coherency and balancing adjustments, which reduce consistency between the input and output measures.

It is important, however, to bear in mind the limitations to these figures. For some industries, the ABI is not representative; for others the ABI offers no coverage at all - notably sections J and L relating to Financial intermediation and Public administration and defence respectively. Finally, note that prices in certain industrial sectors are subject to substantial volatility, which should be borne in mind when interpreting the corresponding labour productivity estimates.

A full set of labour productivity estimates at section, 2 digit and 4 digit SIC level can be found in the **Appendix** in **Tables A1, A2 and A3**, respectively.

Notes

1. From 2009, the part of the ABI which deals with employment, known as ABI/1, will be replaced with the Business Register Employment Survey (BRES). BRES will replace both the ABI/1 and the Business Register Survey (BRS). For more information see www.ons.gov.uk/about/surveys/a-z-of-surveys/business-register-and-employment-survey/index.html
2. Between 1995 and 1998 employment data was collected using the Annual Employment Survey (AES) which, due to methodological and coding differences, is not consistent with the ABI.
3. Specifically, division H (Hotels and restaurants) and elements of divisions I (Transport, storage and communication), K (Real estate, renting and business activities), O (Other community, social and personal service activities) and G (Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods).
4. The ratios for 2006 are plotted against the 2007 labour productivity estimates as it is the prior level capital expenditure that is likely to influence the current level of productivity.

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APPENDIX

Table A1
Current Price 'Approximate GVA per job' for 1998 to 2007, Industry Sections¹

			£ thousands									
Section	Sub section	Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
C-O		All sectors covered by the ABI	28.7	30.1	31.1	32.1	32.8	34.0	36.1	38.0	40.6	42.8
C-F		Production sector plus construction	36.1	38.0	40.1	41.8	43.9	45.3	49.0	53.6	56.8	60.6
C-E		Production sector	38.5	40.4	42.7	43.7	46.5	47.2	51.7	57.5	60.3	64.3
G-O		Service sector	25.2	26.5	27.2	28.1	28.6	29.8	31.4	33.1	35.0	36.8
H-O		Service sector excluding Wholesale and Retail trade	26.7	27.7	29.0	29.6	30.2	31.3	33.1	35.4	36.7	39.0
C		Mining and Quarrying	162.8	198.3	297.4	316.3	288.1	260.5	297.9	369.9	378.3	443.3
	CA	Mining and Quarrying of Energy Producing Materials	238.0	295.7	496.0	533.0	472.2	428.6	477.9	601.4	639.2	693.8
	CB	Mining and Quarrying except Energy Producing Materials	49.9	52.8	53.5	55.5	49.8	48.3	61.6	74.0	59.8	68.1
D		Manufacturing	33.9	35.2	35.9	36.6	39.3	40.2	43.7	44.6	48.2	51.4
	DA	Manufacture of Food Products, Beverages and Tobacco	35.9	37.4	38.0	39.8	43.4	44.7	47.7	*	50.3	52.1
	DB	Manufacture of Textiles and Textile Products	19.6	18.7	19.9	22.8	24.4	25.0	26.4	29.7	28.4	32.8
	DC	Manufacture of Leather and Leather Products	20.1	24.4	28.9	28.6	34.4	27.8	27.0	30.0	25.7	31.2
	DD	Manufacture of Wood and Wood Products	25.0	23.3	25.9	25.7	26.9	30.2	33.7	34.8	31.5	37.5
	DE	Manufacture of Pulp, Paper and Paper Products; Publishing and Printing	36.1	39.4	40.6	40.4	42.7	42.0	45.4	45.4	45.5	47.1
	DF	Manufacture of Coke, Refined Petroleum Products and Nuclear fuel	84.0	120.0	88.9	97.5	87.3	84.4	103.4	92.8	117.9	139.8
	DG	Manufacture of Chemicals, Chemical Products and Man-made Fibres	52.5	55.2	60.9	62.5	63.5	66.8	70.8	77.5	90.1	91.7
	DH	Manufacture of Rubber and Plastic Products	29.8	28.9	30.7	31.8	33.2	34.1	36.0	38.0	36.5	40.6
	DI	Manufacture of Other Non-metallic Mineral Products	32.8	33.5	34.8	36.0	40.1	41.9	46.1	46.0	48.7	52.1
	DJ	Manufacture of Basic Metals and fabricated Metal Products	30.4	29.5	30.2	30.7	31.5	32.6	35.6	37.3	41.2	44.9
	DK	Manufacture of Machinery and Equipment not elsewhere classified	33.0	32.7	33.5	32.8	36.9	38.8	39.8	42.2	46.5	47.3
	DL	Manufacture of Electrical and Optical Equipment	35.2	36.6	39.1	31.4	37.4	39.7	44.2	43.5	47.9	50.1
	DM	Manufacture of Transport Equipment	39.9	42.8	38.2	43.8	45.3	43.2	48.1	49.7	53.7	59.1
	DN	Manufacturing not elsewhere classified	25.6	26.3	25.4	27.8	27.9	28.2	32.1	33.7	34.6	41.8
E		Electricity, Gas and Water Supply	109.9	114.9	107.2	110.6	132.2	127.4	135.5	169.9	187.0	175.4
F		Construction	27.2	29.8	31.6	35.9	36.7	40.0	41.9	45.4	48.5	52.2
G		Wholesale and retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	22.7	24.5	23.9	25.6	25.7	27.0	28.6	28.8	31.7	32.7
H		Hotels and Restaurants	11.3	11.9	12.6	13.1	13.8	13.6	15.0	14.9	15.6	16.1
I		Transport, Storage and Communication	38.5	38.5	39.7	39.5	40.4	43.6	45.4	48.7	52.9	55.6
K		Real Estate, Renting and Business Activities	31.1	32.1	34.0	34.4	34.8	36.4	38.2	40.9	43.0	46.1
O		Other Community, Social and Personal Service Activities	23.0	25.0	25.1	26.3	27.0	27.4	29.4	32.2	29.5	29.7

Note:

