PA331

1978

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Business Statistics Office

Business Monitor

Report on the Census of Production

Agricultural machinery (except tractors)

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A publication of the Government Statistical Service

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Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1978

Agricultural machinery (except tractors)

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

Petroleum and natural gas

Milk and milk products

Grain milling
Bread and flour confectionery

Fruit and vegetable products

Vegetable and animal oils and fats

Coke ovens and manufactured fuel

Pharmaceutical chemicals and preparations

Synthetic resins and plastics materials and synthetic rubber

Animal and poultry foods

PA229.2 Starch and miscellaneous foods

PA239.1 Spirit distilling and compounding

Mineral oil refining Lubricating oils and greases

Brewing and malting

PA239.2 British wines, cider and perry

Inorganic chemicals

Toilet preparations

Soap and detergents

Dyestuffs 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

Mechanical handling equipment

PA339.3 Refrigerating machinery, space-heating, ventilating and air-conditioning equipment

PA339.5 Scales and weighing machinery and portable

Ball, roller, plain and other bearings

Surgical instruments and appliances

Telegraph and telephone apparatus and

Gramophone records and tape recordings

Radio, radar and electronic capital goods

Electrical appliances primarily for domestic use

Radio and electronic components

PA365.2 Broadcast receiving and sound reproducing

Photographic and document copying equipment

Scientific and industrial instruments and systems

PA339.7 Food and drink processing machinery and

Ordnance and small arms

Watches and clocks

Electrical machinery

Electronic computers

equipment

Insulated wires and cables

Industrial engines
Textile machinery and accessories

Aluminium and aluminium alloys

Copper, brass and other copper alloys

Agricultural machinery (except tractors)

Construction and earth-moving equipment

PA339.2 Printing, bookbinding and paper goods machinery

Soft drinks

Tobacco

PA271.2 Organic chemicals

Paint

Fertilizers

PA279.3 Explosives and fireworks PA279.4 Formulated pesticides, etc.

Iron castings, etc.

Office machinery

Mining machinery

power tools

PA279.6 Surgical bandages, etc.

Steel tubes

Polishes

PA279.5 Printing ink

PA271.3 Miscellaneous chemicals

Stone and slate quarrying and mining

Chalk, clay, sand and gravel extraction

Miscellaneous mining and quarrying

Bacon curing, meat and fish products

Cocoa, chocolate and sugar confectionery

PA1001 Introductory notes Coal mining

Sugar

PA229.1 Margarine

PA109

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PA333.1 Pumps

PA333.2 Valves

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 Wheeled tractor manufacturing Motor vehicle manufacturing PA380 PA381.1 Trailers, caravans and freight containers PA382

Motor cycle, tricycle and pedal cycle manufacturing Aerospace equipment manufacturing and repairing PA383 Locomotives, railway track equipment, railway carriages wagons and trams
Engineers' small tools and gauges

PA390 Hand tools and implements PA391

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

Bolts, nuts, screws, rivets, etc. Wire and wire manufactures PA393 PA394 PA395

Jewellery and precious metals Metal furniture PA396 PA399. 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

Woollen and worsted PA415

Jute Rope, twine and net PA416

Hosiery and other knitted goods

PA417.2 Warp knitting PA418 Lace Carpets

PA421 Narrow fabrics PA422 Household textiles and handkerchiefs

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

PA429.1 Asbestos PA429.2 Miscellaneous textile industries

PA431 Leather (tanning and dressing) and fellmongery

PA432 Leather goods

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

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

Hats, caps and millinery PA449.1 Corsets and miscellaneous dress industries

PA449.2 Gloves PA450 Footwear

PA461. Refractory goods PA461.2

Building bricks and non-refractory goods PA462 Potterv PA463 Glass

PA464 Cement PA469 1

Abrasives
Miscellaneous building materials and mineral products PA469.2 PA471 Timber

PA472 Furniture and upholstery PA473 Bedding, etc. PA474 Shop and office fitting

PA475 Wooden containers and baskets Miscellaneous wood and cork manufactures

PA481 Paper and board

PA482 1 Cardboard boxes, cartons and fibre-board packing cases PA482.2 Packaging products of paper and associated materials Manufactured stationery

PA339.9 Miscellaneous (non-electrical) machinery
PA341 Industrial (including process) plant and steelwork PA484 1 Wallcoverings PA484.2 Miscellaneous manufactures of paper and board PA349.2 Precision chains and other mechanical engineering

Printing, publishing of newspapers and periodicals General printing and publishing PA489 PA491 Rubber Linoleum, plastics floor-covering, leathercloth, etc.

