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Business Monitor

A publication of the Government Statistical Service

**Report on the
Census of Production**

**Pumps, valves and
compressors**



HMSO

Department of Industry
Business Statistics Office

PA333

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A publication of the Government Statistical Service

Report on the Census of Production 1973

Pumps, valves and compressors

Presented by the Secretary of State for Industry
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**Department of Industry
Business Statistics Office**

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PA333 PUMPS, VALVES AND COMPRESSORS

The information in this report relates to establishments classified to the Pumps, valves and compressors industry, minimum list heading 333 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Manufacturing pumps for handling liquids (including petrol station pumps); industrial valves and cocks including pneumatic control valves; air and gas compressors (excluding compressors for refrigerators) and exhausters; fluid power equipment including equipment for operating machinery by hydraulic or pneumatic means, including hydraulic pumps and motors, hydraulic control and ancillary valves, pneumatic motors, pneumatic and hydraulic actuators, boosters, cylinders, rams and accumulators and power packs. Parts of pumps, valves and compressors, other than component parts of internal combustion engines, are included.

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 1

PA333 2

Output and costs, 1970, 1971, 1972 and 1973
All United Kingdom establishments classified to the industry (a)

	Unit	1970	1971	1972	1973	
Enterprises (b)	Number	473	465	466	522	
Establishments (b)	"	519	535	536	602	
Sales of goods produced, work done and industrial services rendered (c)	£'000	358,624	410,207	432,780	466,468	
Capital goods produced for establishments' own use (d)	"					751
Non-industrial services rendered (e)	"					1,378
Goods merchanted or factored	"					54,551
Total sales and work done (c) (e)	"	383,968	439,851	464,152	523,149	
Increase during the year, work in progress and goods on hand for sale	"	12,628	-606	-1,666	15,141	
Gross output (c) (e)	"	396,596	439,245	462,486	538,290	
Purchases of materials for use in production, and packaging and fuel (d)	"	198,360	202,515	196,452	218,671	
Purchases of goods for merchenting or factoring (d)	"					42,617
Increase during the year, stocks of materials, stores and fuel	"	9,103	412	758	9,671	
Cost of industrial services received (f)	"	8,911	17,186	15,391	12,692	
Net output (g)	"	198,428	219,956	251,401	273,982	
Total employment (h)	Thousands	84.2	84.5	84.2	85.9	
Net output per head (g)	£	2,356	2,603	2,985	3,189	
Payments for non-industrial services (j)						
Rents, hire of plant, machinery and vehicles	£'000	3,093	
Commercial insurance premiums	"				2,676	
Bank charges	"				604	
Other non-industrial services	"				17,943	
Licensing of motor vehicles (k)	"				176	
Rates, excluding water rates (k)	"				3,496	
Gross value added at factor cost	"				245,995	
Gross value added at factor cost per head	£				2,863	

- (a) For 1973, estimates for establishments not making satisfactory returns and for establishments employing less than 20 persons accounted for 18 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 15 per cent.
- (b) Increase from 1972 to 1973 largely attributable to the improved estimates of the number of establishments with less than 20 employees - see notes on page (iii).
- (c) The figures for 1970-1972 do not include receipts for repairs and maintenance.
- (d) Not recorded separately for 1970-1972.
- (e) The figures for 1970-1972 do not include revenue from rents for industrial buildings.
- (f) The figures for 1970-1972 exclude the amounts payable for repairs and maintenance.
- (g) The definition of net output used in previous census reports provided for the deduction of amounts payable to other organisations for transport of goods within the United Kingdom. The net output and net output per head figures on that basis were:-

Year	Net output £'000	Net output per head £
1970	194,778	2,314
1971	215,790	2,553
1972	246,387	2,926

Additionally, the figures for 1970-1972 do not reflect revenue from rents or amounts payable for repairs and maintenance (see footnotes d and e).

- (h) Average number employed (full and part-time; see table 7) during the year (including working proprietors) by the establishment.
- (j) Not collected for 1970-1972 except for amounts payable to other organisations for transport of goods within the United Kingdom.
- (k) Not collected for 1970-1972.