1 Excluding SIC Divisions 12, 65-67, 70, 75-85 and also 13 in 2003-2007.

Source: Office for National Statistics

Table A2

Current Price 'Approximate GVA per job' for 1998 to 2007, Two Digit SIC¹

		£ thousands									
SIC03		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
10	Mining of Coal and Lignite; Extraction of Peat	46.1	37.0	41.9	37.7	35.8	40.2	36.9	32.1	37.5	55.0
11	Extraction of Crude Petroleum and Natural Gas; Service Activities Incidental to Oil and Gas Extraction excluding Surveying	330.1	419.2	703.0	766.0	657.3	573.5	611.5	744.4	770.1	820.8
14	Other Mining and Quarrying	50.3	52.9	53.5	55.5	49.8	48.3	61.6	74.0	59.8	68.1
15	Manufacture of Food Products and Beverages	33.9	35.3	35.9	38.2	41.4	42.8	45.5	*	48.2	49.9
16	Manufacture of Tobacco Products	166.3	188.4	211.3	178.9	245.6	211.2	250.6	*	251.9	257.8
17	Manufacture of Textiles	21.8	21.1	22.5	24.0	25.0	26.5	25.2	26.6	28.3	31.5
18	Manufacture of Wearing Apparel; Dressing and Dyeing of Fur	17.0	15.9	16.8	21.0	23.4	22.7	28.8	36.2	28.5	35.9
19	Tanning and Dressing of Leather; Manufacture of Handbags, Saddlery, Harness and Footwear	20.1	24.4	28.9	28.6	34.4	27.8	27.0	30.0	25.7	31.2
20	Manufacture of Wood and Products of Wood and cork, except Furniture; Manufacture of Articles of Straw and Plaiting Materials	25.0	23.3	25.9	25.7	26.9	30.2	33.7	34.8	31.5	37.5
21	Manufacture of Pulp, Paper and Paper Products	35.1	38.0	37.7	39.2	43.1	40.2	40.7	37.4	36.5	44.6
22	Publishing, Printing and Reproduction of Recorded Media	36.4	39.9	41.4	40.7	42.6	42.4	46.5	47.3	47.5	47.6
23	Manufacture of Coke, Refined Petroleum Products and Nuclear Fuel	84.0	120.0	88.9	97.5	87.3	84.4	103.4	92.8	117.9	139.8
24	Manufacture of Chemicals and Chemical Products	52.5	55.2	60.9	62.5	63.5	66.8	70.8	77.5	90.1	91.7
25	Manufacture of Rubber and Plastic Products	29.8	28.9	30.7	31.8	33.2	34.1	36.0	38.0	36.5	40.6
26	Manufacture of Other Non-metallic Mineral Products	32.8	33.5	34.8	36.0	40.1	41.9	46.1	46.0	48.7	52.1
27	Manufacture of Basic Metals	33.8	30.6	34.8	32.0	29.3	30.5	43.5	43.8	52.5	67.3
28	Manufacture of Fabricated Metal Products, except Machinery and Equipment	29.4	29.2	28.9	30.4	32.1	33.1	33.9	35.8	38.8	40.0
29	Manufacture of Machinery and Equipment not elsewhere classified	33.0	32.7	33.5	32.8	36.9	38.8	39.8	42.2	46.5	47.3
30	Manufacture of Office Machinery and Computers	52.9	38.2	39.0	35.5	61.2	62.9	73.5	45.1	49.5	52.9
31	Manufacture of Electrical Machinery and Apparatus not elsewhere classified	26.8	29.8	31.2	30.7	30.4	32.4	35.6	38.3	40.3	42.4
32	Manufacture of Radio, Television and Communication Equipment and Apparatus	42.9	47.8	51.7	24.1	35.0	37.5	41.7	39.4	56.1	62.5
33	Manufacture of Medical, Precision and Optical Instruments, Watches and Clocks	32.6	34.0	36.5	37.3	40.3	43.1	48.2	50.9	51.4	51.0
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	37.4	33.8	30.4	37.4	37.5	37.3	43.9	43.2	49.3	55.3
35	Manufacture of Other Transport Equipment	43.6	55.5	48.9	52.0	56.2	51.4	53.8	58.0	59.2	63.0
36	Manufacturing of Furniture; Manufacturing not elsewhere classified	25.5	26.1	25.1	27.4	27.3	27.6	29.7	32.0	31.4	38.0
37	Recycling	28.9	30.9	30.7	32.7	35.9	36.3	59.2	49.1	60.1	71.6
41	Collection Purification and Distribution of Water	94.6	91.8	78.4	94.4	129.5	104.7	117.2	154.1	159.3	156.4
45	Construction	27.2	29.8	31.6	35.9	36.7	40.0	41.9	45.4	48.5	52.2
50	Sale, Maintenance and Repair of Motor Vehicles and Motorcycles; Retail Sale of Automotive Fuel	28.2	30.2	29.6	33.6	36.5	38.7	39.6	35.8	39.1	42.8
51	Wholesale Trade and Commission Trade, except of Motor Vehicles and Motorcycles	38.5	40.3	38.7	43.2	41.4	44.4	48.5	49.2	52.9	56.3
52	Retail Trade, except of Motor Vehicles and Motorcycles; Repair of Personal and Household Goods	14.8	16.4	16.6	16.8	17.4	18.0	18.9	19.5	21.5	21.5
55	Hotels and Restaurants	11.3	11.9	12.6	13.1	13.8	13.6	15.0	14.9	15.6	16.1
60	Land Transport; Transport Via Pipelines	25.9	27.3	28.6	27.9	29.5	28.6	27.3	30.7	32.8	36.2
61	Water Transport	70.1	61.9	78.9	85.0	106.2	85.3	112.4	120.7	123.6	131.9

Table A2 continued

		£ thousands									
SIC03		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
63	Supporting and Auxiliary Transport Activities; Activities of Travel Agencies	42.3	42.8	39.5	41.7	41.5	45.2	48.5	51.8	59.0	63.1
64	Post and Telecommunications	50.1	48.1	50.5	48.4	48.2	57.2	60.8	63.8	69.1	69.4
71	Renting of Machinery and Equipment Without Operator and of Personal and Household Goods	59.0	57.1	52.8	63.4	66.3	65.9	64.6	71.4	71.2	83.2
72	Computer and Related Activities	46.7	47.0	44.2	46.4	50.0	51.1	56.2	61.6	64.5	70.0
74	Other Business Activities	27.3	28.2	31.4	30.6	30.5	32.1	33.5	35.6	37.9	40.1
90	Sewage and Refuse Disposal, Sanitation and Similar Activities	66.0	74.7	62.8	56.2	82.1	76.3	75.4	89.9	105.2	96.5
91	Activities of Membership Organisations not elsewhere classified	11.2	10.6	8.8	8.1	8.9	8.1	10.2	10.4	14.8	13.3
92	Recreational, Cultural and Sporting Activities	25.7	27.6	28.7	30.4	31.3	31.3	32.5	35.5	27.9	30.1
93	Other Service Activities	16.6	19.2	20.6	22.5	20.2	21.7	23.7	25.1	25.0	23.4

Note:

