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Business Monitor

Report on the Census of Production

Water supply



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PA603 Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1979

Water supply

Presented by the Secretary of State for Industry to Parliament in pursuance of the Statistics of Trade Act 1947 (10 & 11 Geo.6 Cha.39 sec 7)

Department of Industry Business Statistics Office

London: Her Majesty's Stationery Office

List of Industry Reports, etc.

LIST OF	industry Reports, etc.		
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	power tools	PA481	Paper and board
PA339.7	Food and drink processing machinery and		Cardboard boxes, cartons and fibre-board packing case
	packaging and bottling machinery		Packaging products of paper and associated materials
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	Ball, roller, plain and other bearings	PA485	Printing, publishing of newspapers and periodicals
	Precision chains and other mechanical engineering	PA489	General printing and publishing Rubber
PA351	Photographic and document copying equipment	PA491 PA492	Linoleum, plastics floor-covering, leathercloth, etc.
PA352	Watches and clocks	PA493	Brushes and brooms
PA353 PA354	Surgical instruments and appliances Scientific and industrial instruments and systems		Toys, games and children's carriages
PA361	Scientific and industrial instruments and systems Electrical machinery		Sports equipment
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PA363	Telegraph and telephone apparatus and	PA496	Plastics products
,,000	equipment		Musical instruments
PA364	Radio and electronic components		Miscellaneous manufacturing industries
PA365.1		PA500	Construction
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	equipment	PA602	Electricity
PA366	Electronic computers	PA603	Water supply
PA367	Radio, radar and electronic capital goods	PA1002	Summary tables
PA368	Electrical appliances primarily for domestic use		

PA603 WATER SUPPLY

PA603

The information in this report relates to the undertakings classified to the Water supply industry, minimum list heading 603 in the Standard Industrial Classification (revised 1968). The activities of the industry include:—

Purifying and distributing water and supplying hydraulic power. Construction work carried out by employees of water undertakings is included. Private water works maintained by establishments primarily for their own use are excluded.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which commence on page (iii).

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Output and costs, 1975—1979 All United Kingdom undertakings classified to the industry (a)

	Unit	1975	1976	1977	1978	1979
Undertakings	Number	129	122	108	107	101
Water supplied	£ thousand	479,797(b)	557,085	628,900	677,260	757,743
Repairs and maintenance and receipts for other industrial services rendered	"	(b)	52,353	50,031	56,252	63,603
New construction of buildings, reservoirs, aqueducts, mains, machin- ery and plant and other capital items	"	56,966	65,898	79,352	85,283	88,161
Total value of water supplied and work done (c)	,,	536,763	675,336	758,283	818,796	909,506
Non-industrial services rendered	"	987	1,174	1,539	1,950	2,814
Gross output	"	537,750	676,510	759,823	820,746	912,320
Purchases of materials and fuel used		84,276	111,548	120,742	131,933	165,583
Cost of industrial services received		11,626	21,914	34,734	38,994	26,537
Net output		441,848	543,047	604,347	649,819	720,200
Total employment (d)	Thousands	43.9	45.0	42.8	42.4	42.5
Net output per head	£	10,076	12,077	14,112	15,325	16,959
Payments for non-industrial services	"					
Hire of vehicles, plant and machinery	£ thousand	3,625(e)	3,364	4,302	6,970	9,145
Rents of industrial and commercial buildings	"	(e)	1,131	1,023	1,278	1,535
Commercial insurance premiums		1,649	2,087	2,294	2,544	3,145
Bank charges		160	129	245	284	325
Other non-industrial services (f)(g)		10,488(f)	13,762(f)	14,862	15,483	17,205
Licensing of motor vehicles		857	1,041	1,319	1,264	1,519
Rates, excluding water rates		44,580	45,667	52,292	57,098	64,813
Gross value added at factor cost		380,488	475,866	528,010	564,899	622,512
Gross value added at factor cost per head	£	8,677	10,583	12,329	13,322	14,659

Including estimates for undertakings not making satisfactory returns, non-response and undertakings not selected for the Census. Satisfactory returns accounted for 99 per cent of employment within the industry.

