PA366

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Business Monitor

Report on the Census of Production

Electronic computers



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Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1978

Electronic computers

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

Miscellaneous mining and quarrying

Bacon curing, meat and fish products

Cocoa, chocolate and sugar confectionery

Petroleum and natural gas

Bread and flour confectionery

Fruit and vegetable products

Vegetable and animal oils and fats

Spirit distilling and compounding

Coke ovens and manufactured fuel

Pharmaceutical chemicals and preparations

Synthetic resins and plastics materials and

Mineral oil refining Lubricating oils and greases

Animal and poultry foods

PA229.2 Starch and miscellaneous foods

Brewing and malting

PA239.2 British wines, cider and perry

Inorganic chemicals

Toilet preparations

Soap and detergents

Dvestuffs and pigments

PA279.2 Formulated adhesives, gelatine, etc. PA279.3 Explosives and fireworks

Iron and steel (general)

Photographic chemical materials

Aluminium and aluminium alloys

Copper, brass and other copper alloys

synthetic rubber

PA279.4 Formulated pesticides, etc.

Iron castings, etc.

PA279.6 Surgical bandages, etc.

Steel tubes

Fertilizers

Polishes

PA279.5 Printing ink

Miscellaneous chemicals

Milk and milk products

Chalk, clay, sand and gravel extraction

Coal mining

Grain milling

Biscuits

Sugar

Margarine

Soft drinks

Tobacco

PA271.2 Organic chemicals

Paint

PA1001

PA101

PA 102

PA103

PA104

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PA221

PA229.1

PA231

PA232

PA239.1

PA240

PA261

PA262

PA271.1

PA271.3

PA272

PA273

PA274

PA275

PA276

PA277

PA278

PA279.7

PA311 PA312

PA321

PA322

PA323

PA331

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. Shipbuilding and marine engineering

PA380 Wheeled tractor manufacturing PA381 1 Motor vehicle manufacturing

PA381.2 Trailers, caravans and freight containers Motor cycle, tricycle and pedal cycle manufacturing Aerospace equipment manufacturing and repairing PA383 Locomotives, railway track equipment, railway carriages PA384

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

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

PA393 Bolts, nuts, screws, rivets, etc. Wire and wire manufactures 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 PA413 Weaving of cotton, linen and man-made fibres

PA414 Woollen and worsted PA415 PA416

Rope, twine and net Hosiery and other knitted goods PA417.1

PA417.2 Warp knitting PA418 Lace

PA419 Carpets PA421 Narrow fabrics

PA422.1 Household textiles and handkerchiefs

PA422.2 Canvas goods and sacks and other made-up textiles Textile finishing PA423

PA429.1 Asbestos

PA429.2 Miscellaneous textile industries PA431

Leather (tanning and dressing) and fellmongery PA432 Leather goods

PA433

PA461.2

PA462

PA463

PA471

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PA479

PA481

PA482.1

PA482.2

PA484.1

PA484.2

PA485

PA489

PA491

PA492

PA493

PA494.1

PA494.3

PA495

PA499.1

PA500

PA601

PA602

PA603

PA1002

PA483

PA441 Weatherproof outerwear PA442 Men's and boys' tailored outerwear

PA443 Women's and girls' tailored outerwear PA444 Overalls and men's shirts, underwear, etc.

PA445 Dresses, lingerie, infants' wear, etc. PA446 Hats, caps and millinery

Furniture and upholstery

Manufactured stationery

Brushes and brooms

Sports equipment

Plastics products

Construction

Water supply

Summary tables

Electricity

Gas

Musical instruments

Paper and board

Wallcoverings

Bedding, etc.
Shop and office fitting
Wooden containers and baskets

General printing and publishing

Miscellaneous stationers' goods

PA499.2 Miscellaneous manufacturing industries

Toys, games and children's carriages

Miscellaneous wood and cork manufactures

Cardboard boxes, cartons and fibre-board packing cases

Packaging products of paper and associated materials

Miscellaneous manufactures of paper and board

Printing, publishing of newspapers and periodicals

Linoleum, plastics floor-covering, leathercloth, etc.

