1978

0 42 0 42 0 8834 **Business Statistics Office**

Business Monitor

Report on the Census of Production

Iron castings, etc





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PA313

Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1978

Iron castings, etc.

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

Stone and slate quarrying and mining Chalk, clay, sand and gravel extraction Petroleum and natural gas

Miscellaneous mining and quarrying

Bacon curing, meat and fish products
Milk and milk products

Cocoa, chocolate and sugar confectionery

Grain milling
Bread and flour confectionery

Fruit and vegetable products Animal and poultry foods

PA229.1 Margarine PA229.2 Starch and miscellaneous foods

Brewing and malting

PA239.2 British wines, cider and perry

Mineral oil refining

Inorganic chemicals PA271.2 Organic chemicals

Toilet preparations

Soap and detergents

Dvestuffs and pigments

PA279.2 Formulated adhesives, gelatine, etc.

PA279.7 Photographic chemical materials

Iron and steel (general)

Miscellaneous base metals

Metal-working machine tools

PA333.3 Compressors and fluid power equipment

Textile machinery and accessories

PA339.5 Scales and weighing machinery and portable

Ordnance and small arms
Ball, roller, plain and other bearings

Surgical instruments and appliances

Telegraph and telephone apparatus and

Gramophone records and tape recordings

Broadcast receiving and sound reproducing

Radio, radar and electronic capital goods Electrical appliances primarily for domestic use

Radio and electronic components

Aluminium and aluminium alloys

Copper, brass and other copper alloys

Agricultural machinery (except tractors)

Construction and earth-moving equipment Mechanical handling equipment

PA339.2 Printing, bookbinding and paper goods machinery PA339.3 Refrigerating machinery, space-heating,

ventilating and air-conditioning equipment

Food and drink processing machinery and

Precision chains and other mechanical engineering

Scientific and industrial instruments and systems

packaging and bottling machinery Miscellaneous (non-electrical) machinery

synthetic rubber

PA279.3 Explosives and fireworks

PA279.4 Formulated pesticides, etc.

Iron castings, etc.

Industrial engines

Office machinery

Mining machinery

Watches and clocks

Electrical machinery

Electronic computers

equipment

equipment

Insulated wires and cables

power tools

PA279.6 Surgical bandages, etc.

Steel tubes

Pumps

PA239.1 Spirit distilling and compounding

Lubricating oils and greases

Soft drinks

Tobacco

Paint

Polishes

PA279.5 Printing ink

Vegetable and animal oils and fats

Coke ovens and manufactured fuel

PA271.3 Miscellaneous chemicals PA272 Pharmaceutical chemicals and preparations

Synthetic resins and plastics materials and

Coal mining

Biscuits

Sugar

PA103

PA109

PA211

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PA368

PA349.2

PA333.2 Valves

PA271.1

PA369.1	Electrical equipment for motor vehicles, cycles
	and aircraft

PA369.2 Primary and secondary batteries
PA369.4 Electric lamps, electric light fittings, wiring

accessories, etc.

PA370 Shipbuilding and marine engineering PA380

Wheeled tractor manufacturing Motor vehicle manufacturing Trailers, caravans and freight containers

PA381.2 Motor cycle, tricycle and pedal cycle manufacturing Aerospace equipment manufacturing and repairing PA382

Locomotives, railway track equipment, railway carriages, PA384 wagons and trams

PA390 Engineers' small tools and gauges PA391 Hand tools and implements

PA392 Cutlery, spoons, forks and plated tableware, etc.

Bolts, nuts, screws, rivets, etc. Wire and wire manufactures PA393 PA394

PA395 Cans and metal boxes

PA396 Jewellery and precious metals Metal furniture PA399.1

PA399.5 Drop forgings, etc. PA399.6 Metal hollow-ware

PA399.8 Miscellaneous metal manufacture PA411

Production of man-made fibres PA412 Spinning and doubling on the cotton and flax systems Weaving of cotton, linen and man-made fibres

PA413

Woollen and worsted PA415 Jute

PA416 Rope, twine and net

Hosiery and other knitted goods

PA417.2 Warp knitting PA418 Lace PA419 Carpe

Carpets PA421 Narrow fabrics

Household textiles and handkerchiefs PA422 1

PA422.2 Canvas goods and sacks and other made-up textiles

PA423 Textile finishing PA429 1 Ashestos

PA429.2 Miscellaneous textile industries

PA431 Leather (tanning and dressing) and fellmongery

PA432 Leather goods

PA433 PA441 Weatherproof outerwear

PA442 Men's and boys' tailored outerwear Women's and girls' tailored outerwear PA443

PA444 Overalls and men's shirts, underwear, etc. PA445 Dresses, lingerie, infants' wear, etc.