Capital expenditure, 1975-1979

TABLE 2

All United Kingdom undertakings classified to the industry (a) (b)

A CONTRACT TO SECURITION					£ thousand
	1975	1976	1977	1978	1979
Land and buildings					
New building work	132,274	179,302	147,670	154,480 .	180,146
Land and existing buildings					
Acquisitions	5,783	4,469	2,748	3,145	4,459
Disposals	2,326	2,508	1,195	1,990	2,516
Vehicles					
Acquisitions	3,827	3,802	4,150	4,187	4,824
Disposals	332	501	686	842	961
Plant and machinery					
Acquisitions	22,320	35,156	31,528	21,739	26,933
Disposals	133	164	242	156	209
Total net capital expenditure	161,414	219,555	183,972	180,563	212,676

⁽a) Including estimates for undertakings not making satisfactory returns, non-response and establishments not selected for the Census.

Repairs and maintenance and receipts for other industrial services rendered included in water supplies. (b)

Water supplied, work supplied and work done are published regularly in Business Monitor PQ603. (c)

Average number employed during the year, including full and part-time employees (see table 7). (d)

Rents of industrial and commercial buildings (not recorded separately) included in hire of vehicles, plant and machinery.

¹⁹⁷⁵⁻¹⁹⁷⁶ figures include the cost of hiring goods vehicles. (f)

For 1975-1978 transport of goods by road (within the United Kingdom) was not recorded separately. For 1979 the amount payable

Capital expenditure in respect of manufacturing undertakings where production had not commenced before the end of the year, is included. (b)

Analysis of undertakings by size, 1979
All United Kingdom undertakings classified to the industry (a)

Size group (b)	Undertak ings	Employme	Employment			Wages and salaries (d)			
		Total	Opera- tives	Others (c)	Operatives		Others (c)		
			11403		Total	per head	Total	per head	
	Number .	Number	Number	Number	£ thousand	£	£ thousand	£	
1-19	3	42)							
20-49	4	157)	345	180	1,656	4,801	1,091	6,059	
50-99	4	326)							
100-199	21	3,112	1,880	1,232	8,530	4,537	6,358	5,161	
200–299	19	4,668	2,509	2,159	11,287	4,499	11,270	5,220	
300-399	14	4,888	2,675	2,213	12,411	4,640	11,489	5,192	
400-499	9	3,990	2,242	1,748	10,157	4,530	9,908	5,668	
500-749	15	8,974	5,082	3,892	23,190	4,563	21,805	5,603	
750–999	7	6,082	3,607	2,475	16,239	4,502	12,251	4,950	
1,000 and over	5	10,228	6,235	3,993	31,856	5,109	23,980	6,006	

Total	101	42.467	24.575	17.892	115.326	4.693	98,152	5.486

⁽a) Including estimates for undertakings not making satisfactory returns, non-response and undertakings not selected for the Census.

Gross output (e)	tput Net output		Gross value added at factor cost	Net capital expenditure (g)	
	Total	per head	Total	per head	
£ thousand	£ thousand	£	£ thousand	£	£ thousand
9,520	6,543	12,462	(f)	(f)	3,708
77,666	63,376	20,365	62,123(f)	17,081(f)	22,800
91,656	71,619	15,343	60,617	12,986	26,617
101,533	77,437	15,842	66,367	13,577	31,847
73,228	54,350	13,622	45,483	11,399	15,048
225,379	179,006	19,947	156,972	17,492	51,973
113,416	89,877	14,778	74,553	12,258	29,966
219,923	177,992	17,402	156,396	15,291	30,718

(e)	Comprises the value of water supplied, work done for which a charge was made, the value of new construction works and receipts for non-industrial services rendered.
-----	--

622,512

14,659

212,676

720,200

912,320

16,959

⁽b) Average number employed during the year, including full and part-time employees (see table 7).

⁽c) Administrative, technical and clerical employees.

⁽d) The cost of employers' contributions to national insurance, pensions and welfare schemes and the running costs of canteens, is estimated for the industry at £45,135 thousand.

⁽f) Gross value added data relate to undertakings employing 1–199.

⁽g) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.