PA493 Brushes and brooms PA494 . Toys, games and children's carriages

PA494.3 Sports equipment Miscellaneous stationers' goods PA496 Plastics products

PA499.1 Musical instruments PA499.2 Miscellaneous manufacturing industries

PA500 Construction PA601 Gas

PA602 Electricity Water supply PA1002 Summary tables A331 AGRICULTURAL MACHINERY (EXCEPT TRACTORS)

he information in this report relates to establishments classified to the Agricultural machinery (except tractors) industry, minimum list ading 331 in the Standard Industrial Classification (revised 1968). The activities of the industry include:

Manufacturing agricultural machinery and implements (including self-propelled agricultural machinery) such as ploughs, harrows, combine harvesters, elevators, etc. The manufacture of milking machines is included but industrial dairy machinery and appliances, tractors and hand tools such as spades are excluded. Specialist repairers of agricultural machinery are also 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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TABLE

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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	559	576	608	612	620
Establishments	"	582	598	633	641	660
Sales of goods produced	£ thousand	184,745	200,058	237,642	286,321	328,102
Receipts for work done and industrial services rendered	,,	(b)	(b)	1,870	1,820	2,532
Capital goods produced for establishments' own use	,,	320	111	364	, 468	610
Non-industrial services rendered	"	296	544	669	638	490
Goods merchanted or factored	"	36,483	35,378	48,629	54,384	73,245
Total sales and work done (c)	"	221,844	236,092	289,174	343,631	404,978
ncrease during the year, work in progress and goods on hand for sale	"	11,510	16,504	6,002	10,938	10,923
Gross output	,,	233,355	252,596	295,176	354,570	415,901
Purchases of materials for use in production, and packaging and fuel	"	108,376	112,292	127,755	160,413	170,054
Purchases of goods for merchanting or actoring	"	27,564	28,747	37,314	42,987	45,959
ncrease during the year, stocks of naterials, stores and fuel	"	10,274	-184	3,679	8,533	-19
Cost of industrial services received	"	3,987	4,479	5,472	7,450	7,706
Net output	"	103,702	106,893	128,314	152,253	192,164
otal employment (d)	Thousands	23.3	23.0	22.9	22.8	22.7
Net output per head	£	4,456	4,646	5,607	6,680	8,469
ayments for non-industrial services						
Hire of vehicles, plant and machinery	£ thousand	996	1,489	710	1,172	1,525
Rents of industrial and commercial buildings	"	(e)	(e)	886	1,300	1,897
Commercial insurance premiums	· · ·	790	1,056	1,141	1,437	1,646
Bank charges	"	144	164	242	242	318
Other non-industrial services	"	5,451	8,568	12,838	14,017	19,076
icensing of motor vehicles	,,	88	128	134	167	207
ates, excluding water rates	"	1,558	2,220	2,241	2,655	2,942
Gross value added at factor cost	"	94,675	93,269	110,121	131,262	164,553
Gross value added at factor cost per head	£	4,068	4,054	4,812	5,759	7,252

⁽a) Including estimates for establishments not making satisfactory returns, non-response and establishments not selected for the Census. Satisfactory returns accounted for 69 per cent of employment within the industry.

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

				£tī	housand
1974	1975	1976	1977	1978	
1,993	2,117	1,289	3,137	4,249	
330	392	392	526	511	
87	71	428	77	3,056	
1,082	929	1,728	2,322	2,722	
301	329	576	576	810	
3,783	3,979	5,355	7,246	7,898	
293	771	371	286	1,125	
iture 6,506	6,246	7,390	12,294	10,388	9.6 = QLS.
	1,993 330 87 1,082 301 3,783 293	1,993 2,117 330 392 87 71 1,082 929 301 329 3,783 3,979 293 771	1,993 2,117 1,289 330 392 392 87 71 428 1,082 929 1,728 301 329 576 3,783 3,979 5,355 293 771 371	1,993 2,117 1,289 3,137 330 392 392 526 87 71 428 77 1,082 929 1,728 2,322 301 329 576 576 3,783 3,979 5,355 7,246 293 771 371 286	1974 1975 1976 1977 1978 1,993 2,117 1,289 3,137 4,249 330 392 392 526 511 87 71 428 77 3,056 1,082 929 1,728 2,322 2,722 301 329 576 576 810 3,783 3,979 5,355 7,246 7,898 293 771 371 286 1,125

⁽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	1	978
	PARTICLE OF STREET	Marie Barri	Increase	20120	nen sag	Value at end of year
Materials, stores and fuel	10,274	-184	3,679	8,533	-19	41,514
Work in progress	2,003	6,795	4,373	2,979	7,074	36,417
Goods on hand for sale	9,507	9,709	1,629	7,960	3,849	47,660
Total	21,784	16,320	9,682	19,471	10,903	125,592

⁽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 PQ331.