1 Excluding SIC Divisions 12, 13, 40, 65-67, 70, 73 and 75-85.

Source: Office for National Statistics

Table A3

Current Price 'Approximate GVA per job' for 1998 to 2007, Four Digit SIC¹

	£ thousands									
SIC03	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1010	46.7	36.9	42.1	37.6	34.7	40.2	37.0	31.0	37.2	55.4
1100	330.1	419.2	703.0	766.0	657.3	573.5	611.5	1361.9	770.1	820.8
1411	49.5	28.4	46.4	53.4	53.7	51.8	54.2	46.1	61.8	53.2
1412	48.2	59.4	*	50.1	52.9	*	*	*	*	*
1421	56.8	58.8	56.9	59.5	50.5	48.1	69.2	68.7	64.2	78.0
1422	36.5	44.6	47.6	41.3	41.9	43.5	44.3	47.5	39.8	56.7
1430	*	*	*	*	*	*	*	*	*	*
1440	70.0	75.5	80.5	63.6	87.1	86.7	63.7	91.1	*	*
1450	18.5	38.4	56.9	55.4	54.3	43.9	54.2	38.3	29.0	36.7
Manufacturing										
1512	17.5	17.2	20.1	25.1	29.2	24.0	23.4	24.8	21.4	24.5
1513	26.4	24.2	25.1	25.9	28.7	29.2	28.0	30.5	27.7	31.8
1520	17.7	17.6	17.5	21.5	22.6	24.3	26.4	29.2	25.9	39.2
1531	38.2	60.3	57.7	56.4	56.5	60.5	64.6	48.0	55.7	61.2
1532	29.9	51.8	54.1	50.7	48.1	50.2	52.2	54.8	35.1	34.1
1533	31.7	29.5	28.3	38.5	31.3	30.1	34.8	34.8	32.2	38.2
1551	35.0	31.0	34.8	34.9	47.7	45.0	38.3	35.8	46.2	50.3
1552	34.5	27.5	27.3	25.7	34.1	42.5	39.2	40.9	36.6	48.5
1561	66.9	62.6	61.2	58.3	*	*	*	76.1	92.3	*
1562	76.8	48.5	66.0	86.4	*	*	*	39.8	7.7	*
1571	29.0	38.9	20.3	32.1	40.0	43.8	39.4	35.0	46.8	45.7
1572	63.2	58.7	60.8	65.0	78.1	63.4	79.3	87.0	87.1	113.3
1581	17.2	18.5	20.6	21.7	24.4	26.5	29.4	26.5	28.2	27.9
1582	23.9	24.4	26.3	26.4	24.9	30.0	35.1	47.0	41.7	44.8
1584	46.3	45.7	55.7	60.3	62.6	76.5	90.4	77.9	80.4	101.4
1586	52.5	78.1	100.1	99.7	101.5	111.6	101.9	137.2	117.1	108.0
1587	39.9	35.8	32.8	39.3	47.4	56.2	54.9	67.1	53.2	39.4
1589	*	36.0	36.6	38.8	36.9	45.2	45.7	50.2	61.1	45.0
1591	83.3	72.3	78.5	83.3	87.4	104.9	135.4	150.3	173.6	187.0
1596	57.1	74.9	68.1	62.6	69.1	58.2	53.7	52.2	67.1	35.8
1597	47.8	35.7	40.5	55.7	47.5	69.2	57.8	54.4	59.1	88.9
1598	54.2	63.4	55.2	60.0	54.6	63.7	71.2	63.2	62.1	58.1
1600	166.3	188.4	211.3	178.9	245.6	211.2	*	*	251.9	257.8
1711	22.8	18.7	30.4	35.1	65.0	*	*	19.4	27.3	11.6
1712	22.5	27.8	25.6	27.3	23.1	23.0	20.6	29.8	28.7	36.2
1713	17.9	20.4	28.5	24.3	31.5	23.2	23.3	27.1	22.8	16.1
1716	26.5	16.6	21.9	22.5	22.8	22.5	24.0	14.4	*	28.7
1721	21.5	17.5	22.2	24.6	27.5	17.3	25.0	15.0	17.4	15.2
1722	20.8	29.3	18.2	22.2	22.9	29.8	24.0	14.1	16.0	24.6
1723	24.8	21.6	19.1	33.8	22.9	22.7	21.4	19.1	22.0	37.1
1724	27.1	27.2	25.4	29.7	31.9	35.0	32.6	30.1	32.5	36.4
1725	26.8	12.5	19.6	18.8	*	*	10.7	31.9	37.4	168.0
1730	25.9	23.2	25.7	29.8	33.6	33.7	28.7	23.9	27.9	32.6
1740	16.5	21.0	20.0	22.6	20.9	27.2	23.5	28.0	26.5	26.7
1751	25.9	25.4	26.2	25.4	29.6	28.1	30.1	33.7	34.1	40.7
1752	28.7	24.9	26.1	31.7	23.5	28.8	30.0	23.7	19.8	41.5
1753	37.4	32.9	31.5	31.0	43.6	35.7	34.4	39.7	31.2	32.6
1754	25.8	19.0	24.1	25.1	21.9	28.0	29.7	27.3	37.1	43.6
1760	28.2	21.7	24.8	24.6	28.9	26.3	23.3	17.9	27.7	39.2
1771	22.4	20.4	15.8	17.2	26.0	19.7	20.7	22.9	18.8	25.2
1772	16.1	16.0	20.2	14.9	18.7	15.2	17.2	18.2	24.3	19.1
1810	25.8	33.5	20.1	15.1	23.3	44.4	49.2	27.0	*	*
1821	17.2	15.9	24.8	20.9	31.1	22.4	25.4	31.7	34.6	35.4
1822	14.9	17.1	16.8	24.1	26.5	27.6	32.7	28.0	27.9	43.9
1823	20.1	14.6	17.6	20.6	16.2	24.6	22.4	29.9	28.0	30.7
1824	17.8	14.2	14.1	17.7	20.8	16.6	27.5	31.2	27.9	29.0
1910	22.2	29.7	28.4	21.2	34.0	36.2	40.8	41.0	36.5	36.7
1920	20.3	26.3	20.3	19.2	29.8	21.7	24.3	31.2	18.9	29.2
1930	19.7	22.8	33.1	36.2	36.7	28.9	24.7	25.7	29.4	31.1
2010	27.1	27.5	23.5	23.2	28.0	31.4	33.7	40.7	34.1	42.1
2020	43.3	38.5	37.9	32.2	35.8	40.8	44.4	43.4	57.7	76.2
2030	21.3	20.4	26.0	26.1	27.1	30.8	34.9	34.5	28.3	34.2
2040	28.6	21.8	25.2	24.6	23.0	25.7	27.9	29.9	29.8	30.9
2051	23.4	21.2	22.6	23.8	23.6	24.5	25.6	29.2	*	*
2052	25.5	18.4	28.8	*	*	29.9	*	*	*	*
2110	43.7	49.5	46.8	*	*	51.9	*	*	43.1	67.6
2121	31.9	30.8	29.9	31.1	34.0	34.2	37.6	38.4	32.6	37.0
2122	44.8	43.9	52.0	55.5	66.4	59.6	52.4	41.5	48.6	53.6