PA446 Hats, caps and millinery

PA449.1 Corsets and miscellaneous dress industries

PA449.2 Gloves

PA450 Footwear

PA461.1 Refractory goods

PA461.2 Building bricks and non-refractory goods

PA462 Pottery PA463 Glass PA464 Cement

PA469 1 Abrasives

PA469.2 Miscellaneous building materials and mineral products

Timber PA472 Fürniture and upholstery

PA473 Bedding, etc.

Shop and office fitting

PA475 Wooden containers and baskets

PA479 Miscellaneous wood and cork manufactures

Paper and board

PA482. Cardboard boxes, cartons and fibre-board packing cases PA482.2 Packaging products of paper and associated materials

PA483 Manufactured stationery

Industrial (including process) plant and steelwork PA484. Wallcoverings

PA/101

PA484.2 Miscellaneous manufactures of paper and board
PA485 Printing, publishing of newspapers and periodicals
PA489 General printing and publishing

Photographic and document copying equipment PA492 Linoleum, plastics floor-covering, leathercloth, etc.

Brushes and brooms Toys, games and children's carriages PAAQA 1

PA494.3 Sports equipment PA495 Miscellaneous stationers' goods

PA496

Rubber

Plastics products PA499.1 Musical instruments

PA499.2 Miscellaneous manufacturing industries

Construction

PA601

PA602 Electricity

PA603 Water supply Summary tables PA313 IRON CASTINGS, ETC.

The information in this report relates to establishments classified to the Iron castings, etc. industry, minimum list heading 313 in the Standard industrial Classification (revised 1968). The activities of the industry include:—

Manufacturing pig iron and iron castings. Blast furnaces forming part of integrated steel or tube works are excluded and for this reason establishments in this industry account for only a part of the total production of pig iron.

> 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, 1974–1978
All United Kingdom establishments classified to the industry (a)

	Unit	1974	1975	1976	1977	1978
Enterprises	Number	979	962	996	983	964
Establishments .		1,069	1,065	1,092	1,081	1,056
Sales of goods produced	£ thousand	543,097	700,863	776,057	817,386	876,713
Receipts for work done and industrial services rendered	***************************************	(b)	(b)	1,686	2,750	1,301
Capital goods produced for establish- nents' own use	"	531	532	887	791	1,299
Non-industrial services rendered		1,178	1,315	1,536	1,499	5,044
Goods merchanted or factored	"	10,771	13,033	17,691	21,265	26,067
Total sales and work done (c)	"	555,577	715,743	797,857	843,691	910,424
ncrease during the year, work in progress and goods on hand for sale	,,	14,575	16,772	7,414	4,622	15,484
Gross output	"	570,152	732,515	805,271	848,314	925,908
Purchases of materials for use in production, and packaging and fuel		276,717	332,341	375,078	374,540	385,594
Purchases of goods for merchanting or actoring	"	9,456	10,758	15,180	17,481	21,689
ncrease during the year, stocks of naterials, stores and fuel		17,025	-2,047	8,349	-1,334	6,232
Cost of industrial services received	"	19,786	23,206	24,314	30,409	29,201
Net output	"	281,218	364,162	399,048	424,550	495,655
otal employment (d)	Thousands	82.3	82.0	78.8	76.2	72.8
Net output per head	£	3,417	4,440	5,063	5,572	6,813
Payments for non-industrial services						
Hire of vehicles, plant and machinery	£ thousand	2,535	3,056	2,821	4,499	5,899
Rents of industrial and commercial buildings	,,	(d)	(d)	533	772	1,451
Commercial insurance premiums	"	2,693	3,657	4,383	5,004	6,152
Bank charges	"	343	442	429	675	677
Other non-industrial services	"	18,159	22,412	26,230	30,249	35,312
icensing of motor vehicles	,,	160	190	225	251	279
Rates, excluding water rates		4,601	5,591	6,490	8,074	7,933
Gross value added at factor cost		252,728	328,814	357,938	375,026	437,953
Gross value added at factor cost per head	£	3,071	4,009	4,541	4,922	6,020

⁽a) Including estimates for establishments not making satisfactory returns, non-response and establishments not selected for the Census. Satisfactory returns accounted for 63 per cent of employment within the industry.