PA449.1 Corsets and miscellaneous dress industries

Pottery

Cement

Timber

Abrasives

Glass

Miscellaneous base metals PA449.2 Gloves Agricultural machinery (except tractors) Metal-working machine tools PA450 Footwear PA461 1 Refractory goods
Building bricks and non-refractory goods

PA332 PA333.1 Pumps PA333.2 Valves

PA333.3 Compressors and fluid power equipment PA334 Industrial engines
Textile machinery and accessories

PA464 PA336 Construction and earth-moving equipment PA469.1 PA337 PA469.2 Miscellaneous building materials and mineral products

Mechanical handling equipment Office machinery PA339 Mining machinery

PA339.2 Printing, bookbinding and paper goods machinery PA339.3 Refrigerating machinery, space-heating, ventilating and air-conditioning equipment

PA339.5 Scales and weighing machinery and portable power tools

PA339.7 Food and drink processing machinery and packaging and bottling machinery Miscellaneous (non-electrical) machinery PA341 Industrial (including process) plant and steelwork

PA342 Ordnance and small arms PA349.1 Ball, roller, plain and other bearings PA349.2 Precision chains and other mechanical engineering

PA351 Photographic and document copying equipment PA352 Watches and clocks

Surgical instruments and appliances PA354 Scientific and industrial instruments and systems PA361 Electrical machinery

PA362 Insulated wires and cables PA363 Telegraph and telephone apparatus and equipment

PA364 Radio and electronic components PA365 1 Gramophone records and tape recordings PA365.2 Broadcast receiving and sound reproducing

equipment PA366 Electronic computers PA367 Radio, radar and electronic capital goods

PA368 Electrical appliances primarily for domestic use PA366 ELECTRONIC COMPUTERS

The information in this report relates to establishments classified to the Electronic computers industry, minimum list heading 366 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Manufacturing digital, analogue and hybrid electronic computers and related equipment, including peripheral equipment for computing systems and data transmission equipment. Telecommunication links and computers and peripheral equipment not separable from industrial control systems 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, 1974–1978
All United Kingdom establishments classified to the industry (a)

	Unit	1974	1975	1976	. 1977	1978
Enterprises	Number	122	129	137	135	144
Establishments	9/4 ,,	136	144	152	145	154
Sales of goods produced	£ thousand	386,544	495,054	545,500	625,199	716,947
Receipts for work done and industrial services rendered	200 07 E-70 000 100 7 00 1000 0	(Þ)	(b)	43,641	53,084	109,914
Capital goods produced for establishments' own use		2,099	2,166	1,413	2,264	3,419
Non-industrial services rendered	"	2,290	1,487	2,295	344	313
Goods merchanted or factored	"	40,406	47,734	53,847	54,923	51,401
Total sales and work done (c)	,,	431,340	546,440	646,695	735,813	881,995
Increase during the year, work in progress and goods on hand for sale	"	14,623	7,687	13,187	-4,902	24,338
Gross output		445,963	554,128	659,883	730,910	906,333
Purchases of materials for use in production, and packaging and fuel	,,	194,245	204,365	315,640	336,725	424,965
Purchases of goods for merchanting or factoring	"	32,531	38,178	40,215	47,503	39,568
Increase during the year, stocks of materials, stores and fuel		6,023	-10,389	9,351	17,092	19,726
Cost of industrial services received	"	10,411	9,063	21,384	26,415	29,575
Net output	"	214,799	292,131	291,996	337,360	431,950
Total employment (d)	Thousands	28.3	27.4	26.7	26.5	23.8
Net output per head	£	7,598	10,650	10,923	12,747	18,118
Payments for non-industrial services						
Hire of vehicles, plant and machinery	£ thousand	2,990	3,885	2,550	2,452	3,490
Rents of industrial and commercial buildings	"	(e)	(e)	2,633	2,712	3,314
Commercial insurance premiums	"	1,134	1,287	1,739	2,198	1,857
Bank charges		37	111	121	95	173
Other non-industrial services	"	11,613	10,215	11,055	18,570	21,550
Licensing of motor vehicles	"	116	394	161	180	210
Rates, excluding water rates		1,347	2,199	2,564	2,662	2,418
Gross value added at factor cost	,, `	197,561	274,040	271,172	308,489	398,938
Gross value added at factor cost per head	£	6,988	9,990	10,144	11,656	16,733

⁽a) Including estimates for establishments not making satisfactory returns, non-response and establishments not selected for the Census. Satisfactory returns accounted for 86 per cent of employment within the industry.