Table A3 continued

	£ thousands									
SIC03	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
2123	29.8	35.4	36.7	29.8	30.9	37.3	38.5	40.9	27.8	33.0
2124	24.7	55.0	32.9	45.0	40.1	32.8	30.4	44.3	31.1	40.7
2125	29.5	35.3	40.3	36.7	34.0	30.0	32.6	32.9	36.4	38.7
2211	44.2	59.0	49.0	50.8	52.7	56.1	55.9	67.2	62.2	55.6
2212	51.1	53.8	55.2	50.6	51.7	47.8	55.1	54.6	51.7	54.5
2213	42.4	45.2	50.4	46.9	48.7	59.5	56.5	58.4	57.5	60.3
2214	99.7	26.6	46.1	48.3	78.4	75.1	40.8	41.3	104.4	54.0
2215	10.9	24.7	25.7	33.3	35.7	22.3	37.7	35.2	40.0	29.7
2222	31.9	33.7	35.6	34.6	36.9	34.2	39.5	34.0	39.0	40.1
2223	27.4	26.8	25.7	25.5	25.5	27.4	29.4	30.0	30.5	33.1
2225	29.8	30.8	37.8	39.1	37.9	31.0	39.0	51.6	40.4	43.6
2231	62.2	46.0	63.6	39.6	27.9	52.2	61.8	46.1	23.9	65.0
2232	51.6	53.4	43.3	53.9	55.1	48.3	49.2	45.1	53.0	46.9
2233	43.0	47.8	21.4	35.9	40.5	46.1	21.5	62.6	79.5	30.0
2320	114.4	171.3	121.0	*	*	*	*	238.4	*	249.2
2330	60.5	83.9	60.4	*	*	*	*	*	*	74.4
2413	33.5	35.4	42.7	55.4	59.2	67.9	66.9	66.5	95.2	90.8
2414	81.6	63.4	74.2	84.1	100.7	86.1	99.1	183.7	206.6	144.5
2415	37.8	41.1	53.2	55.7	55.2	69.7	68.6	59.6	49.7	68.9
2416	41.9	39.1	54.6	44.3	45.8	60.2	52.9	61.5	65.2	66.6
2417	41.2	46.2	53.9	66.9	56.1	65.5	67.1	63.0	59.1	70.4
2420	69.6	69.6	83.6	75.7	89.1	85.6	83.4	78.1	64.3	82.8
2430	38.4	37.5	41.8	39.7	48.4	48.8	57.2	58.9	62.1	68.0
2441	35.0	52.7	39.6	50.9	38.8	40.5	31.1	36.1	43.4	108.9
2442	73.7	76.4	82.6	94.7	81.6	96.2	95.7	116.0	120.3	123.9
2451	31.7	39.9	36.8	38.7	46.7	42.7	63.2	63.2	67.2	56.0
2452	38.5	49.8	64.2	55.9	50.3	50.0	48.5	44.6	40.1	28.3
2461	35.3	29.0	33.0	33.6	29.0	35.4	38.1	31.2	30.6	60.4
2462	51.1	42.6	56.8	48.9	53.7	46.4	63.5	65.3	53.6	70.5
2463	40.3	42.3	47.7	47.7	54.1	54.8	66.0	77.0	74.0	69.7
2464	70.7	121.8	51.5	49.7	47.4	46.1	*	64.9	62.2	88.8
2465	34.2	44.7	38.2	40.3	39.3	44.5	*	49.8	17.1	32.4
2466	52.5	47.1	60.8	54.6	52.2	52.9	60.7	68.5	86.0	81.0
2470	52.7	53.9	67.9	53.7	128.2	98.0	73.5	75.6	104.2	90.1
2511	43.4	43.9	37.0	43.1	66.9	66.6	70.3	69.5	67.2	71.8
2512	21.1	22.3	24.2	19.6	24.0	28.9	22.5	42.9	46.3	23.7
2513	27.6	26.9	30.4	27.5	33.8	35.1	34.7	36.1	38.2	34.6
2521	33.9	32.3	38.0	42.1	39.1	38.7	38.9	41.5	42.4	43.6
2522	34.7	31.7	31.6	35.4	34.5	36.6	41.2	41.9	37.9	40.1
2523	25.7	25.7	27.8	30.9	29.7	30.3	32.7	34.8	34.1	40.8
2524	26.6	26.5	27.8	25.8	27.8	28.9	31.6	32.7	30.8	37.5
2612	*	*	23.2	*	32.6	*	*	33.1	37.1	42.9
2613	40.7	44.8	44.1	44.3	47.4	48.3	54.6	53.6	38.9	42.1
2614	34.7	33.9	35.8	35.3	27.2	42.7	55.5	56.7	56.9	77.7
2615	28.2	17.4	47.6	36.1	25.8	35.3	41.6	31.3	42.2	39.2
2621	18.1	15.7	17.0	16.7	19.3	21.6	22.9	23.8	22.3	27.0
2622	36.1	44.2	40.9	40.0	43.7	43.7	77.4	*	65.4	64.4
2624	41.5	23.7	*	*	*	*	*	*	*	*
2625	10.7	14.6	19.1	28.3	7.0	20.1	23.2	28.9	17.8	17.9
2626	28.6	31.5	33.2	29.3	31.3	32.1	28.5	34.1	26.1	32.4
2630	29.6	22.0	21.4	20.9	15.9	24.2	32.6	28.3	25.7	33.3
2640	36.7	36.9	33.0	37.0	38.8	45.9	49.4	48.3	47.5	46.7
2651	64.4	77.1	95.6	96.0	97.0	115.2	82.3	69.4	92.9	93.6
2661	33.0	33.2	32.9	35.3	42.7	41.7	48.2	48.6	43.2	47.9
2662	122.3	124.5	114.3	153.6	145.0	148.8	171.9	170.4	213.1	247.3
2663	47.7	55.0	41.2	48.1	74.7	60.7	73.0	57.1	106.5	63.2
2664	49.2	28.4	42.1	48.4	27.8	*	*	*	*	*
2665	27.5	30.9	32.4	21.2	32.4	*	*	75.8	*	*
2666	22.9	24.9	33.0	50.5	22.1	29.6	32.9	30.2	32.3	30.5
2670	24.5	23.5	23.5	34.0	40.3	23.2	28.6	33.5	30.5	30.7
2681	35.4	24.8	29.0	30.8	25.5	29.4	33.7	35.3	24.5	32.5
2682	36.7	33.0	44.1	40.5	44.0	46.2	46.5	52.7	58.1	60.9
2710	38.7	32.2	35.3	18.7	16.3	21.8	49.2	39.5	49.9	91.3
2721	23.1	23.3	34.5	29.4	34.8	30.0	32.6	48.6	74.7	65.5
2722	33.1	29.8	29.8	39.8	38.3	34.8	46.4	53.3	60.8	58.7
2731	22.1	22.4	26.7	27.1	28.5	30.1	40.0	35.2	37.6	*
2732	45.1	37.8	32.3	39.7	24.5	36.5	54.1	16.7	32.5	*
2733	37.1	26.9	38.9	26.8	26.9	37.7	50.1	53.0	63.6	52.0
2734	26.3	39.0	27.3	26.6	27.4	34.4	33.2	45.4	43.7	48.4