TABLE 2

Capital expenditure, 1974—1978

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

2	+4	 	nd

£ thousand

129.584

					Ltil	ousand
	1974	1975	1976	1977	1978	
Land and buildings				757	******	
New building work	2,878	2,879	4,786	5,310	3,946	
Land and existing buildings						
Acquisitions	600	861	1,795	1,694	2,448	
Disposals	418	136	311	617	270	
Vehicles						
Acquisitions	2,101	2,229	2,489	3,757	4,343	
Disposals	654	633	754	1,216	1,265	
Plant and machinery						
Acquisitions	15,879	22,179	30,041	31,006	34,583	
Disposals	382	1,540	1,135	660	594	
Total net capital expenditure	20,003	25,838	36,911	39,275	43,191	

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

TABLE 3

Total

Stocks and work in progress, 1974—1978
All United Kingdom establishments classified to the industry (a)

31,600

	1974	1975	1976	1977		1978
	500 d = 75 - 328,	NAS DESTRICT	Increase	Not all	2460 300 03	Value at end of year
Materials, stores and fuel	17,025	-2,047	8,349	-1,334	6,232	48,566
Work in progress	8,911	11,780	2,120	3,493	7,450	40,771
Goods on hand for sale	5,664	4,992	5,294	1,130	8,035	40,247

15,763

3,289

21,716

14,724

⁽b) Included in sales of goods produced.

⁽c) Average number employed, including full and part-time employees (see table 7) and working proprietors.

⁽d) For 1974 and 1975 rents of industrial and commercial buildings were not recorded separately, but included in hire of vehicles, plant and machinery.

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

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

Analysis of establishments by size, 1978
All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab- lish- ments	Enter- prises (c)	Employme	ent		Wages and sa	laries (f)		
			Total (d)	Opera- tives	Others (e)	Operatives		Others (e)	
		No. of Control	(0)		(e)	Total	per head	Total	per head
	Number	Number	Number	Number	Number	£ thousand	£	£ thousand	£
1–10	453	447	2,255)						
11–19	170	168	2,435)						
20-49	191	187	6,160)	14,025	3,325	51,023	3,638	13,362	4,019
50-99	102	98) 7,159)						
100-199	62	60	8,323	6,662	1,653	24,932	3,742	7,105	4,298
200–299	24	21	5,922	4,701	1,221	18,359	3,905	5,380	4,407
300–399	19	18	6,463	5,189	1,274	21,370	4,118	5,355	4,203
400–499	10	8	4,580	3,598	982	13,323	3,703	3,403	3,466
500-749	9	8	5,423	4,437	986	18,326	4,130	4,602	4,667
750-999	5	5	4,170	3,356	814	12,897	3,843	3,733	4,586
1,000—1,499	6	6	6,943	5,464	1,479	23,198	4,246	6,311	4,267
5,000 and over	5	3	12,917	10,164	2,753	41,401	4,073	12,812	4,654

Total	1,056	964	72,750	57,596	14,487	224,828	3,904	62,065	4,284

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

Total sales and work done (g)	Gross output	t Net output		Gross value added at factor cost		Net capital expenditure (h)	Total stocks and work in progress at end of year
		Total	per head	Total	per head		
£ thousand	£ thousand	£ thousand	£ market	£ thousand	£	£ thousand	£ thousand
200,136	201,976	109,018	6,054	(j)	(j)	9,508	20,655
106,313	108,071	57,151	6,867	144,421(j)	5,485(j)	6,499	12,857
74,296	75,388	40,680	6,869	35,845	6,053	3,305	11,824
84,350	85,091	46,130	7,138	39,962	6,183	3,264	11,516
58,918	60,080	32,675	7,134	30,291	6,614	3,414	8,542
62,225	63,061	36,682	6,764	33,962	6,263	2,178	6,646
50,329	50,898	26,759	6,417	23,687	5,680	1,906	8,670
92,475	93,950	50,982	7,343	44,891	6,466	4,101	13,171
181,382	187,393	95,579	7,399	84,893	6,572	9,016	35,703

_	
(f)	The cost of employers' contributions to national insurance, pensions and welfare schemes and the running costs of canteens, is
	estimated for the industry at £48,097 thousand.