TABLE 6

PA603

Regional distribution of employment, net capital expenditure, net output and gross value added at factor cost, 1979 All United Kingdom undertakings classified to the industry (a)

Area	Total employment (b)		Net capital expenditure (c)		Net output (d)	Gross value added at factor cost (d)	Gross value added at factor cost returned by establishments wit 80 per cent or more of their employment in the region as a proportion of total gross value added at factor cost in the region	
	Thousands	per cent of United Kingdom	£ thousand	per cent of United Kingdom	£ thousand	£ thousand	percentage	
Standard regions of England								
North	2.4	5.5	8,984	4.2	48,060	42,862	100.0	
Yorkshire and Humberside	***	*	*	*		*		
East Midlands	*	*	*	*		*		
East Anglia	1.3	3.0	7,199	3.4	20,905	17,810	99.6	
South East	12.1	28.5	50,312	23.7	201,828	174,834	98.9	
South West	3.8	9.0	21,715	10.2	61,327	52,827	100.0	
West Midlands	3.1	7.2	14,267	6.7	49,975	43,089	100.0	
North West	*	*	*	*	*	*	*	
England	33.6	79.1	172,784	81.2	605,105	527,184		
Wales	*	*	*	*	*	.*	*	
Scotland	4.0	9.3	17,714	8.3	30,642	18,382	100.0	
Great Britain	*	*	*	*	*	*	-	
Northern Ireland	*	*	*	*		*	•	
United Kingdom	42.5	100.0	212,676	100.0	720,200	622,512		

(a) Including estimates for undertakings not making satisfactory returns, non-response and undertakings not selected for the Census.

(b) Average number employed during the year, including full and part-time employees (see table 7).

(c) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.

Where a census return covered addresses in two or more regions, an estimate of the net output attributable to each address was made by assuming that net output was proportionate to employment. An estimate for each region was obtained by aggregating estimates of net output for addresses located in that region. Gross value added at factor cost is treated similarly.

Percentage analysis of twelve-month periods covered by returns received from United Kingdom undertakings, 1979

Accounting year ended		Percentage of total returns received	Percentage of total	I number employed
		per cent	per cent	
1979	April (a)			
	May			
	June	-	-	
	July	- 1	_	
	August		_	
	September	2.1	1.6	
	October			
	November	_	_	
	December	20.6	13.0	
980	January	_	_	
	February		_	
	March (b)	77.3	85.4	

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1980.

TABLE 7

Percentage analysis of employees, by full and part-time employment and sex, 1977(a)

Sex	Full-time	Part-time	All employees
	per cent	per cent	per cent
Male	87	1	88
Female	10	2	12

Source: Department of Employment

(a) The percentages relate to the numbers employed in the United Kingdom at mid-June, 1977.

Operating ratios, 1978-1979 All United Kingdom undertakings classified to the industry (a)

	Unit	1978	1979
Gross output per head	£	19,356	21,483
Net output per head	£	15,325	16,959
Gross value added per head	£	13,322	14,659
Gross value added as a percentage of gross output	%	69	68
Ratio of gross output to stocks (b)		-	-11
Wages and salaries as a percentage of gross value added	%	31	34
Ratio of operatives to administrative, technical and clerical employees		1.4	1.4
Wages and salaries per administrative, technical and clerical employee	£	4,674	5,486
Wages and salaries per operative	£	3,817	4,693
Net capital expenditure per head	£	4,258	5,008
Net capital expenditure as a percentage of gross value added	%	32	34

Including estimates for undertakings not making satisfactory returns, non-response and establishments not selected for the Census.

These notes give the main information needed for interpreting the figures in the industry Business Monitors: more detailed information about the census is given in a separate Business Monitor -PA1001 (Introductory Notes) of the Report on the Census of Production. 1979.

GENERAL INFORMATION

Changes made for 1979

The Census for 1979 is in line with similar inquiries being conducted in other member countries of the European Economic Community.

The census differed from the 1978 census in three respects. A question on the leasing of capital assets was removed from the form and a question on road transport costs was added. The sample of units in the 10 to 19 employment size band included for the 1978 census was not repeated.