TABLE 2

PA333 3

Capital expenditure, 1970, 1971, 1972 and 1973
All United Kingdom establishments classified to the industry (a)(b)

	£'000			
	1970	1971	1972	1973
Land and buildings				
New building work	2,229	1,754	1,505	3,356
Land and existing buildings				
Acquisitions	997	762	401	685
Disposals	1,888	1,537	595	2,278
Vehicles				
Acquisitions				
Motor cars (c)	1,645	1,831	2,479	2,026
Other vehicles (c)				333
Disposals				
Motor cars (c)	616	722	938	999
Other vehicles (c)				60
Plant and machinery				
Acquisitions	11,841	10,771	11,818	14,095
Disposals	901	1,246	828	1,506
Total net capital expenditure (d)	13,307	11,612	13,841	15,654

- (a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.
- (b) Capital expenditure in respect of manufacturing establishments where production had not commenced before the end of the year, is included.
- (c) Not recorded separately for 1970-1972.
- (d) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.

TABLE 3

Stocks and work in progress, 1970, 1971, 1972 and 1973
All United Kingdom establishments classified to the industry (a)

	£'000				
	1970	1971	1972	1973	
	Increase				Value at end of year
Materials, stores and fuel	9,103	412	758	9,671	59,864
Work in progress	5,639	-3,569	-1,363	11,067	68,764
Goods on hand for sale	6,989	2,963	-303	4,074	38,070
Total	21,731	-194	-908	24,812	166,698

- (a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.

TABLE 4

PA333 4

Analysis of establishments by size, 1973
All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab-lish-ments	Enter-prises (c)	Employment			Wages and salaries (e)			
			Total (b)	Opera-tives	Others (d)	Operatives		Others (d)	
						Total	per head	Total	per head
Number	Number	Number	Number	Number	Number	£'000	£	£'000	£
1 - 10	205	198	1,052	5,819	3,062	9,276	1,594	6,231	2,035
11 - 19	93	89	1,363						
20 - 49	72	72	2,385						
50 - 99	64	63	4,457						
100 - 199	67	64	9,703	5,866	3,820	9,279	1,582	7,432	1,945
200 - 299	25	23	6,073	3,759	2,313	5,908	1,572	4,248	1,837
300 - 399	18	18	6,064	3,694	2,364	6,819	1,846	4,469	1,891
400 - 499	12	12	5,388	3,378	2,010	5,670	1,678	4,016	1,998
500 - 749	21	19	12,827	7,712	5,115	12,666	1,642	9,841	1,924
750 - 999	9	9	7,806	5,079	2,727	8,958	1,764	5,522	2,025
1,000 - 1,499	8	8	9,515	5,798	3,717	10,061	1,735	7,301	1,964
1,500 - 1,999	4	4	7,058	4,507	2,551	7,412	1,645	4,841	1,898
2,000 and over	4	4	12,233	7,858	4,375	13,340	1,698	9,101	2,080
Total	602	522	85,924	53,470	32,054	89,388	1,672	63,001	1,965

- (a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.
 (b) Average number employed (full and part-time; see table 7) during the year (including working proprietors) by the establishment.
 (c) Some enterprises control establishments in more than one size group: the sum of the figures for the size groups therefore exceeds the total for the industry.
 (d) Administrative, technical and clerical employees.

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Total sales and work done (f)	Gross output	Net output		Gross value added at factor cost		Net capital expenditure (g)	Total stocks and work in progress at end of year
		Total	per head	Total	per head		
59,782	61,078	31,251	3,376	(h)	(h)	1,563	15,431
61,258	62,961	31,813	3,279	56,660(h)	2,988(h)	1,727	17,862
41,804	42,854	20,186	3,324	18,059	2,974	330	12,595
44,502	46,111	22,715	3,746	20,214	3,333	1,435	14,601
30,545	31,936	17,627	3,271	15,824	2,937	1,204	10,691
74,926	76,685	37,294	2,907	33,032	2,575	3,495	25,096
43,249	44,113	26,744	3,426	24,226	3,104	2,479	12,529
53,106	55,856	31,282	3,288	28,396	2,984	744	20,257
41,342	44,552	23,650	3,351	21,484	3,044	1,895	16,595
72,636	72,143	31,420	2,568	28,099	2,297	783	21,041
523,149	538,290	273,982	3,189	245,995	2,863	15,654	166,698

- (e) Another important component of labour costs, employers' national insurance contributions, graduated pensions, contributions to other pensions and welfare schemes and the running costs of canteens, is estimated for the industry at £15,520 thousand.
 (f) Comprises sales of goods produced (including capital goods manufactured, buildings constructed by establishments for their own use), work done, industrial and non-industrial services rendered, goods merchanted or factored.
 (g) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.
 (h) Gross value added data relates to establishments employing 1 - 199 persons.