437,953

43,191

129,584

6,813

495,655

910,424

925,908

⁽b) Average number employed, including full and part-time employees (see table 7) and working proprietors.

⁽c) The sum of the figures for the size groups may exceed the total for the industry because some enterprises control establishments in more than one size group.

⁽d) Including working proprietors.

⁽e) Administrative, technical and clerical employees.

⁽g) Sales of goods produced, capital goods manufactured and buildings constructed by establishments for their own use, work done, industrial and non-industrial services rendered and merchanted goods.

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

Gross value added data relate to establishments employing 1–199.

Regional distribution of employment, net capital expenditure, net output and gross value added at factor cost, 1978 All United Kingdom establishments classified to the industry (a)

Area	Total employment	(b)	Net capital expenditure	c) Net Gross value added at factor cost (d)		Gross value added at factor cost returned by establishments with 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
unacest à l'ins	Thousands	per cent of United Kingdom	£ thousand	per cent of United Kingdom	£ thousand	£ thousand	percentage
Standard regions of England							
North	4.2	5.8	2,276	5.3	29,114	25,628	16.6
Yorkshire and Humberside	7.4	10.2	6,739	15.6	54,111	48,608	81.6
East Midlands	18.4	25.3	11,985	27.8	134,579	120,019	69.2
East Anglia	0.4	0.6	265	0.6	2,735	2,402	22.9
South East	4.6	6.3	2,885	6.7	30,465	26,301	50.7
South West	2.1	2.9	1,104	2.6	14,687	12,932	75.1
West Midlands	23.0	31.6	11,132	25.8	149,346	132,185	69.8
North West	4.3	5.9	2,082	4.8	26,722	23,442	59.2
	482.1		100,00				
England	64.4	88.5	38,468	89.1	441,760	391,517	
Wales	2.6	3.6	1,719	4.0	17,611	14,577	37.4
Scotland	5.6	7.7	2,938	6.8	35,481	31,169	47.3
Great Britain	72.6	99.8	43,124	99.8	494,853	437,264	
Northern Ireland	0.1	0.2	67	0.2	802	689	- 1
United Kingdom	72.8	100.0	43,191	100.0	495,655	437,953	

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

(b) Average number employed, including full and part-time employees (see table 7) and working proprietors.

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

(d) 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.

TABLE 6

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments, 1978

Accounting year ended	Percentage of total returns received	Percentage of total number employed
1014	per cent	per cent
1978 April (a)	1.9	0.8
May	1.4	0.3
June	4.3	1.1
July	3.8	2.5
August	1.9	1.3
September	4.3	3.2
October	5.2	15.7
November	1.4	0.3
December	41.4	37.8
1979 January	3.8	4.9
February	0.5	0.2
March (b)	30.0	31.9

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1979.

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	89	1	90	
Female	8	2	10	

Source: Department of Employment

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

Operating ratios, 1977–1978

All United Kingdom establishments classified to the industry (a)

between the court factor to appropriate the transfer of the second program to the text.	Unit	1977	1978
Gross output per head	£	11,134	12,727
Net output per head	£	5,572	6,813
Gross value added per head	£	4,922	6,020
Gross value added as a percentage of gross output	%	44	47
Ratio of gross output to stocks		7.7	7.1
Wages and salaries as a percentage of gross value added	%	70	66
Ratio of operatives to administrative, technical and clerical employees		4.2	4.0
Nages and salaries per administrative, technical and clerical employee	£	3,773	4,284
Nages and salaries per operative	£	3,435	3,904
Net capital expenditure per head	£	515	594
Net capital expenditure as a percentage of gross value added	%	10	10

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

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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 PA 1001 (Introductory Notes) of the Report on the Census of Production, 1978.

GENERAL INFORMATION

Changes made for 1978

The Census for 1978 is in line with similar inquiries being conducted in other member countries of the European Economic solutions.

The census differed from earlier censuses in three respects. Sampling was introduced for establishments employing 20 to 49 and a sample of smaller units was selected. A new question on the leasing of capital assets was included for 1978 only. This will provide register information for use in related inquiries into leasing.