Table A3 continued

	£ thousands									
SIC03	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
2735*****	32.4	22.9	57.1	15.6	19.3	**	**	**	**	**
2741	66.2	99.2	117.9	187.3	104.1	72.7	130.0	161.6	169.6	182.2
2742	39.8	39.8	37.9	41.7	40.5	39.6	44.6	53.1	62.4	65.8
2743	31.5	24.1	37.0	39.9	31.0	48.6	94.1	76.8	58.2	161.2
2744	33.1	24.4	43.6	32.4	28.9	39.3	38.0	33.5	53.2	52.1
2745	45.6	35.4	41.8	45.7	44.6	48.7	52.1	54.3	56.7	66.3
2751	26.6	24.8	26.7	27.8	28.8	27.4	31.3	32.7	44.2	35.3
2752	24.2	24.1	27.2	25.6	31.4	35.2	33.2	33.0	30.2	44.1
2753	23.6	19.9	26.6	25.8	30.9	28.5	28.8	32.2	36.2	27.1
2754	24.3	24.1	34.3	33.7	25.1	22.9	29.3	34.3	34.5	33.6
2811	33.5	33.5	30.7	31.8	32.7	35.2	35.7	34.3	42.0	48.4
2812	30.0	25.1	26.0	30.4	28.3	28.1	34.9	33.2	36.5	40.0
2821	26.3	27.5	28.0	36.9	32.5	42.9	39.0	41.8	39.1	33.5
2822	34.9	37.3	31.1	36.5	37.6	35.7	37.3	49.8	48.8	59.7
2830	38.6	32.8	38.3	39.8	39.4	41.2	48.6	56.3	63.6	53.9
2840	27.8	27.7	29.0	30.7	28.4	25.3	27.1	29.6	37.5	35.4
2851	30.0	27.5	24.6	27.7	29.0	29.2	29.6	31.2	34.2	35.7
2852	28.4	28.7	29.0	27.8	30.3	31.8	33.2	35.5	36.0	35.4
2861	30.5	29.8	18.1	*	*	*	36.7	87.0	92.0	65.2
2862	31.2	24.1	31.1	30.1	35.9	32.5	31.6	37.5	34.4	32.2
2863	20.3	25.0	22.1	*	*	*	30.8	33.2	37.8	34.7
2871	26.5	29.4	23.5	25.3	27.3	29.7	43.0	31.0	58.2	52.3
2872	52.4	59.7	60.8	59.9	66.3	55.8	54.2	59.8	55.2	58.1
2873	26.3	32.9	29.1	28.8	33.3	36.5	41.1	46.3	43.2	76.4
2874	25.8	25.7	25.4	26.5	26.6	33.7	36.2	28.2	35.1	36.8
2875	24.6	26.5	26.6	25.4	27.7	29.7	33.1	36.6	36.5	34.7
2911	53.3	42.2	34.9	41.9	48.8	38.9	57.5	62.9	58.8	53.3
2912	36.8	33.2	38.6	35.0	33.9	38.8	40.4	43.5	49.5	45.9
2913	34.8	33.7	35.8	36.9	38.8	37.3	39.1	41.1	36.2	47.4
2914	32.8	29.9	32.9	28.7	32.9	35.4	23.6	32.1	37.5	45.1
2921	25.3	27.2	33.8	34.1	35.7	40.6	42.4	34.5	40.8	41.0
2922	30.6	31.8	35.6	29.8	36.6	38.6	39.2	47.4	49.4	49.2
2923	33.3	30.9	29.4	37.6	38.1	37.5	38.5	43.4	46.5	47.4
2924	30.2	30.2	30.4	32.1	28.9	36.3	39.1	34.4	39.2	45.3
2931	49.7	36.0	41.2	51.2	68.1	76.6	*	7.0	11.7	58.2
2932	23.2	29.1	27.2	25.8	32.3	33.8	*	34.5	37.5	34.1
2940	32.7	42.6	39.5	30.9	40.9	32.1	34.5	44.2	41.5	45.9
2951	37.5	25.4	25.8	34.9	29.5	76.7	41.4	42.5	53.9	56.7
2952	39.8	46.0	33.6	40.9	48.5	58.7	53.0	46.7	65.0	63.5
2953	29.8	34.2	32.1	30.4	36.0	37.6	39.0	44.9	52.0	40.2
2954	21.3	20.8	27.7	21.9	31.7	30.4	28.3	38.3	43.3	28.5
2955	25.3	19.6	38.6	41.5	32.5	26.8	41.6	31.9	39.0	50.6
2956	35.5	32.3	33.5	30.7	34.6	35.5	39.0	41.9	42.9	44.5
2960	32.1	32.7	37.9	31.4	42.7	44.6	46.3	56.0	66.8	63.8
2971	27.0	25.0	30.0	28.8	35.8	38.3	42.7	30.9	38.8	36.0
2972	24.1	28.4	28.4	22.0	27.6	27.4	33.8	33.4	34.7	23.2
3001	20.2	18.3	30.6	27.1	31.5	45.6	49.3	40.9	48.3	52.2
3002	62.5	43.4	41.3	37.7	70.3	67.7	82.1	47.1	50.2	53.2
3110	24.3	29.9	31.4	28.0	28.4	30.7	34.5	43.3	48.2	48.7
3120	31.9	32.7	31.6	33.9	34.4	34.8	39.0	37.5	35.9	38.1
3130	26.6	26.2	29.5	30.4	25.7	34.9	42.1	25.1	31.6	47.7
3140	28.1	26.4	29.5	23.2	25.6	27.7	27.3	34.9	35.7	47.2
3150	22.1	26.4	28.3	26.6	29.1	29.0	27.9	39.1	44.9	35.8
3161	19.3	29.8	32.5	25.8	28.0	30.2	28.5	27.6	27.9	54.6
3162	28.4	30.6	33.4	33.9	30.8	32.7	38.3	38.3	44.2	41.5
3210	36.5	38.6	44.7	34.5	39.5	39.0	40.2	45.2	41.1	47.7
3220	63.2	69.3	65.5	10.0	27.2	38.5	41.8	54.5	64.0	73.9
3230	25.8	26.0	34.4	32.8	40.9	34.1	43.8	34.9	71.1	73.0
3310	31.2	36.1	37.3	34.2	41.5	37.2	41.2	43.7	45.3	45.7
3320	33.0	33.0	38.8	40.3	43.8	50.5	54.7	50.4	59.9	53.7
3330	39.4	39.3	38.0	28.6	40.1	37.2	45.9	61.5	43.8	53.1
3340	30.4	32.9	25.7	36.1	24.4	30.2	37.7	37.7	40.1	51.5
3350	20.9	23.4	28.7	23.6	29.7	34.4	37.4	38.3	36.7	62.3
3410	44.2	38.3	31.9	46.6	44.8	44.9	56.5	49.9	62.3	73.8
3420	26.1	26.2	26.0	26.4	29.8	30.7	33.4	36.8	38.9	37.1
3430	32.7	30.9	29.9	31.8	32.6	32.0	34.3	37.7	38.9	41.4
3511	34.2	51.5	30.6	28.0	29.1	33.8	37.4	31.2	35.9	57.3
3512	21.4	22.8	23.4	38.5	25.9	26.9	32.8	28.0	30.6	33.6
3520	*	46.0	37.0	34.0	36.9	32.5	28.7	54.4	53.3	34.1