⁽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	Others (e)	Operatives	Operatives		Others (e)	
			(0)		(0)	Total	per head	Total	per head	
	Number	Number	Number	Number	Number	£ thousand	£	£ thousand	£	
1-10	433	424	1,897)							
11–19	108	105	1,525)							
20–49	58	58	1,700)	4,027	1,775	12,676	3,148	7,032	3,962	
50-99	18	17	1,211)							
100–199	20	19	2,752	2,057	695	7,182	3,491	3,264	4,697	
200–299	8	8	1,958	1,328	630	4,355	3,280	2,869	4,553	
300–399	6	6	2,165	1,318	847	4,874	3,698	3,541	4,181	
100-749	5	5	2,709	1,864	845	6,369	3,417	3,101	3,670	
750 and over	4	4	6,773	4,670	2,103	17,760	3,803	8,738	4,155	

Total	660	620	22,690	15,264	6,895	53,217	3,486	28,545	4,140

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

⁽e) Administrative, technical and clerical employees.



Total sales and work done (g)	Gross output	Gross 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	
130,330	133,287	54,039	8,533	(j)	(j)	5,349	28,268	
47,742	49,267	22,805	8,287	63,484(j)	6,988(j)	1,448	15,222	
30,558	31,275	14,588	7,451	12,260	6,262	988	11,040	
44,704	46,311	20,806	9,610	17,726	8,188	934	13,671	
41,075	41,997	19,854	7,329	17,150	6,331	912	13,856	
110,570	113,763	60,071	8,869	53,932	7,963	758	43,535	

		96082					
404,978	415,901	192,164	8,469	164,553	7,252	10,388	125,592

⁽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 £17,284 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.

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)	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
	Thousands	per cent of United Kingdom	£ thousand	per cent of United Kingdom	£ thousand	£ thousand	percentage
Standard regions of England							
North	0.5	2.1	149	1.4	2,987	2,407	1.3
Yorkshire and Humberside	2.2	9.6	742	7.1	14,514	12,565	66.3
East Midlands	1.2	5.1	800	7.7	9,032	7,726	43.2
East Anglia	5.8	25.6	825	7.9	41,936	35,847	62.9
South East	3.4	15.2	2,121	20.4	44,200	38,961	80.3
South West	2.6	11.5	1,451	14.0	22,269	17,923	55.1
West Midlands	2.6	11.3	1,820	17.5	22,424	19,233	39.7
North West	0.6	2.4	424	4.1	3,803	3,112	46.6
England	18.8	82.9	8,333	80.2	161,165	137,775	
Wales	1.0	4.4	533	5.1	10,648	8,855	54.1
Scotland	2.6	11.5	1,367	13.2	18,041	16,024	70.1
Great Britain	22.4	98.7	10,232	98.5	189,854	162,654	
Northern Ireland	0.3	1.3	156	1.5	2,310	1,899	71.1
United Kingdom	22.7	100.0	10,388	100.0	192,164	164,553	

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.

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

Accoun	ting year ended	Percentage of total returns received	Percentage of total number employed
		per cent	per cent
1978	April (a)	4.4	0.7
	May	1.5	0.2
	June	4.4	3.4
	July	7.4	8.8
	August	-	
	September	5.9	2.0
	October	5.9	21.3
	November	1.5	0.1
	December	54.4	56.4
1979	January	8.8	2.0
	February	_	
	March (b)	5.9	5.0

From 6th April.

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	86	1	87		
Female	10	3	13		

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)

	Unit	1977	1978
Gross output per head	£	15,556	18,330
Net output per head	£	6,680	8,469
Gross value added per head	£	5,759	7,252
Gross value added as a percentage of gross output	%	37	40
Ratio of gross output to stocks		3.1	3.3
Wages and salaries as a percentage of gross value added	%	54	50
Ratio of operatives to administrative, technical and clerical employees		2.4	2.2
Wages and salaries per administrative, technical and clerical employee	£	3,689	4,140
Wages and salaries per operative	£	2,972	3,486
Net capital expenditure per head	£	539	458
Net capital expenditure as a percentage of gross value added	%	9	6

⁽a) Including estimates for establishments 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 PA 1001 (Introductory Notes) of the Report on the Monitor PA 1001 (Introductory Notes) of Production, 1978.