Capital expenditure, 1974—1978
All United Kingdom establishments classified to the industry (a)(b)

					£ thousand
The state of the s	1974	1975	1976	1977	1978
Land and buildings					ewa District District Control
New building work	2,645	2,497	3,995	5,193	11,452
Land and existing buildings					
Acquisitions	2	90	96	655	640
Disposals	-	255	1,372	395	593
Vehicles					
Acquisitions	827	866	1,266	1,410	2,239
Disposals	115	124	202	303	534
Plant and machinery					
Acquisitions	6,443	9,661	9,160	18,484	24,493
Disposals	109	988	927	2,420	1,281
Total net capital expenditu	re 9,694	11,747	12,015	22,624	36,416

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

TABLE 3

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

						£ thousand
	1974	1975	1976	1977		1978
	DOTA ASI NEMBERO	198817	Increase	200 200 200	A (A) (A) (A)	Value at end of year
Materials, stores and fuel	6,023	-10,389	9,351	17,092	19,726	99,545
Work in progress	11,114	67	-1,650	8,217	28,658	126,462
Goods on hand for sale	3,509	7,620	14,838	-13,119	-4,320	28,800
Total	20,646	-2,702	22,539	12,190	44,063	254,806

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

⁽b) Included in sales of goods produced.

⁽c) Details of manufacturers' quarterly sales of principal products are published regularly in Business Monitor PQ366.

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

⁽e) 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.

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	Employment			Wages and salaries (f)			
			Total (d)	Opera- tives		Operatives	7	Others (e)		
			(u)	tivos		Total	per head	Total	per head	
	Number	Number	Number	Number	Number	£ thousand	£	£ thousand	£	
1-10	69	68	308)							
11-19	28	27	389)							
20-49	21	21	705)	1,252	1,283	4,030	3,219	6,510	5,074	
50-99	15	15	1,145)							
100-199	4	4	496	223	273	659	2,955	1,484	5,436	
200-299	3	3	712	225	487	933	4,147	2,736	5,618	
800-399	3	3	1,137	471	666	1,488	3,159	3,355	5,038	
00-749	6	6	3,483	920	2,563	3,564	3,874	13,755	5,367	
'50 and over	5	4	15,466	7,480	7,986	28,991	3,876	52,791	6,610	

Total	154	144	23,841	10,571	13,258	39,665	3,752	80,631	6,082

⁽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	Net output	Net output			Net capital expenditure (h)	Total stocks and work in progress at end of year
		Total	per head	Total	per head		
£ thousand	£ thousand	£ thousand	£	£ thousand	£	£ thousand	£ thousand
57,877	60,378	29,726	11,671	(j)	(j)	2,925	16,104
9,318	9,638	5,214	10,512	28,321(j)	9,307(j)	535	2,587
19,757	19,619	10,159	14,268	8,404	11,803	2,632	5,447
25,672	26,178	11,182	9,835	9,603	8,446	1,259	4,966
81,255	84,311	44,021	12,639	36,055	10,352	2,750	30,684
688,116	706,209	331,648	21,444	316,555	20,468	26,316	195,018

881,995	906,333	431,950	18,118	398,938	16,733	36,416	254,806

The cost of employers' contributions to national insurance, pensions and welfare schemes and the running costs of canteens, is estimated for the industry at £20,729 thousand. The remuneration of outworkers on returns received was £40 thousand.

⁽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.

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.

⁽j) 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 output (d)	Gross value added at factor cost (d)	factor co by estab 80 per co of their co in the re proportion	on of total ue added at
	Thousands	per cent of United Kingdom	£ thousand	per cent of United Kingdom	£ thousand	£ thousand	percenta	ge
Standard regions of England								
North	*	*	*	***	*	* **		
Yorkshire and Humberside	*	*	*	*	*	*		
East Midlands	*	*	*	*	*	* 00	*	
East Anglia	*	*	*	*	*	* 41		
South East	9.3	39.2	14,449	39.7	158,895	141,390	40.2	
South West	0.4	1.9	281	0.8	5,628	5,080	74.9	
West Midlands	*	*	*	*	*	*		
North West	*	*	*	*	*	•	*	
England	*	*	*	*	*	*	/	
Wales • •	*	*	*					
Scotland	5.9	24.6	16,383	45.0	93,339	83,806	76.6	
Great Britain	23.8	100.0	36,416	100.0	431,950	398,938	/	
Northern Ireland	-	-	_	-	-	-	-	
United Kingdom	23.8	100.0	36,416	100.0	431,950	398,938	/	

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

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

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.