Suppression of information relating to individual undertakings tion 9(5)(b) of the Statistics of Trade Act 1947 states he following provisions shall have effect with respect to any port, summary or other communication to the public of ormation 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, nowever, 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" a figure involved disclosure the contributor concerned was etimes asked to give permission for its publication. In the jority of cases permission was given. When it was refused and ere contributors were not approached the figure has been opressed, either by combining it with other figures, or as in the ional tables, by omitting the figure altogether.

ymbols used

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 enterprises,

R 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 and 1968. It exists to promote uniformity and comparability in the official statistics of the United Kingdom. The general principles followed are those of the International Standard Industrial Classification of all Economic Activities of the United Nations Statistical Office but the United Kingdom SIC reflects the organisation and structure of industry and trade as it exists in the United Kingdom. The SIC is a classification by activity and is not a commodity classification. However, an index of all commodity headings for which sales data are provided in the Quarterly Business Monitors, is published in Business Monitor PQ 1000.

Statistical units

The statistical unit for the purpose of the Census is the establishment which is defined in the SIC as the smallest unit which can provide the information normally required for an economic census, for

example, employment, expenses, turnover, capital formation, Usually the principal activities carried on in an establishment fall within a single heading of the classification (eg steel making or sugar refining). Typically the establishment embraces all the activities carried on at a single address eg a mine or a factory, including those which are ancillary to the principal activities. Frequently distinct activities characteristic of different industries are carried on at one address, but normally these are not classified separately and the whole establishment is classified according to the main activity. If, however, the required range of data can be provided for each activity, each is taken to constitute a separate establishment. Sometimes activities which are conducted as a single business are carried on at a number of addresses. Where this is so, businesses are asked to provide the full range of information in respect of each address, whether or not the activities are different. Their activities may, however, be integrated to such an extent that they constitute a single establishment. In the latter case the establishment is defined to cover the combined activities at these addresses (termed local units). Separate figures are obtained of employment and net capital expenditure at each unit in order to compile regional tables. Efforts are made by the Business Statistics Office (BSO) to ensure by negotiating with respondents, that the return from an establishment does not cover local units in more than one of the countries of the United Kingdom

Establishments are asked to exclude from their returns particulars relating to any department not engaged in production eg merchanting, transport, warehousing, for which they keep a separate set of accounts. Transfers of goods produced to such departments are treated as sales and respondents are asked to value them as far as possible as if sold to an independent purchaser. Where separate accounts are not kept they are asked to include details of all these activities in their return.

Particulars relating to head offices mainly engaged in the administration of the production units within the scope of the census were included. Where more than one return was made the information in respect of the head office was apportioned among them.

For certain purposes in the annual censuses of production (especially the enterprise analyses of Business Monitor PA 1002) related establishments are combined. An enterprise group is defined as a business consisting of either a single establishment or two or more establishments under common ownership or control. Bringing together establishments into enterprise groups is also necessary for the purpose of ensuring that there will be no disclosure of the activities of any one enterprise group. Information about the relationship of establishments, the changing structure of groups of companies and about common ownership links is obtained from many sources, including the Stock Exchange Year Book, company reports, press reports and information supplied by individual establishments.

THE REGISTER

The register permits a questionnaire to be sent direct to the reporting establishment 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-to-date and act as a check on its detail and structure. For the establishments 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 does not make a return to these inquiries the employment data are based on 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 BSO. Where necessary details are sought directly from new businesses. Units which cease to trade are removed from the live register.

Coverage

In recent censuses returns have been required from all establishments employing 20 or more. For the 1978 Census in 68 selected manufacturing industries coverage of establishments 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. The Census has included for the first time a small sample (around 10 per cent) of units employing 11 to 19 to meet an EEC requirement to collect a limited range of data from smaller units every 5 years.

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

Establishments 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 employees

(b) all other employees (operatives)

Averages could be calculated from the figures relating to the last week of each calendar month. Establishments were also required to state the number of working proprietors where appropriate and these are included in total employment figures. Full-time and part-time employees are included but outworkers (ie persons employed by establishments who worked in their own homes etc on materials supplied by the establishment) are excluded. 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.

