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Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production

Precision chains and other mechanical engineering



HMSO

Department of Industry
Business Statistics Office

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PA349.2 Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1973

Precision chains and other mechanical engineering

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

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PA363	Telegraph and telephone apparatus and equipment	PA494.1	Toys, games and children's carriages
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PA349.2 PRECISION CHAINS AND OTHER MECHANICAL ENGINEERING

PA349.2 1

The information in this report relates to establishments classified to the Precision chains and other mechanical engineering industry, minimum list heading 349.2 and 3 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Manufacturing transmission and other precision chains including transmission chains for motor vehicles and cycles. The undertaking by establishments of general sub-contract or repair work and establishments whose mechanical engineering products (including machinery parts) are of such a mixed character that they cannot be allocated elsewhere among the mechanical engineering group of industries - Order VII.

Prior to 1971, for census purposes, the manufacture of precision chains and other mechanical engineering formed part of the General mechanical engineering industry and separate figures are not available. Aggregate results for the whole of MLH 349 are shown in tables 1b, 2b and 3b; the remaining tables relate only to MLH 349.2 and 3.

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 1a

PA349,2 2

Output and costs, 1971, 1972 and 1973.
All United Kingdom establishments classified to the Precision chains and other mechanical engineering industry (a)

	Unit	1971	1972	1973
Enterprises	Number	5,292	4,540	4,947
Establishments	"	5,430	4,735	5,126
Sales of goods produced, work done and industrial services rendered (b)	£'000			584,926
Capital goods produced for establishments' own use (c)	"	621,546	511,904	1,500
Non-industrial services rendered (d)	"			4,502
Goods merchanted or factored	"	36,512	29,559	23,710
Total sales and work done (b) (d)	"	658,058	541,462	614,639
Increase during the year, work in progress and goods on hand for sale	"	-501	800	12,629
Gross output (b) (d)	"	657,556	542,262	627,268
Purchases of materials for use in production, and packaging and fuel (c)	"			219,067
Purchases of goods for merchenting or factoring (c)	"	261,557	211,378	20,771
Increase during the year, stocks of materials, stores and fuel	"	493	2,322	10,462
Cost of industrial services received (e)	"	18,513	15,898	23,366
Net output (f)	"	377,979	317,308	374,526
Total employment (g)	Thousands	159.9	129.9	132.6
Net output per head (f)	£	2,364	2,443	2,824
Payments for non-industrial services (h)				
Rents, hire of plant, machinery and vehicles	£'000			6,248
Commercial insurance premiums	"			3,214
Bank charges	"			487
Other non-industrial services	"			15,598
Licensing of motor vehicles (j)	"			250
Rates, excluding water rates (j)	"			5,404
Gross value added at factor cost	"			343,326
Gross value added at factor cost per head	£			2,589

- (a) For 1973, estimates for establishments not making satisfactory returns and for establishments employing less than 20 persons accounted for 40 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 17 per cent.
- (b) The figures for 1971-1972 do not include receipts for repairs and maintenance.
- (c) Not recorded separately for 1971-1972.
- (d) The figures for 1971-1972 do not include revenue from rents for industrial buildings.
- (e) The figures for 1971-1972 exclude the amounts payable for repairs and maintenance.
- (f) 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 £
1971	372,461	2,329
1972	313,289	2,412

Additionally, the figures for 1971-1972 do not reflect revenue from rents or amounts payable for repairs and maintenance (see footnotes d and e).

- (g) Average number employed (full and part-time; see table 7) during the year (including working proprietors) by the establishment.
- (h) Not collected for 1971-1972 except for amounts payable to other organisations for transport of goods within the United Kingdom.
- (j) Not collected for 1971-1972.