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22
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TABLE 5

PA333 6

Regional distribution of employment, net capital expenditure and net output, 1973
All United Kingdom establishments classified to the industry (a)

Area	Employment (b)		Net capital expenditure (c)				Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (e)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	£'000	Other (d) £'000	Estimated net output £'000	Average number employed as a percentage of total average number employed in the industry in the region	Net output as a percentage of total of the industry in the United Kingdom
Standard regions of England									
North	1.8	2.1	*	*	*	*	1,584	32.6	0.6
Yorkshire and Humberside	7.7	9.0	1,456	9.3	14	1,442	20,582	87.0	7.5
East Midlands	4.0	4.7	1,069	6.8	*	*	*	*	*
East Anglia	3.7	4.3	866	5.5	*	*	*	*	*
South East	18.5	21.5	3,182	20.3	*	*	52,130	75.9	19.0
South West	12.4	14.4	2,671	17.1	*	*	33,799	76.7	12.3
West Midlands	10.7	12.4	*	*	*	*	26,170	79.7	9.6
North West	10.5	12.2	806	5.2	*	*	18,953	64.5	6.9
England	69.2	80.6	12,224	78.1	*	*	175,928	76.2	64.2
Wales	*	*	*	*	*	*	*	*	*
Scotland	*	*	*	*	*	*	*	*	*
Great Britain	84.9	98.8	15,502	99.0	*	*	210,703	77.3	76.9
Northern Ireland	1.0	1.2	151	1.0	*	*	2,875	97.1	1.1
Unallocated (a) (f)	-	-	-	-	-	-	60,403	-	22.1
United Kingdom	85.9	100.0	15,654	100.0	-1,593	17,247	273,982		100.0

- (a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.
(b) Average number employed (full and part-time; see table 7) during the year (including working proprietors).
(c) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.
(d) Acquisitions less disposals.
(e) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.
(f) Includes unallocated net output of establishments covering addresses in two or more regions.

TABLE 6

PA333 7

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 20 or more persons, 1973

Accounting year ended		Percentage of total returns received	Percentage of total number employed
		per cent	per cent
1973	April (a)	1.8	0.5
	May	1.8	0.4
	June	1.8	1.4
	July	3.6	3.9
	August	1.4	1.1
	September	12.3	13.7
	October	4.6	1.3
	November	5.9	6.7
	December	40.0	46.3
1974	January	1.8	4.1
	February	1.4	1.7
	March (b)	23.6	18.9
		100.0	100.0

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1974.

TABLE 7

Percentage analysis of employees, by full and part-time employment and sex, 1973 (a)

Sex	Full-time	Part-time	All employees
	per cent	per cent	per cent
Male	81	1	82
Female	15	3	18
	96	4	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) in the United Kingdom at mid-June, 1973.

TABLE 8

PA333 8

Sales of principal products of the industry by establishments employing 25 or more persons, including sales by establishments classified to other industries, 1973(a)