Working proprietors

These include all persons regarded as "self-employed" for national insurance purposes and members of their families who worked in the business without receiving a wage or salary; but such persons who worked less than half the normal number of working hours are excluded. Directors working in the business but not in receipt of a definite wage, salary or commission are included under this heading: directors paid by fee only are not included.

Employees

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 employees.

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. but outworkers are excluded.

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. Establishments 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. Establishments with 100 or more employees were asked to include a total net capital expenditure figure for each calendar year and to state whether any of the investment shown in cost of new building work, vehicles or plant and machinery included goods for letting out on hire or leasing.

(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 establishment'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 establishment, payments for repairs and maintenance (including those in respect of rented buildings) and amounts paid to other firms for contracts which have been sublet. Payments to outworkers are excluded.

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 output

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 etcl and the cost of industrial services received, and where applicable duties atc.

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 and working proprietors, but excluding outworkers.

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, transpor (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 no 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 and working proprietors, but excluding out workers.

Purchase:

Purchases include the cost of raw materials, components, semi manufactured goods and workshop materials; of replacement partiand 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 establishment or given out to other establishments for the production of machinen or other capital items for the establishment's own use; of material for use by the establishment when working on goods supplied by

omers; and of food, etc for any canteen covered by the ablishment's return. Transfers of goods to the establishment n another department of the same firm not covered by the hlishment's return are included at a cost corresponding to the mated selling value recorded by the other department. Amounts vable to transport firms or credited to the firm's own transport artment for delivery of materials are excluded, as are all chases of machinery and plant charged to capital account. chases of goods for merchanting or factoring have been ected separately since 1973. The values shown exclude VAT. ev include, in addition to the actual purchase price, the value packaging material charged to the establishment. The value of rned goods or packaging material returned to suppliers and any le discounts are excluded. Materials purchased duty-paid are luded at their duty-paid value, less any drawback, rebate, etc. cost of transport is included only if it is included with the chase price in the firm's accounts. Imported goods are included their full delivered cost. If in the firm's accounts the transport m docks or airport is not included in the cost of goods purchased. cost is entered at cif plus duty (if applicable). Leasing, ing and hire purchase charges are excluded.

Sales of goods produced

es for the purposes of the annual censuses means deliveries on of goods made by establishments in the United Kingdom ered by the inquiry. Sales of goods made for these establishments outworkers or by other establishments from materials given out hem and sales of waste products are included. New building k and machinery or other capital items produced by establishnts for hiring out or leasing are regarded as sales, the value luded in the return being that adopted in the establishments' sital asset accounts. Forward sales and canteen takings are excluded sales in the period of the inquiry are included irrespective of n the goods were manufactured. Goods produced in one blishment and transferred either to ancillary departments not aged in production for which there are separate accounts, or to ther establishment of the same firm not covered by the return. treated as sales by the producing establishment and valued as as possible as if they had been sold to an independent purchaser. ds transferred to wholesale or retail selling organisations, for ch 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. In industries where products attract Excise Duty the value stated is usually inclusive of duty if sold duty-paid and exclusive of duty if sold in bond or exported.

Receipts for work done and industrial services rendered

igures for work done represent the amount charged for work arried out on materials supplied by a customer and include repair work. Within certain industries this heading covers a wide variety of citivities, for example, within the food sector - butter packed on ammission; within the textile industries - making up of garments, ur dressing and textile finishing; within printing and publishing preparatory work on type-setting, block making and binding. Work lone is also significant in the electrical machinery and heavy ingineering industries, covering erection, installation and repair and obbing work. Other activities within this heading include exploration work, research and development, glass cutting and dressing and blaning of timber.

Industrial services rendered include repairs and maintenance, installation work, and technical research and studies for other organisations.

Capital goods produced for establishments' own use

This includes all work of a capital nature carried out during the year by the establishments' 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 establishment but which are not usually sold or transferred to another establishment without further processing. The values include the cost of materials consumed and labour used. Progress payments made to subcontractors 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. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly 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 included.

Remuneration paid to outworkers

The remuneration paid to outworkers (ie persons employed by the establishment who do their work in their own homes) is generally on a piece-work basis. Only amounts paid to outworkers whose names appear on the establishment's payroll are included. Amounts paid to outworkers by sub-contractors are 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 establishments classified to each industry, including not selected establishments 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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