TABLE 1b

PA349.2 3

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

	Unit	1970	1971	1972	1973
Enterprises	Number	5,128	5,321	4,585	4,996
Establishments	"	5,222	5,469	4,791 ^R	5,186
Sales of goods produced, work done and industrial services rendered (b)	£'000				738,308
Capital goods produced for establishments' own use (c)	"	708,209	756,051	646,750	2,214
Non-industrial services rendered (d)	"				6,881
Goods merchanted or factored	"	33,360	50,523	41,779	46,957
Total sales and work done (b) (d)	"	741,569	806,574	688,527	794,360
Increase during the year, work in progress and goods on hand for sale	"	12,831	906	2,051	14,521
Gross output (b) (d)	"	754,400	807,481	690,578	808,881
Purchases of materials for use in production, and packaging and fuel (c)	"				277,113
Purchases of goods for merchenting or factoring (c)	"	310,049	317,973	269,797	38,994
Increase during the year, stocks of materials, stores and fuel	"	7,457	-604	2,661	12,822
Cost of industrial services received (e)	"	18,731	19,146	16,707	26,785
Net output (f)	"	433,077	469,758	406,734	478,812
Total employment (g)	Thousands	205.1	197.2	165.0	166.7
Net output per head (f)	£	2,112	2,382	2,465	2,872
Payments for non-industrial services (h)					
Rents, hire of plant, machinery and vehicles	£'000				8,839
Commercial insurance premiums	"				4,100
Bank charges	"				563
Other non-industrial services	"				18,875
Licensing of motor vehicles (j)	"				310
Rates, excluding water rates (j)	"				6,654
Gross value added at factor cost	"				439,471
Gross value added at factor cost per head	£				2,636

- (a) For 1973, estimates for establishments not making satisfactory returns and for establishments employing less than 20 persons accounted for 33 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 14 per cent.
- (b) The figures for 1970-1972 do not include receipts for repairs and maintenance.
- (c) Not recorded separately for 1970-1972.
- (d) The figures for 1970-1972 do not include revenue from rents for industrial buildings.
- (e) The figures for 1970-1972 exclude the amounts payable for repairs and maintenance.
- (f) 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	427,342	2,084
1971	463,410	2,350
1972	401,926	2,436

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

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

TABLE 2a

PA349.2 4

Capital expenditure, 1971, 1972 and 1973

All United Kingdom establishments classified to the Precision chains and other mechanical engineering industry (a)(b)

	£'000		
	1971	1972	1973
Land and buildings			
New building work	5,456	2,301	3,368
Land and existing buildings			
Acquisitions	2,751	3,210	1,458
Disposals	4,189	3,964	1,483
Vehicles			
Acquisitions			
Motor cars (c)	} 4,188	4,629	} 3,256
Other vehicles (c)			
Disposals			
Motor cars (c)	} 1,690	2,149	} 1,273
Other vehicles (c)			
Plant and machinery			
Acquisitions	23,538	23,013	23,533
Disposals	2,459	1,565	1,878
Total net capital expenditure (d)	27,595	25,475	27,537

- (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 1971-1972.
 (d) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.

TABLE 2b

PA349.2 5

Capital expenditure, 1970, 1971, 1972 and 1973

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

	£'000			
	1970	1971	1972	1973
Land and buildings				
New building work	6,908	5,956	2,984	4,425
Land and existing buildings				
Acquisitions	1,712	2,845	3,251	4,043
Disposals	844	4,425	4,074	1,982
Vehicles				
Acquisitions				
Motor cars (c)	} 4,329	4,518	4,981	} 3,576
Other vehicles (c)				
Disposals				
Motor cars (c)	} 1,530	1,831	2,297	} 1,423
Other vehicles (c)				
Plant and machinery				
Acquisitions	28,867	30,089	28,983	31,635
Disposals	1,649	2,863	1,938	2,113
Total net capital expenditure (d)	37,793	34,290	31,890	38,787

- (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 3a

PA349.2 6

Stocks and work in progress, 1971, 1972 and 1973

All United Kingdom establishments classified to the Precision chains and other mechanical engineering industry (a)

	1971			1972		1973	
	Increase			Value at end of year			
Materials, stores and fuel	493	2,322	10,462	48,945			
Work in progress	-4,403	3,806	11,508	57,881			
Goods on hand for sale	3,902	-3,006	1,121	23,887			
Total	-8	3,122	23,091	130,713			