	Quantity		Value	
	Number		£'000	
Pumps (excluding hydraulic types):				
Centrifugal pumps, with stuffing box or mechanical seal:				
Single-stage, single entry impeller close coupled:				
Up to 4" discharge outlet	123,708		6,293	
Above 4" discharge outlet	3,043		920	
Single-stage, single entry impeller coupled:				
Up to 6" discharge outlet	22,887		7,279	
Above 6" discharge outlet	1,301		1,994	
Single and multi-stage, self priming close coupled:				
Up to 3" discharge outlet	..		2,488	
Above 3" discharge outlet				
Single and multi-stage, self priming, coupled				
	5,122		982	
Single stage double entry impeller:				
Up to 6" discharge outlet	1,637		998	
Above 6" discharge outlet	1,044		2,283	
Multi-stage, single entry impeller:				
Up to 3" discharge outlet	10,941		1,789	
Above 3" and up to 6" discharge outlet	802		2,070	
Above 6" discharge outlet	163		1,480	
Up to 3" discharge outlet	326		546	
Above 3" and up to 6" discharge outlet				
Above 6" discharge outlet				
Propeller and mixed flow	382		1,523	
Borehole type shaft drive pumps	831		925	
Liquid ring and peripheral pumps	6,865		2,486	
Other	(b)		(b)	
Centrifugal pumps, without stuffing box or mechanical seal:				
Circulators	1,041,366		12,359	
Electro-submersible contractors type/unchokeable	3,932		988	
Electro-submersible bore-hole:				
With motors up to 5 h.p	4,351		260	
With motors above 5 h.p and up to 20 h.p	483		317	
With motors above 20 h.p and up to 100 h.p	427		687	
With motors above 100 h.p	162		806	
Positive displacement pumps:				
Hand pumps	317,543		1,461	
Reciprocating pumps:				
Direct-acting steam driven	1,943		964	
Power-operated other than steam (including metering and diaphragm)	13,421		3,670	
Rotary pumps:				
Gear pumps	27,255		3,110	
Screw pumps, archimedes screw pumps and peristaltic pumps	26,203		3,052	

TABLE 8 (continued)

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	Quantity		Value	
	Number		£'000	
Pumps (excluding hydraulic types): (continued)				
Kerbside petrol and oil measuring pumps:				
Complete	13,268		4,656	
Parts	..		884	
Other pumps NES (except automotive and hydraulic fluid power pumps)	218,226(b)		7,533(b)	
Parts (other than those for kerbside petrol and oil measuring pumps)	..		24,903	
Total sales of pumps	..		99,706	
Industrial valves (excluding multi-port valves for use with hydraulic and pneumatic systems; actuators not forming an intrinsic part of the valve; valve components (e.g. raw material parts); inlet and exhaust valves for internal combustion engines; valves for use in aircraft systems; aerosol, bicycle and similar valves; sanitary taps and fittings and domestic gas cocks). Complete valve units and/or complete units with actuators that are intrinsic parts of the valves:				
Ferrous metal:				
Gate	910,155		22,272	
Globe	211,035		5,869	
Plug	307,362		4,052	
Ball	1,060,511		14,914	
Relief, safety and reducing	73,805		3,899	
Check	82,204		2,874	
Diaphragm	105,022		6,492	
Butterfly	155,128		3,053	
Parallel slide	21,653		4,329	
Penstock	13,599		618	
Automatic process control	39,248		7,896	
Cocks	30,556		210	
Other types	400,002		4,861	
Non-ferrous metal:				
Gate	1,711,875		4,384	
Globe	1,264,826		4,656	
Plug	3,794		128	
Ball	220,488		942	
Relief, safety and reducing	221,614		3,366	
Check	337,690		812	
Diaphragm	840,565		2,820	
Butterfly				
Parallel slide	35,843		423	
Penstock	-		-	
Automatic process control	96,304		1,717	
Cocks	1,726,542		1,200	
Other types	1,013,651		5,606	
Other materials	49,385		749	
Total sales of industrial valves	..		108,142	

TABLE 8 (continued)

PA333 10

	Quantity	Value
	Number	£'000
Compressors (excluding compressors for refrigerators):		
Air compressors and exhausters:		
Reciprocating:		
Portable:		
Not exceeding 50 cu ft per minute	8,262	661
Exceeding 50 cu ft per minute	5,719	5,993
Stationary:		
Not exceeding 80 cu ft per minute	36,883	6,586
Exceeding 80 cu ft per minute but not exceeding 650 cu ft per minute	6,727	6,652
Exceeding 650 cu ft per minute	780	2,412
Parts for reciprocating	..	10,054
Rotating piston (roots, screw, vane):		
Portable	14,671	16,495
Stationary:		
Not exceeding 80 cu ft per minute	76,027	4,940
Exceeding 80 cu ft per minute	7,890	4,082
Parts for rotating piston	..	2,614
Centrifugal and axial:		
Complete } Parts } } ..		1,263
Gas compressors and exhausters (excluding refrigerator compressors):		
Complete } Parts } } ..		3,971
Total sales of compressors	..	65,725
Fluid power equipment:		
Oil hydraulic equipment:		
Pumps:		
Gear	..	8,197
Vane	..	1,392
Radial piston	..	310
Axial piston	..	3,192
Other	..	1,072
Motors:		
Gear } Vane } } ..		748
Radial piston	..	3,478
Axial piston	..	1,624
Other	..	435
Cylinders (including linear actuators)	..	12,075
Actuators, semi rotary	..	1,413
Valves:		
Directional control	..	8,458
Pressure control	..	2,463