SENERAL INFORMATION

made for 1978

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

the census differed from earlier censuses in three respects. In three respects, ampling 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 register information for use in related inquiries into leasing.

ession of information relating to individual undertakings 9(5)(b) of the Statistics of Trade Act 1947 states ollowing provisions shall have effect with respect to any summary or other communication to the public of nation obtained under the foregoing provisions of this Act compiling any such report, summary or communication the petent authority shall so arrange it as to prevent any culars published therein from being identified as being ticulars relating to any individual person or undertaking ent with the previous consent in writing of that person or the son carrying on that undertaking, as the case may be; but provision shall not prevent the disclosure of the total ntity or value of any articles produced, sold or delivered; so, ever that before disclosing any such total the competent ority shall have regard to any representations made to by any person who alleges that the disclosure thereof uld enable particulars relating to him or to an undertaking ried on by him to be deduced from the total disclosed". igure involved disclosure the contributor concerned was es asked to give permission for its publication. In the ty of cases permission was given. When it was refused and contributors were not approached the figure has been ssed, either by combining it with other figures, or as in the al tables, by omitting the figure altogether.

ymbols used

following symbols are used throughout the PA series of ess Monitors:

not available

il or less than half the final digit shown

figures cannot be shown owing to the risk of disclosing information about individual enterprises.

Rounding of figures

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

dustrial classification

The United Kingdom Standard Industrial Classification (SIC) was rest 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 ollowed are those of the International Standard Industrial Lassification of all Economic Activities of the United Nations statistical Office but the United Kingdom SIC reflects the reganisation and structure of industry and trade as it exists in the United Kingdom. The SIC is a classification by activity and is of a commodity classification. However, an index of all commodity eadings for which sales data are provided in the Quarterly Business Monitors, is published in Business Monitor PQ 1000.

tistical units

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

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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
- all other employees (operatives) (b)

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.

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

(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

(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 i made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written-off

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.

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

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.

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 out-

Purchases include the cost of raw materials, components, semimanufactured 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

mers; and of food, etc for any canteen covered by the plishment's return. Transfers of goods to the establishment another department of the same firm not covered by the ishment's return are included at a cost corresponding to the mated selling value recorded by the other department. Amounts able to transport firms or credited to the firm's own transport ment for delivery of materials are excluded, as are all hases of machinery and plant charged to capital account. hases of goods for merchanting or factoring have been cted separately since 1973. The values shown exclude VAT. include, in addition to the actual purchase price, the value ackaging material charged to the establishment. The value of ned goods or packaging material returned to suppliers and any discounts are excluded. Materials purchased duty-paid are uded at their duty-paid value, less any drawback, rebate, etc. cost of transport is included only if it is included with the hase price in the firm's accounts. Imported goods are included eir full delivered cost. If in the firm's accounts the transport ndocks or airport is not included in the cost of goods purchased, cost is entered at cif plus duty (if applicable). Leasing, ng and hire purchase charges are excluded.

for the purposes of the annual censuses means deliveries on of goods made by establishments in the United Kingdom red by the inquiry. Sales of goods made for these establishments utworkers or by other establishments from materials given out nem and sales of waste products are included. New building and machinery or other capital items produced by establishhts for hiring out or leasing are regarded as sales, the value ided in the return being that adopted in the establishments' ital asset accounts. Forward sales and canteen takings are excluded. sales in the period of the inquiry are included irrespective of 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 ner establishment of the same firm not covered by the return, reated as sales by the producing establishment and valued as s possible as if they had been sold to an independent purchaser. ods transferred to wholesale or retail selling organisations, for h separate accounts are kept are valued on the same basis. value shown for sales is the "net selling value" defined as the int (excluding VAT) charged to customers whether on an works or delivered basis, after any trade discounts and agents'

issions have been deducted. The cost of packing materials allowance for returnable cases is included. In industries where ucts attract Excise Duty the value stated is usually inclusive duty if sold duty-paid and exclusive of duty if sold in bond

eipts for work done and industrial services rendered

res for work done represent the amount charged for work ed out on materials supplied by a customer and include repair k. Within certain industries this heading covers a wide variety of ities, for example, within the food sector - butter packed on nission; within the textile industries - making up of garments, dressing and textile finishing; within printing and publishing paratory work on type-setting, block making and binding. Work is also significant in the electrical machinery and heavy neering industries, covering erection, installation and repair and ing work. Other activities within this heading include exploration research and development, glass cutting and dressing and ing of timber

strial services rendered include repairs and maintenance, instawork, and technical research and studies for other nisations.

tal goods produced for establishments' own use

includes all work of a capital nature carried out during the ar 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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