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

TABLE 3b

PA349.2 7

Stocks and work in progress, 1970, 1971, 1972 and 1973

All United Kingdom establishments classified to the General mechanical engineering industry (a)

	1970		1971		1972		1973	
	Increase		Value at end of year					
Materials, stores and fuel	7,457	-604	2,661	12,822	62,809			
Work in progress	6,406	-6,245	4,483	12,514	77,380			
Goods on hand for sale	6,425	7,151	-2,432	2,007	45,128			
Total	20,288	302	4,711	27,344	185,317			

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

TABLE 4

PA349.2 8

Analysis of establishments by size, 1973

All United Kingdom establishments classified to the Precision chains and other mechanical engineering 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					
1 - 10	3,039	3,013	15,646	47,728	11,829	77,116	1,616	23,560	1,992
11 - 19	1,074	1,067	15,560						
20 - 49	630	622	18,886						
50 - 99	206	205	14,124						
100 - 199	102	96	13,989	10,793	3,170	17,258	1,599	6,077	1,917
200 - 299	26	25	6,395	4,821	1,567	7,716	1,601	2,725	1,739
300 - 399	7	7	2,304	1,505	799	2,539	1,687	1,608	2,012
400 - 499	12	10	5,380	3,763	1,617	6,256	1,663	2,950	1,824
500 - 749	14	13	7,963	5,361	2,596	9,631	1,797	4,853	1,870
750 - 999	6	5	5,079	3,305	1,774	4,716	1,427	3,557	2,005
1,000 - 1,999	4	4	6,169	4,272	1,897	6,577	1,540	3,489	1,839
2,000 and over	6	4	21,119	15,575	5,544	24,281	1,559	10,347	1,866
Total	5,126	4,947	132,614	97,123	30,793	156,089	1,607	59,165	1,921

- (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						
								£'000	£	£'000	£
287,593	292,669	181,235	2,822	(h)	(h)	13,127	39,808				
64,052	64,844	37,933	2,712	203,232(h)	2,599(h)	3,611	11,278				
32,604	33,375	16,996	2,658	15,628	2,444	1,204	7,727				
12,786	12,979	6,123	2,658	5,452	2,366	374	3,484				
27,970	28,544	16,709	3,106	14,326	2,663	1,063	7,417				
45,731	46,872	23,987	3,012	21,420	2,690	1,644	13,179				
25,911	26,768	14,934	2,940	13,416	2,641	1,207	9,101				
35,632	36,501	21,268	3,448	18,883	3,061	2,014	10,436				
82,359	84,716	55,341	2,620	50,969	2,413	3,292	28,284				
614,639	627,268	374,526	2,824	343,326	2,589	27,537	130,713				

- (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 £19,862 thousand. In addition, for 1973 the remuneration to outworkers on returns received was £130 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.

TABLE 5

PA349.2 10

Regional distribution of employment, net capital expenditure and net output, 1973
All United Kingdom establishments classified to the Precision chains and other mechanical engineering 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	£'000	£'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	8.0	6.1	1,577	5.7	35	1,542	12,449	57.9	3.3	
Yorkshire and Humberside	17.9	13.5	4,896	17.8	400	4,495	30,708	58.5	8.2	
East Midlands	6.2	4.7	1,133	4.1	8	1,125	7,195	40.0	1.9	
East Anglia	2.1	1.6	557	2.0	1	556	2,303	37.0	0.6	
South East	42.9	32.4	8,062	29.3	*	*	58,592	43.6	15.6	
South West	9.9	7.4	1,884	6.8	16	1,868	10,628	38.2	2.8	
West Midlands	20.7	15.6	3,902	14.2	*	*	26,194	46.6	7.0	
North West	16.9	12.8	3,394	12.3	61	3,334	18,180	43.7	4.9	
England	124.7	94.0	25,405	92.3	*	*	166,250	46.5	44.4	
Wales	*	*	*	*	*	*	*	*	*	
Scotland	3.9	2.9	1,207	4.4	89	1,118	6,675	55.2	1.8	
Great Britain	*	*	*	*	*	*	*	*	*	
Northern Ireland	*	*	*	*	*	*	*	*	*	
Unallocated (a) (f)	-	-	-	-	-	-	196,768	-	52.5	
United Kingdom	132.6	100.0	27,537	100.0	-24	27,561	374,526	/	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

PA349.2 11

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 20 or more persons, 1973 classified to the Precision chains and other mechanical engineering industry.