TABLE 8 (continued)

PA333 11

	Quantity	Value
	Number	£'000
Fluid power equipment: (continued)		
Oil hydraulic equipment: (continued)		
Valves: (continued)		
Volume control	..	690
Servovalves	..	459
Combination of valves	..	884
Accumulators (including intensifiers and surge dampers) } Fluidic devices and systems } Power units and systems } Compact hydrostatic transmission units } } ..		1,107
Parts including oil hydraulic flow line equipment and assemblies (e.g. connectors, pipe fittings, hose and tube assemblies and self-sealing couplings) but excluding filters and seals	..	15,112
Pneumatic power equipment:		
Motors	..	613
Actuators	..	2,328
Boosters } Rams } } ..		6,078
Accumulators	-	-
Other pneumatic appliances	..	4,048
Parts of pneumatic power equipment:		
Control valves	..	11,230
Other	..	9,621
Total sales of fluid power equipment	..	106,527
Other sales and work done:		
Unclassified sales	..	18,096
Waste products, residues etc.	..	1,571
Work done	..	17,039
Total sales of principal products of the Pumps, valves, compressors and fluid power equipment industry (MLH 333) and work done		416,806

Source: Business Monitor (PQ 333). Quarterly Statistics

- (a) Sales are deliveries on sale for home or abroad; forward sales are excluded. Values are net selling values, value added tax (or purchase tax where previously applicable) trade discounts and commissions are excluded.
- (b) Where indicated other centrifugal pumps with stuffing boxes or mechanical seals are included with "other pumps not elsewhere specified".

Notes

These notes give the main information needed for interpreting the figures in the industry Business Monitors: more detailed information about the census is given in a separate Business Monitor — PA1001 (Introductory Notes) of the Report on the Census of Production, 1973.

GENERAL INFORMATION

Changes made for 1973

The Census for 1973 was the first to be modified to bring it into line with similar inquiries being conducted in other member countries of the European Economic Communities. One modification has made possible the publication for the first time in the Annual Censuses of data on a number of additional items. These include:

- Capital goods purchased for establishments' own use (previously included with sales of goods produced etc.)
- Purchases of goods for merchanting or factoring (previously included with purchases of materials etc.)
- Payments for non-industrial services
- Licensing of motor vehicles
- Rates, excluding water rates
- Gross value added
- Amounts paid to outworkers (where applicable)
- Employers' national insurance contributions etc.

Suppression of information relating to individual undertakings.

The Statistics of Trade Act 1947 provides that — "No individual estimates or returns, and no information relating to an individual undertaking obtained under the foregoing provisions of this Act, shall, without the previous consent in writing of the person carrying on the undertaking which is the subject of the estimates, returns or information, be disclosed except—

(a) in accordance with directions given by the Minister in charge of the government department in possession of the estimates, returns or information to a government department or to the Import Duties Advisory Committee for the purposes of the exercise by that department or committee of any of their functions; or

(b) for the purposes of any proceedings for an offence under this Act or any report of these proceedings."

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

Symbols used

The following symbols are used throughout the P A 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. There may, therefore, be an apparent slight discrepancy between a sum of constituent items and a 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 as PQ1000 in the Business Monitor Series.

The SIC is revised every 10 years or so and is to be revised to bring it more closely into line with the General Industrial Classification of Economic Activities within the European Communities (NACE).

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 (e.g. steel making or sugar refining). Typically the establishment embraces all the activities carried on at a single address e.g. a farm, 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 separate 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 that case the establishment is defined to cover the combined activities at these addresses (termed local units). Separate figures are obtained, however, of employment and net capital expenditure at each unit.