Table A3 continued

	£ thousands									
SIC03	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
3530	53.4	61.9	56.6	62.1	69.9	61.2	63.9	65.7	68.9	71.5
3541	22.0	21.7	35.1	51.1	73.5	63.1	44.6	43.3	42.7	60.5
3542	16.7	26.1	37.8	26.8	17.9	19.5	22.2	22.6	42.5	37.3
3543	34.6	22.4	43.3	39.6	30.4	31.1	32.4	33.3	39.4	40.7
3550	31.0	19.5	21.2	20.7	20.7	32.0	35.3	26.7	41.3	24.4
3611	23.3	26.4	23.2	24.9	26.9	24.3	27.1	31.8	31.8	35.6
3612	31.9	28.9	30.4	32.0	28.4	30.0	34.5	39.4	43.2	46.3
3613	32.0	31.2	31.3	29.6	27.9	29.3	32.3	37.4	32.6	39.3
3614	22.5	22.8	20.3	24.1	25.6	26.7	24.8	26.9	27.9	36.1
3615	24.6	24.6	23.1	25.7	24.1	24.6	25.0	24.4	29.3	30.4
3621	66.5	40.0	31.3	29.4	*	*	*	*	*	*
3622	27.8	33.4	36.4	39.6	*	*	*	33.3	*	*
3630	16.2	21.1	25.9	34.5	25.0	28.1	32.5	26.6	25.9	29.0
3640	26.0	27.4	32.1	34.2	35.1	32.3	32.1	46.2	33.2	28.7
3650	29.9	27.6	33.6	29.9	31.5	31.3	39.5	37.5	34.7	32.7
3661	23.4	33.2	40.0	33.1	27.0	49.3	35.8	23.2	*	*
3662	19.3	26.4	30.3	29.8	22.2	27.4	32.3	32.1	*	*
3663	22.4	23.9	23.0	25.4	26.3	25.0	30.1	28.4	24.6	38.2
3710	39.4	36.7	38.7	33.3	48.5	50.8	92.5	54.4	79.2	98.2
3720	19.1	23.3	20.9	31.8	23.9	25.6	34.0	38.0	45.1	49.5
Electricity, gas and water supply										
4100	94.6	91.8	78.4	94.4	129.5	104.7	117.2	154.1	*	156
Construction										
4511	32.0	34.1	39.9	39.2	44.3	36.2	39.0	36.6	*	49.5
4512	67.6	50.4	25.0	43.8	25.0	27.6	26.9	28.0	24.6	156.4
4521	28.6	32.1	34.0	40.5	42.3	48.5	51.4	54.6	79.2	50.6
4522	23.1	26.4	29.4	30.1	33.2	34.7	35.0	40.6	44.0	52.3
4523	26.6	28.2	26.6	34.0	34.6	34.0	40.2	45.5	45.6	45.2
4524	42.2	25.6	36.9	17.5	33.9	80.6	59.0	54.4	89.0	86.4
4525	22.8	32.7	35.3	34.0	37.4	30.0	34.4	46.7	51.5	53.9
4531	27.3	27.5	29.4	31.9	34.4	35.6	37.1	39.2	43.7	36.8
4532	31.9	29.1	28.2	30.3	31.2	38.4	37.3	36.7	29.2	37.8
4533	28.5	25.5	26.8	29.9	31.9	34.5	34.6	32.6	35.3	44.5
4534	19.8	21.6	29.3	32.8	27.5	36.1	28.4	43.0	30.6	39.1
4541	30.9	30.7	25.4	32.9	32.5	34.6	51.1	49.1	50.8	54.7
4542	27.3	26.5	32.2	35.2	28.4	37.4	32.6	39.8	51.8	50.8
4543	27.8	27.9	35.0	37.2	42.0	39.6	32.4	34.2	47.8	49.6
4544	18.8	22.8	26.1	26.0	26.8	28.0	27.6	32.5	34.1	40.0
4545	25.5	31.4	24.9	34.3	21.9	31.4	37.6	34.8	40.7	40.8
4550	29.8	36.0	31.5	39.6	40.3	34.7	49.6	48.6	54.7	58.4
Distribution										
5010	34.9	37.7	35.8	43.5	47.6	51.3	51.1	48.2	51.9	54.7
5020	22.4	25.3	24.2	24.6	25.8	25.9	24.6	26.8	27.3	31.9
5030	24.5	24.2	23.6	25.2	30.3	30.9	36.1	27.5	30.7	38.6
5040	33.3	20.1	36.1	29.2	30.9	32.9	30.9	19.8	29.8	32.8
5050	17.0	18.5	22.8	28.3	23.8	31.2	39.5	31.6	34.8	30.8
5110	40.0	40.4	36.8	45.0	40.9	49.3	67.3	50.7	44.3	48.6
5120	24.8	31.2	23.8	31.4	25.3	32.3	29.4	33.8	35.2	43.4
5131	32.7	23.0	22.6	31.8	42.8	33.0	36.7	38.0	37.9	31.4
5132	22.4	29.4	25.6	28.3	29.0	27.2	34.9	35.1	49.4	38.1
5133	33.4	29.2	31.7	28.8	34.7	27.0	43.4	54.7	56.8	57.2
5134	50.0	46.5	46.0	61.8	63.7	49.7	54.5	47.8	50.7	65.2
5135-37	6.6	117.3	36.4	81.6	50.7	19.3	45.2	66.8	44.2	30.8
5138	26.8	33.3	23.9	21.5	28.2	27.8	39.5	36.5	36.8	50.2
5139	16.5	23.1	20.0	26.2	25.2	33.2	32.2	25.7	42.0	40.8
5141	40.0	35.3	36.4	41.1	40.0	39.3	36.1	35.7	40.0	49.3
5142	37.0	38.0	35.7	40.9	40.7	53.1	52.3	50.0	38.8	52.9
5143	62.0	53.0	53.5	54.9	53.3	54.9	60.0	43.0	59.8	72.8
5144	33.7	37.7	33.6	27.7	31.1	26.1	29.5	27.2	25.9	26.8
5145	28.9	23.5	35.0	33.9	31.7	35.0	36.3	34.9	27.5	44.2
5146	44.5	63.9	60.8	63.2	66.3	80.7	71.0	97.0	86.6	103.7
5147	32.4	38.3	36.0	31.3	37.0	35.1	37.2	37.3	41.9	35.8
5151	69.4	107.4	72.4	94.1	126.8	212.3	276.4	282.9	263.9	215.6
5152	30.4	39.2	32.0	35.8	43.0	40.8	54.8	60.0	69.2	83.3
5153	29.8	27.7	28.1	34.7	29.6	38.0	38.6	37.4	41.6	48.9
5154	30.3	30.5	28.5	29.1	31.2	32.3	35.8	37.7	42.3	36.3