Accounting year ended	Percentage of total returns received		Percentage of total number employed	
		per cent		per cent
1973	April (a)	4.0		2.7
	May	2.8		1.2
	June	4.0		2.7
	July	3.6		4.0
	August	4.6		4.0
	September	6.8		18.7
	October	3.5		6.1
	November	2.8		1.6
	December	36.3		30.2
1974	January	3.2		1.4
	February	3.0		1.6
	March (b)	25.4		25.8
		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) General mechanical engineering industries, minimum list heading 349.

Sex	Full-time		Part-time		All employees	
		per cent		per cent		per cent
Male	80		1		81	
Female	15		4		19	
	95		5		100	

Source: Department of Employment

- (a) The percentages relate to the numbers employed (excluding working proprietors) in the United Kingdom in minimum list heading 349 at mid-June, 1973. In the 1973 Census of Production the employment of the "Precision chains and other mechanical engineering" industry represented 80 per cent of the employment of minimum list heading 349 as a whole.

TABLE 8

PA349.2 12

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

	Value
	£'000
Transmission chains:	
Of steel	19,032
Of iron	
Precision chains other than transmission chains	
Cylinder liners and inserts:	
For motor vehicles	
For aircraft	
Other	4,504
Filters (excluding air filters for air conditioning equipment, water filters and filter presses):	
Oil:	
For hydraulic equipment other than for motor vehicles and hydraulic equipment	3,190
Other	15,553
Gaskets and jointings (including metallic packings)	15,794
Gears (other than for motor vehicles including cycles and tractors) and parts:	
Helical, spur and bevel gears	9,098
Worm gears	3,621
Other gears	4,546
Gear boxes, new and reconditioned (other than for motor vehicles including cycle and tractors):	
Helical, spur and bevel gear boxes:	
Industrial	9,904
Marine	707
Worm gear boxes	9,333
Geared motor units	3,810
Other	4,564
Parts of gear boxes (excluding gears)	2,729
Lubricators and parts (other than for railway wagon etc. axle boxes)	4,656
Mechanical power transmission plant:	
Complete	7,696
Parts	4,913
Moulding boxes and parts thereof	57
Oil fuel burners:	
Domestic, up to and including 150,000 btu/h	2,683
Industrial, over 150,000 btu/h	8,984
Other burners (other than oil fuel)	3,818
Oil seals	10,719
Pistons:	
For motor vehicles	
For aircraft	
Other	25,846
Piston rings, packing rings, etc.:	
For motor vehicles	
For aircraft	
Other	10,880
Pulleys and pulley wheels	3,467

TABLE 8. (continued)

PA349.2 13

	Value
	£'000
Railway and locomotive brake gear	7,800
Rolls of iron or steel:	
For metal rolling mills:	
Of cast iron	
Of cast steel	
Of forged steel	13,861
For machinery other than metal working	1,748
Diving equipment, including parts and accessories	..
Tyre, inner tube and other similar valves for inflatable equipment	..
Waste products	2,703
Work done:	
Machinery, equipment and plant (other than marine machinery, complete process plant, constructional steelwork and heating, ventilating and air-conditioning plant) erected and installed:	
Mechanical engineering	13,527
Other	3,760
Repairs and jobbing work	69,133
Other work done (including jacquard card designing and cutting)	4,232
Unclassified sales	79,065
Total sales of principal products of the Precision chains and other mechanical engineering industry (MLH 349.2) and work done	385,933

Source: Business Monitor (PQ349.2). 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.

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 merchandising 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. merchandising, 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 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 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 exclude 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 injury 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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