TABLE 6

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

Accounting year er	ded	Percentage of total returns received	Percentage of total number employed	
	21630	per cent	per cent	
978 April (a)		3.0	0.6	
May		3.0	0.2	
June		9.1	1.6	
July		3.0	0.2	
August		mortiles - the state of the sta		
Septemb	er	6.1	44.7	
October		3.0	0.2	
Novemb	er	6.1	10.1	
Decembe	er and a second	42.4	33.0	
1979 January				
February		3.0	1.0	
March (b)	21.2	8.3	

(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	
M Male	74	_	74	
Female	23	3	26	

Source: Department of Employment

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

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Operating ratios, 1977-1978 All United Kingdom establishments classified to the industry (a)

Contraction and the Contraction of the Contraction	Unit	1977	1978
Gross output per head	£	27,618	38,016
Net output per head	£	12,747	18,118
Gross value added per head	£	11,656	16,733
Gross value added as a percentage of gross output	%	42	44
Ratio of gross output to stocks		3.4	3.6 -
Wages and salaries as a percentage of gross value added	%	37	30
Ratio of operatives to administrative, technical and clerical employees		0.7	0.8
Wages and salaries per administrative, technical and clerical employee	£	4,816	6,082
Wages and salaries per operative	£	3,557	3,752
Net capital expenditure per head	£	855	1,527
Net capital expenditure as a percentage of gross value added	%	7	9

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

Produced in Wales by Her Majesty's Stationery Office Reprographic Unit, Cardiff Dd.699517 K6 Cdf 411 9/80

These notes give the main information needed for interpreting the figures in the industry Business Monitors: more detailed nformation 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 communities.

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 Section 9(5)(b) of the Statistics of Trade Act 1947 states "The following provisions shall have effect with respect to any eport, summary or other communication to the public of nformation 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". a figure involved disclosure the contributor concerned was ometimes asked to give permission for its publication. In the najority 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 gional tables, by omitting the figure altogether.

he following symbols are used throughout the PA series of usiness Monitors:

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

Rounding of figures

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

ndustrial classification

he United Kingdom Standard Industrial Classification (SIC) was rst issued in 1948 and was subsequently revised in 1958 and 1968. It exists to promote uniformity and comparability in the fficial statistics of the United Kingdom. The general principles ollowed are those of the International Standard Industrial lassification of all Economic Activities of the United Nations tatistical Office but the United Kingdom SIC reflects the ganisation and structure of industry and trade as it exists in the nited Kingdom. The SIC is a classification by activity and is ot a commodity classification. However, an index of all commodity eadings for which sales data are provided in the Quarterly Business fonitors, is published in Business Monitor PQ 1000.

tatistical units

he statistical unit for the purpose of the Census is the establishment hich is defined in the SIC as the smallest unit which can provide he 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 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

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:

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 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 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, 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 and working proprietors, but excluding outworkers.

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 establishment or given out to other establishments for the production of machinery or other capital items for the establishment's own use; of materials for use by the establishment when working on goods supplied by

istomers; and of food, etc for any canteen covered by the stablishment's return. Transfers of goods to the establishment om another department of the same firm not covered by the establishment'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 epartment for delivery of materials are excluded, as are all irchases of machinery and plant charged to capital account. urchases of goods for merchanting or factoring have been offected separately since 1973. The values shown exclude VAT. they include, in addition to the actual purchase price, the value f packaging material charged to the establishment. The value of eturned goods or packaging material returned to suppliers and any rade discounts are excluded. Materials purchased duty-paid are ncluded at their duty-paid value, less any drawback, rebate, etc. he cost of transport is included only if it is included with the rchase price in the firm's accounts. Imported goods are included their full delivered cost. If in the firm's accounts the transport omdocks or airport is not included in the cost of goods purchased. he cost is entered at cif plus duty (if applicable). Leasing, nting and hire purchase charges are excluded.

Sales of goods produced

Sales for the purposes of the annual censuses means deliveries on ale of goods made by establishments in the United Kingdom overed by the inquiry. Sales of goods made for these establishments y outworkers or by other establishments from materials given out them and sales of waste products are included. New building work and machinery or other capital items produced by establishnts for hiring out or leasing are regarded as sales, the value ncluded in the return being that adopted in the establishments' apital 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 establishment and transferred either to ancillary departments not engaged in production for which there are separate accounts, or to another establishment of the same firm not covered by the return. are treated as sales by the producing establishment and valued as ar 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. 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

Figures for work done represent the amount charged for work carried out on materials supplied by a customer and include repair work. Within certain industries this heading covers a wide variety of activities, for example, within the food sector - butter packed on commission; within the textile industries - making up of garments, fur dressing and textile finishing; within printing and publishing - preparatory work on type-setting, block making and binding. Work done is also significant in the electrical machinery and heavy engineering industries, covering erection, installation and repair and jobbing work. Other activities within this heading include exploration work, research and development, glass cutting and dressing and planing 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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