Suppression of information relating to individual undertakings

Section 9(5)(b) of the Statistics of Trade Act 1947 states - "The following provisions shall have effect with respect to any report, summary or other communication to the public of information obtained under the foregoing provisions of this Act -

in compiling any such report, summary or communication the competent authority shall so arrange it as to prevent any particulars published therein from being identified as being particulars relating to any individual person or undertaking except with the previous consent in writing of that person or the person carrying on that undertaking, as the case may be; but this provision shall not prevent the disclosure of the total quantity or value of any articles produced, sold or delivered; so, however, that before disclosing any such total the competent authority shall have regard to any representations made to them by any person who alleges that the disclosure thereof would enable particulars relating to him or to an undertaking carried on by him to be deduced from the total disclosed".

If a figure involved disclosure the contributor concerned was sometimes asked to give permission for its publication. In the majority of cases permission was given. When it was refused and where contributors were not approached the figure has been suppressed, either by combining it with other figures, or as in the regional tables, by omitting the figure altogether.

The following symbols are used throughout the PA series of Business Monitors:

- .. not available
- nil or less than half the final digit shown figures cannot be shown owing to the risk of disclosing information about individual undertakings
- revised

Rounding of figures

Figures in the tables have, where necessary, been rounded to the nearest final digit. Where figures have been so rounded, the sum of the constituent items may not always agree exactly with the total shown.

Industrial classification

The United Kingdom Standard Industrial Classification (SIC) was first issued in 1948 and was subsequently revised in 1958, 1968 and 1980. It exists to promote uniformity and comparability in the official statistics of the United Kingdom. Prior to the 1980 revision the general principles followed were those of the International Standard Industrial Classification of all Economic Activities of the United Nations Statistical Office but the United Kingdom SIC has reflected the

organisation and structure of industry and trade as it existed in the United Kingdom. For the 1980 revision an attempt to align the United Kingdom classification as closely as practicable with NACE, the classification in use by the Statistical Office of the European Community. The SIC is a classification by activity and is not a commodity classification. An index based on the 1968 SIC for all commodity headings for which sales data are provided in the Quarterly Business Monitors is published in Business Monitor P01000.

THE REGISTER

The register permits a questionnaire to be sent direct to the reporting establishment/undertaking on which the latter can include information relating to all the manufacturing (or local) units which it comprises.

The inquiries provide a major source of information for keeping the register continuously up-todate and act as a check on its detail and structure. For the establishments/undertakings on the register making returns to the quarterly inquiries, the industrial classification is derived from an analysis of their sales of commodities and is reviewed annually. Employment data are entered on the register from returns to the annual census of production. In cases where an establishment/undertaking does not make a return to these inquiries the employment data are based information provided by the Department of Employment from the annual censuses of employment. New additions to the register are obtained from various sources including the Department of Employment and HM Customs and Excise. The 1973 Finance Act allows the latter to pass lists of businesses registered for VAT to the Business Statistics Office (BSO). Where necessary details are sought directly from new businesses. Units which cease to trade are removed from the live

In recent censuses returns have been required from all establishments/undertakings employing 20 or more. For the 1979 Census in 68 selected manufacturing industries coverage of establishments/ undertakings in the 20 to 49 employment size band has been reduced to a 1 in 2 sample. This change has relieved some 5,800 firms of the need to complete a census return.

Regions

The regions defined in table 5 take account of the boundary changes arising out of the Local Government Act 1972 and the Local Government Act (Scotland) 1973. These changes came into effect in April 1974 in England and Wales and May 1975 in Scotland.

TERMS USED IN THE CENSUS REPORT

Average number employed

Undertakings were required to state the average number of persons on the payroll during the year of return. Separate figures were required for:

- (a) administrative, technical and clerical emp lovees
- (b) all other employees (operatives) Averages could be calculated from the figures relating to the last week of each calendar month. The figures include persons engaged on merchanting or factoring and canteen workers where particulars in respect of these activities could not be excluded from the return.

Administrative, technical and clerical employees include directors in receipt of a definite wage, salary or commission, managers and works foremen; research and design employees (other than operatives); draughtsmen, editorial staff, advertising staff, travellers and all office Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include operatives employed in power stations, transport (including roundsmen), warehouses, stores, shops and canteens, inspectors, maintenance workers and cleaners. Operatives engaged in outside work of erecting, fitting etc are also included.