Efforts are made by the Business Statistics Office to ensure, by negotiating with respondents, that the return from an establishment does not cover local units on addresses in more than one of the countries of the United Kingdom.

Further information about the statistical unit appeared in an article "The statistical unit in business inquiries" in Statistical News No. 13 May 1971.

Establishments are asked to exclude from their returns particulars relating to any department not engaged in production e.g. 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, which were 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. For these purposes an enterprise group is defined as a business consisting of either a single establishment, or of two or more establishments under common ownership or control. The bringing together of 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 which make returns to the quarterly inquiries, the industrial classification is derived from an analysis of their sales of commodities and is reviewed annually. Employment data is 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 is based on information provided by the Department of Employment from the annual censuses of employment.

Establishments with 20 or more employees are included in the censuses each year and the information they supply to the

census is supplemented by the returns that those of them with 25 or more employees provide to the quarterly inquiries. Information about establishments with less than 20 employees in most industries is less securely based, but increasing use has been made of data on these small establishments supplied by the Department of Employment. One benefit of using this information is an improvement in the estimates of the number of smaller establishments and enterprises, but there is little effect on other aggregates (e.g. employment, output, net capital expenditure).

Coverage

A return was required in the 1973 Census from each establishment with 20 or more employees. Each establishment is classified to an industry, as defined in the SIC, whose principal products form the major part of the establishment's sales.

Regions

The regions defined in Table 5 do not take account of the boundary changes arising out of the Local Government Act 1972 and the Local Government Act (Scotland) 1973. As these boundary changes did not come into effect until April 1974 in England and Wales and in May 1975 in Scotland, the regions defined for these analyses are consistent with boundaries which existed in 1973.

TERMS USED IN THE CENSUS REPORT

Average number employed

Establishments were required to state the number of persons on the payroll (i.e. whose national insurance cards were held by them) on the average during the year of return, whether full-time or part-time employees. 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. Outworkers (i.e. 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, superintendents and works foremen; research, 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 in the figures for 1970 to 1973. 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 also asked to include a total net capital expenditure figure for the calendar year 1973.

(a) New building work

This represents the cost incurred during the year of new building and other construction 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 or 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 any 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 of premium payable for leaseholds acquired (excluding the value of any assets acquired in taking over an existing business), and the amounts receivable for any 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.

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 workers 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 (rent of buildings and capital equipment, commercial insurance premiums, bank charges and amounts paid for professional services, postal etc. services, transport, advertising etc.). 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 materials and components bought for use in production; of fuel and electricity for all purposes; of packaging materials including the cost of returnable cases and containers when first purchased; of workshop materials; office materials and materials for repairs to establishment's own buildings, plant and vehicles when carried out by their own work people included in the returns; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also

included. Purchases of goods for merchanting or factoring were collected separately for 1973. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account. The values shown exclude value added tax but include any duty paid (less rebate etc.), values excluded trade discounts allowed. The cost of transport is included only if included in the cost of materials as invoiced; amounts paid to transport organisations, including an establishment's own separate transport organisations for delivery of materials and fuel are, therefore, excluded. Materials purchased overseas are included at the c.i.f. cost plus any duty payable if the cost of transport from the docks are not included in the invoiced price, but at their full delivery cost if invoiced "carriage paid home". Materials and fuel transferred from another department of the establishment not covered by the same return are included at the estimated selling value recorded by the other department.

Sales of goods produced, work done and industrial services rendered

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

The value shown for sales is the "net selling value" defined as the amount (excluding value added tax) 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.

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 includes repairs and maintenance, installation work, and technical research and studies rendered to other organisations.

Capital goods produced for establishments' own use

This includes all work carried out during the year by the establishments' own staff for their own use, which was of a capital nature.

Non-industrial services rendered

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

Goods merchant or factored

Merchant 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, together with a margin of overhead costs, and profits. Progress payments made to sub-contractors are excluded and progress payments received from other organisations are not deducted.

Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. 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 any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to national insurances and pension schemes are excluded.

Remuneration paid to outworkers

The remuneration paid to outworkers (i.e. 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 and graduated pensions 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 holiday homes, etc. for employees, former employees, and their dependants are also included.

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