Table A3 continued

	£ thousands									
SIC03	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
5155	58.0	65.6	50.1	55.3	39.8	46.8	52.2	61.5	49.3	47.3
5156	44.4	44.0	45.8	38.2	32.5	40.5	38.1	85.7	43.5	54.9
5157	31.1	31.4	28.0	36.3	36.4	44.3	53.9	69.7	53.4	93.7
5164*****	57.0	49.0	61.9	66.9	58.2	**	**	**	**	**
5170*****	33.0	28.3	32.2	40.8	29.4	**	**	**	**	**
5181***	44.3	37.8	30.6	43.3	30.7	29.1	37.6	39.8	52.0	47.1
5182***	44.1	35.4	41.4	46.8	42.2	47.6	53.9	53.5	48.9	71.8
5183***	37.2	27.9	40.4	49.8	30.6	34.1	42.5	39.4	44.8	31.0
5184****	**	**	**	**	**	52.0	**	**	**	**
5185****	**	**	**	**	**	42.9	**	**	**	**
5186****	**	**	**	**	**	48.7	**	**	**	**
5187***	51.1	47.6	47.0	50.8	45.7	46.2	43.4	55.0	64.3	55.7
5188***	23.9	24.9	26.0	30.3	37.6	36.5	44.5	45.8	40.3	48.6
5190****	**	**	**	**	**	35.2	**	**	**	**
5211	16.2	17.3	16.9	14.6	14.4	14.6	14.9	15.7	17.4	17.4
5212	15.5	14.3	15.4	17.0	19.7	20.9	19.9	21.8	28.8	24.3
5221	8.9	10.8	10.2	12.5	12.6	12.5	14.8	14.6	16.3	16.6
5222	13.0	14.6	13.8	13.3	17.5	16.1	17.1	19.5	19.3	18.7
5223	14.2	12.1	13.9	15.7	15.2	17.4	13.6	19.0	15.2	22.7
5224	9.6	12.5	11.2	12.3	12.5	11.8	13.4	14.2	15.3	15.8
5225	7.0	6.0	7.7	7.2	8.7	8.2	9.0	7.5	5.4	10.5
5226	6.4	7.8	8.3	9.9	7.3	9.0	11.2	12.4	7.6	14.2
5227	11.3	14.3	13.8	15.3	15.3	14.8	15.3	16.6	17.5	20.5
5231	15.7	15.4	16.4	18.5	21.4	20.1	23.6	27.7	33.7	30.7
5232	13.4	8.6	29.5	28.2	30.1	33.7	38.4	27.5	40.8	28.8
5233	10.5	15.2	12.1	12.1	15.7	15.6	19.1	15.6	24.2	19.2
5241	12.0	14.5	15.9	15.0	15.3	15.3	16.6	14.9	12.6	20.0
5242	12.6	18.7	17.6	19.1	19.2	20.4	20.8	22.4	25.3	23.7
5243	10.5	10.3	11.9	13.1	14.5	15.8	16.3	18.5	18.6	17.9
5244	19.1	21.2	23.1	24.0	23.8	25.1	26.8	23.0	23.4	21.8
5245	18.6	16.1	18.9	22.5	22.6	20.6	25.3	23.2	27.6	25.2
5246	17.5	22.3	20.9	20.7	21.8	21.7	23.9	22.2	24.3	22.4
5247	10.5	11.0	12.3	13.9	14.8	14.7	15.2	14.5	16.6	17.8
5248	13.9	16.5	17.3	19.0	19.2	21.8	22.1	20.7	22.0	23.9
5250	20.1	20.2	23.1	27.4	23.9	21.8	31.4	32.7	27.3	32.1
5261	26.4	23.3	15.9	19.4	24.1	23.6	28.9	30.4	40.4	50.9
5262	8.6	9.5	8.5	8.9	6.7	9.5	9.6	16.0	10.7	16.2
5263	18.1	16.9	24.9	22.5	22.7	21.6	23.2	30.7	29.8	33.4
5270	13.9	19.2	19.6	17.3	17.0	18.1	21.2	22.4	29.1	33.1
Hotels and catering										
5510	15.9	18.1	18.6	19.2	18.7	18.6	20.5	20.9	22.4	23.5
5521	13.2	12.6	17.9	13.9	13.4	14.0	14.2	14.2	9.9	14.5
5522	36.5	18.7	32.7	34.6	32.2	34.4	38.7	42.0	38.1	40.3
5523	15.7	14.4	18.8	17.1	20.9	19.4	20.5	23.1	19.0	22.9
5530	9.8	10.4	11.6	11.9	12.0	11.8	12.5	12.6	12.8	14.0
5540	10.3	10.4	10.5	11.6	12.7	12.9	14.7	13.8	15.3	14.3
5551	8.1	*	9.8	11.7	13.7	16.5	7.6	21.8	8.4	12.6
5552	9.6	9.8	10.3	10.1	13.1	11.6	13.8	14.7	13.6	14.2
Transport, storage and communication										
6010	32.9	39.2	47.2	50.8	60.0	42.2	36.0	44.3	44.7	47.6
6021	27.9	25.7	24.6	22.6	22.7	25.5	25.2	25.9	30.0	31.6
6022	18.0	17.6	17.0	14.1	18.2	18.1	18.0	18.3	18.3	23.7
6023	16.8	18.5	18.4	14.7	18.6	20.2	20.6	26.3	23.6	22.6
6024	25.3	27.7	29.1	29.2	29.8	29.7	28.3	32.3	34.6	38.7
6110	74.0	71.7	84.8	93.7	115.1	94.1	117.9	126.3	135.0	141.2
6120	16.3	18.2	34.5	28.1	32.9	27.0	37.3	26.6	19.9	29.1
6311	27.6	35.9	37.8	37.4	41.8	48.0	46.4	55.5	66.7	65.2
6312	29.7	31.5	29.7	29.9	30.2	34.3	35.0	38.5	38.4	38.9
6321	88.7	92.6	67.6	81.8	69.5	52.1	85.1	65.0	98.4	100.9
6322	53.3	65.4	53.0	53.2	66.4	71.5	63.7	64.3	82.4	79.0
6323	95.6	85.9	83.8	92.7	84.6	86.4	91.4	96.6	92.5	82.7
6330	25.6	25.0	24.3	27.2	29.6	37.1	31.4	39.1	37.5	47.2
6340	39.6	43.7	45.2	37.1	37.0	38.9	43.1	52.3	57.6	69.3
6412	30.0	27.4	*	*	*	*	*	27.7	*	*
6420	84.9	82.4	83.7	73.2	80.9	97.2	111.1	115.5	119.3	123.4