Capital expenditure

Capital expenditure during the year in respect of manufacturing units where production had not started before the end of the year is included. Undertakings were asked not to deduct from the value of capital expenditure amounts received or expected to be received in grants or allowances from the Government or any statutory body or local authority. Undertakings with 100 or more employees were asked to include a total net capital expenditure figure for each calendar year.

(a) New building work

This represents the cost incurred during the year of new building and other constructional work to be used in connection with the business covered by the return. The value is that charged to capital account during the year of return; it includes expenditure on new buildings and on the extension or reconstruction of old buildings, the value of works of a capital nature carried out by the undertaking's own staff and the cost of any newly constructed buildings purchased. Figures shown include legal charges, stamp duties, agents' commissions, etc.

(b) Land and existing buildings

The items shown are the capital cost of freeholds purchased and the capital cost or premium payable for leaseholds acquired (excluding the value of assets acquired in taking over an existing business), and the amounts receivable for freeholds or leaseholds disposed of . The value is that charged to capital account during the year of return.

(c) Plant, machinery and vehicles

The items shown are the value of plant and machinery and of vehicles acquired, both new and second-hand, and the amount received for items disposed of during the year. The value of plant and machinery acquired includes plant, etc which firms produced for their own use in connection with the business covered by the return. The value of plant, etc acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. Deductible value added tax is excluded but non-deductible value added tax on motor cars acquired is included. No deduction is made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written-off for items scrapped.

Cost of industrial services

This includes amounts payable to other firms for work done on materials supplied by the undertaking, payments for repairs and maintenance (including those in respect of rented buildings) and amounts paid to other firms for contracts which have been sublet.

Cost of non-industrial services

This includes rents of industrial and commercial buildings, hire of plant, machinery and vehicles (excluding vehicles hired with drivers), commercial insurance premiums, bank charges and amounts paid for professional services, post office services, transport (within the United Kingdom), advertising etc. Amounts payable on royalties for the right to use patents, trademarks, copyrights etc, manufacturing and quarrying rights and technical "know-how" are also included.

Gross output
In the calculation of gross output the value of

total sales and work done is increased by the rise (or reduced by the fall) during the year in the value of work in progress and goods on hand for sale.

Net outpu

Net output, a customary census measure, is calculated by deducting from gross output the cost of purchases (reduced by the rise, or increased by the fall, during the year of stocks of materials etc) and the cost of industrial services received, and where applicable, duties etc.

Net output per head

The figures of net output per head are derived by dividing the net output by the average number of persons employed (full and part-time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees.

Gross value added at factor cost

Gross value added at factor cost is calculated by deducting from net output the cost of non-industrial services eg rent of buildings, hire of plant, machinery and vehicles (excluding vehicles hired with drivers), commercial insurance premiums, bank charges and amounts paid for professional services, post office services, transport (within the United Kingdom) and advertising, rates (excluding water rates) and the cost of licensing motor vehicles. This estimate of gross value added approaches more closely than census net output to the definition of net output or value added in national accounts statistics.

Gross value added at factor cost per head
The figures of gross value added at factor cost
per head are derived by dividing the gross value
added by the average number of persons employed
(full and part-time) on all activities covered by
the returns, including operatives, administrative, technical and clerical employees.

Purchases

Purchases include the cost of raw materials, components, semi-manufactured goods and workshop materials; of replacement parts and consumable tools not charged to capital account; of packaging materials of all types; of stationery and printed matter; of fuel, electricity and water; of materials to be used by the undertaking or given out to other establishments/undertakings for the production of machinery or other capital items for the undertaking's own use; of materials for use by the undertaking when working on goods supplied by customers; and of food, etc for any canteen covered by the undertaking's return. Transfers of goods to the undertaking from another department of the same firm not covered by the undertaking's return are included at a cost corresponding to the estimated selling value recorded by the other department. Amounts payable to transport firms or credited to the firm's own transport department for delivery of materials are excluded, as are all purchases of machinery and plant charged to capital account. Purchases of goods for merchanting or factoring have been collected separately since 1973. The values shown exclude VAT. They include, in addition to the actual purchase price, the value of packaging material charged to the undertaking. The value of returned goods or packaging material returned to suppliers and any trade discounts are excluded. Materials purchased duty-paid are included at their duty-paid value, less any drawback, rebate, etc. The cost of transport is included only if it is included with the purchase price in the firm's accounts. Imported goods are included at their full delivered cost. If in the firm's accounts the transport from docks or airport is not included in the cost of goods purchased, the cost is entered at cif plus duty (if applicable). Leasing, renting and hire purchase charges are excluded.

Total value of water supplied and work done Sales for the purposes of the annual censuses means deliveries on sale of goods made by undertakings in the United Kingdom covered by the inquiry. Sales of goods made for these undertakings by other undertakings from materials given out to them and sales of waste products are included. New building work and machinery or other capital items produced by undertakings for hiring out or leasing are regarded as sales, the value included in the return being that adopted in the undertakings' capital asset accounts. Forward sales and canteen takings are excluded. All sales in the period of the inquiry are included irrespective of when the goods were manufactured. Goods produced in one undertaking and transferred either to ancillary departments not engaged in production for which there are separate accounts, or to another undertaking of the same firm not covered by the return, are treated as sales by the producing undertaking and valued as far as possible as if they had been sold to an independent purchaser. Goods transferred to wholesale or retail selling organisations, for which separate accounts are kept are valued on the same basis.

The value shown for sales is the "net selling value" defined as the amount (excluding VAT) charged to customers whether on an ex-works or delivered basis, after any trade discounts and agents' commissions have been deducted. The cost of packing materials less allowance for returnable cases is included.

Receipts for work done and industrial services

rendered
Figures for work done represent the amount charged
for work carried out on materials supplied by a
customer and include repair and jobbing work,
erection and installation of plant and machinery,
exploration work and research and development.
Industrial services rendered include repairs and
maintenance, installation work, and technical
research and studies for other organisations.

Capital goods produced for undertakings' own use This includes all work of a capital nature carried out during the year by the undertakings' own staff for their own use.

Non-industrial services rendered

This includes rents received for commercial and industrial buildings, amounts charged for hiring out plant, machinery and vehicles and other goods and amounts charged to other organisations for the provision of transport. It also includes amounts received for the right to use patents, trademarks, copyrights etc, manufacturing and quarrying rights and technical "know-how" and revenue from such staff facilities as canteens.

Goods merchanted or factored Merchanted goods are those (excluding canteen sales) sold without having been subjected to any manufacturing process by the seller.

Stocks and work in progress Values are given of stocks of goods on hand for sale and of materials, stores and fuel, at the end of the year of return and of the change during the year, including any stocks of goods held for merchanting or factoring. Work in progress is defined as materials which have been partially processed by the undertaking but which are not usually sold or transferred to another undertaking without further processing. The values include the cost of materials consumed and labour used. Progress payments made to sub-contractors are excluded and progress payments received from other organisations are not deducted.

Wages and salaries
These are amounts paid during the year to operatives and to administrative, technical and

clerical employees. The values shown include all overtime payments, bonuses and commissions, whether paid regulary or not, and no deduction is made for income tax, insurances, contributory pensions etc. The value of redundancy payments less any amounts reimbursed from Government sources is included. The value of any payments in kind, travelling expenses etc is excluded.

Employers' insurance and welfare contributions
This item includes employers' contributions to
national insurance under the Social Security
Pensions Act, 1975 as well as commercial
insurance premiums to provide pensions, superannuation or other retirement benefits, sickness
benefits, personal accident benefits, disability
or death benefits for employees or former
employees or their dependants. Contributions to
the running costs of canteens, social centres,
children's and holiday homes, etc for employees,
former employees and their dependants are also
included.

Operating ratios

The operating ratios shown were obtained by dividing the estimate of the industry total for the quantity shown in the numerator by the corresponding estimate for the quantity shown in the denominator. These estimates cover all undertakings classified to each industry, including not selected undertakings and non-respondents. Within an industry, it is possible to compare ratios for an individual firm with the ratios shown for the relevant industry. However, it is important to bear in mind that various factors may affect the results - for example, differences in definitions, treatment of depreciation (which is not identified in the census data) and varying practice with regard to stock valuation, may affect comparability in some respects.

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