Table A3 continued

										£ thousands
SIC03	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Renting and business activities										
7110	104.5	106.1	79.6	116.6	104.9	107.0	109.0	111.7	121.4	141.3
7122	19.9	48.0	40.8	18.0	13.2	14.6	23.4	16.3	28.3	29.3
7131	58.1	53.7	25.8	26.6	35.4	49.0	40.2	53.4	82.1	75.6
7132	41.5	41.6	42.3	44.0	49.0	48.9	48.9	56.6	55.2	67.9
7133	202.8	67.8	151.1	189.5	101.3	69.8	100.8	91.0	132.5	151.9
7134	52.8	53.9	49.8	54.6	59.2	57.3	55.3	52.1	57.8	73.0
7140	24.7	26.8	26.1	31.7	35.6	30.3	30.4	33.1	26.2	25.2
7210	43.0	31.2	28.4	40.6	26.7	47.0	66.7	53.0	59.5	57.6
7220	52.4	49.0	50.6	49.7	53.7	54.5	57.6	67.7	66.4	74.9
7221****	**	**	**	**	**	58.6	57.7	48.6	40.3	63.3
7222****	**	**	**	**	**	54.3	57.6	68.4	67.1	75.2
72.3/72.4	55.4	65.8	55.2	54.6	54.4	51.1	56.3	51.3	58.1	71.9
7250	26.9	35.9	36.0	44.5	39.9	38.2	41.5	44.1	38.9	23.0
7260	28.6	36.0	29.2	36.4	44.4	43.3	51.3	52.3	57.5	65.2
7411	36.0	37.9	43.5	45.7	45.9	47.0	49.6	53.7	59.0	59.0
7412	38.6	38.4	39.3	44.3	44.9	45.7	44.6	48.0	57.9	55.5
7413	19.6	25.0	25.6	23.6	24.6	22.9	31.5	25.6	33.1	30.4
7414	49.5	49.1	53.8	46.2	42.3	47.1	46.6	52.9	56.0	63.8
7415	69.1	29.0	37.8	51.0	43.2	15.1	18.3	2.7	8.0	12.5
7420	39.5	37.9	40.6	41.7	38.3	46.4	45.8	50.2	50.6	55.1
7430	29.5	29.7	30.1	28.7	31.7	44.3	45.2	39.7	53.6	42.7
7440	39.2	61.3	62.6	53.8	56.4	60.7	53.9	75.7	63.3	67.7
7450	17.6	19.4	22.2	20.1	21.7	22.2	24.1	24.7	27.2	28.4
7460	14.1	15.6	17.2	17.4	20.0	19.7	20.8	23.7	25.3	27.2
7470	6.0	6.5	6.8	7.8	8.5	9.5	9.7	9.8	9.8	11.9
7481	19.6	23.1	27.9	21.9	22.3	24.8	31.6	32.1	33.5	29.0
7482	20.8	22.1	20.1	25.8	29.7	23.9	36.3	32.3	40.1	46.3
7485***	23.8	29.1	22.1	27.5	25.6	29.3	37.5	34.7	32.1	29.5
7486****	**	**	**	**	**	21.5	16.4	18.3	16.2	21.4
7487***	35.7	37.3	42.7	37.3	35.2	36.9	42.0	42.5	44.2	43.7
Other services										
9000	66.0	74.7	62.8	56.2	82.1	76.3	75.4	89.9	105.2	96.5
9001****	**	**	**	**	**	182.8	165.7	200.7	233.1	200.4
9002****	**	**	**	**	**	37.7	41.3	48.6	60.5	56.6
9003****	**	**	**	**	**	48.7	39.9	46.7	62.0	48.9
9111	30.0	26.6	27.1	26.6	33.6	25.1	35.1	30.4	29.7	49.7
9112	25.0	21.9	21.4	17.5	19.9	23.7	26.4	36.8	41.5	34.1
9120	32.0	32.0	28.9	30.6	38.2	28.2	33.0	35.8	41.7	42.0
9131	-1.4	-4.7	-4.4	-6.5	-7.6	-4.1	-6.0	-6.6	-3.1	-4.8
9132	2.7	*	-3.2	-2.8	-1.4	-1.3	-1.0	-4.6	-0.2	0.3
9133	10.1	11.3	8.9	8.8	8.3	8.0	9.5	11.4	15.4	13.9
9211	28.9	56.9	50.5	28.0	25.8	48.4	36.0	40.0	78.7	42.5
9212	108.0	75.9	106.4	169.4	123.9	143.6	126.2	172.4	255.6	150.2
9213	18.8	17.2	21.6	20.3	28.4	34.6	29.7	30.2	24.6	23.8
9220	65.6	66.2	78.7	88.6	90.5	81.6	96.1	66.6	21.3	26.1
9231	33.9	34.8	32.7	32.7	35.2	38.8	41.0	34.7	35.0	49.6
9232	19.9	17.4	15.9	12.6	16.4	21.1	21.0	24.1	17.8	20.3
9233	29.6	24.7	32.1	35.1	41.3	42.0	38.1	40.8	22.7	22.0
9234	37.1	25.3	21.4	31.4	48.5	24.6	31.1	26.7	31.8	39.0
9240	61.3	66.8	73.3	103.3	*	44.8	54.9	77.9	86.1	106.3
9253	10.7	14.1	5.8	8.5	8.4	8.0	9.6	8.9	10.8	14.0
9261	11.1	8.7	9.8	10.1	9.8	11.5	11.4	12.4	13.7	17.2
9262	13.9	17.3	16.8	18.9	20.4	22.7	20.6	23.5	23.9	24.2
9271	24.1	30.1	29.8	26.5	34.4	30.5	36.4	40.2	37.8	44.5
9272	11.3	11.5	10.6	14.0	13.1	13.5	14.4	13.7	16.7	9.5
9301	14.9	15.8	20.2	18.2	19.6	17.6	15.9	17.6	21.2	21.0
9302	10.2	11.4	12.7	13.9	12.3	11.7	13.9	13.7	15.1	15.2
9303	19.6	24.7	22.5	30.8	28.5	29.9	32.7	28.0	26.8	28.7
9304	18.7	17.8	24.8	25.1	20.2	22.6	16.4	18.4	26.7	21.4
9305	20.5	23.9	24.9	27.4	24.7	29.7	33.0	37.9	35.2	31.5

Notes:

1 Excluding SIC Divisions 12, 13, 40, 65-67, 70, 73 and 75-85.

***** SIC discontinued from 2003.

**** New SIC from 2003.

*** Change of industry classification from SIC92 to SIC03 – pre-2003 data have been assigned to the new classification.

** Not available.

* Information suppressed to avoid disclosure or because employment estimate is less than 500.

Source: Office for National Statistics