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Business Statistics Office

Business Monitor

Report on the Census of Production

Motor vehicle manufacturing



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PA381.1 Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1979

Motor vehicle manufacturing

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

Introductory notes

Stone and slate quarrying and mining

Chalk, clay, sand and gravel extraction Petroleum and natural gas

Miscellaneous mining and quarrying

Bacon curing, meat and fish products

Vegetable and animal oils and fats

Tobacco Coke ovens and manufactured fuel

Pharmaceutical chemicals and preparations

Synthetic resins and plastics materials and

Cocoa, chocolate and sugar confectionery
Fruit and vegetable products

Bread and flour confectionery

Milk and milk products

Animal and poultry foods

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PA229.2 Starch and miscellaneous foods

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PA239.1 Spirit distilling and compounding

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PA381.1 MOTOR VEHICLE MANUFACTURING

The information in this report relates to establishments classified to the Motor vehicle manufacturing industry, minimum list heading 381.1 in the Standard Industrial Classification (revised 1968). The activities of the industry include:

The manufacture and assembly of passenger cars, commercial goods vehicles, road tractors solely for tractor-trailer combinations, buses, battery-electric vehicles and three wheeled vehicles; the manufacture of engines, bodies, chasis, chassis frames, seats and seat safety belts for motor vehicles, cabs for commercial vehicles and motor body shells; and manufacturing all other parts and accessories (except rough or semi-finished castings and forgings) when made wholly or primarily of metal and not reported elsewhere. Establishments specialising in re-conditioning engines and gear boxes are excluded.

> In interpreting the data in the tables it is essential to bear in mind the notes and definitions which commence on page (iii).

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Output and costs, 1975–1979
All United Kingdom establishments classified to the industry (a)

	Unit	1975	1976	1977	1978	1979
Enterprises	Number	1,739	1,748	1,744	1,769	1,768
Establishments		1,946	1,957	1,947	1,979	1,990
Sales of goods produced	£ thousand	5,107,282(b)	5,505,357	6,399,500	7,330,315	8,150,792
Receipts for work done and industrial services rendered		(b)	35,376	32,173	57,687	72,034
Capital goods produced for establish- nents' own use	u san sa	(b)	18,774	47,210	46,065	72,900
Non-industrial services rendered	"	8,101	7,317	9,918	11,967	14,571
loods merchanted or factored		538,936	720,619	1,123,549	1,402,904	1,806,681
Total sales and work done (c)	,,	5,654,320	6,287,443	7,612,350	8,848,938	10,116,978
ncrease during the year, work in rogress and goods on hand for sale		68,480	227,776	419,498	106,248	241,288
Gross output	"	5,722,800	6,515,219	8,031,849	8,955,186	10,358,267
durchases of materials for use in pro- luction, and packaging and fuel		3,262,597	3,451,790	3,781,857	4,153,018	4,574,397
urchases of goods for merchanting or actoring	"	354,667	531,210	866,920	1,016,436	1,422,507
ncrease during the year, stocks of naterials, stores and fuel	"	9,468	70,997	39,233	39,605	73,377
cost of industrial services received		75,417	97,750	126,385	144,682	168,836
Net output	u	2,039,588	2,505,466	3,295,920	3,680,654	4,265,904
otal employment (d)	Thousands	462.2	453.7	474.4	476.9	463.2
Net output per head	£	4,413	5,522	6,947	7,718	9,210
ayments for non-industrial services						
Hire of vehicles, plant and machinery	£ thousand	19,850(e)	15,790	18,968	28,189	33,357
Rents of industrial and commercial buildings		(e)	12,003	15,451	18,236	25,124
Commercial insurance premiums	"	14,924	19,025	21,642	24,959	25,641
Bank charges	"	1,269	1,887	1,808	2,209	2,745
Other non-industrial services (f)	"	143,066	165,867	215,972	273,504	379,228
icensing of motor vehicles		1,261	1,725	3,112	2,537	4,432
ates, excluding water rates	"	38,140	43,569	49,210	52,555	56,811
Gross value added at factor cost	"	1,821,077	2,245,600	2,969,757	3,278,466	3,738,564
Gross value added at factor cost per head	£	3,940	4,950	6,260	6,874	8,071

⁽a) Including estimates for establishments not making satisfactory returns, non-response and establishments not selected for the Census. Satisfactory returns accounted for 89 per cent of employment within the industry.

TABLE 2

Capital expenditure, 1975—1979
All United Kingdom establishments classified to the industry (a)(b)

					£ thousan
	1975	1976	1977	1978	1979
_and and buildings					
New building work	17,443	21,802	36,104	73,168 .	89,505
Land and existing buildings					
Acquisitions	6,414	7,723	19,079	8,439	9,778
Disposals	4,259	5,149	3,244	4,914	8,919
Vehicles					
Acquisitions	16,358	20,094	34,880	37,555	61,864
Disposals	7,484	8,701	10,006	16,983	20,867
Plant and machinery					
Acquisitions	149,210	161,403	237,113	324,765	544,287
Disposals	2,929	3,303	3,057	6,175	5,998
Total net capital expenditure	174,754	193,868	310,871	415,855	669,651

⁽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, 1975–1979
All United Kingdom establishments classified to the industry (a)

All Officed Kingdom establishine						£ thou
	1975	1976	1977	1978		1979
	ing a consequence	30040000	Increase			Value at end of year
Materials, stores and fuel	9,468	70,997	39,233	39,605	73,377	548,971
Vork in progress	7,866	162,910	209,921	60,453	36,126	905,058
Goods on hand for sale	60,614	64,865	209,577	45,795	205,163	966,403
Total	77,948	298,772	458,732	145,853	314,665	2,420,433

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

⁽b) Receipts for work done and industrial services rendered and capital goods produced for establishments' own use, included in sales of goods produced.

⁽c) Details of manufacturers' quarterly sales of principal products are published regularly in Business Monitor PQ381.1.

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

⁽e) Rents of industrial and commercial buildings (not recorded separately) included in hire of vehicles, plant and machinery.

⁽f) For 1975–1978 transport of goods by road (within the United Kingdom) was not recorded separately. For 1979 the amount payable was £102,365 thousand.

⁽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, 1979
All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab- lish- ments	Enter- prises (c)	Employmen	Employment		Wages and sa			
			Total		Others	Operatives		Others (e)	
			(d)	tives	(e)	Total	per head	Total	per head
	Number	Number	Number	Number	Number	£ thousand	£	£ thousand	£
1–10	1,003	983	5,031)						
11-19	334	324	4,685)						
20-49	252	244	7,822)	20,021	5,400	76,474	3,820	26,644	4,934
50–99	129	127	9,200)						
100-199	102	92	14,718	11,426	3,259	44,588	3,902	15,855	4,865
200-299	37	35	8,885	6,707	2,173	26,834	4,001	10,778	4,960
300-399	20	17	7,041	5,301	1,739	23,051	4,349	9,341	5,371
400-499	16	15	7,264	5,420	1,841	22,610	4,172	9,972	5,416
500-749	20	18	12,428	9,242	3,184	36,329	3,931	15,695	4,929
750-999	16	14	13,628	10,444	3,184	46,653	4,467	18,129	5,694
1,000-1,499	26	23	32,102	23,089	9,013	104,549	4,528	46,547	5,164
1,500—1,999	11	10	18,483	14,376	4,107	67,488	4,694	23,852	5,808
2,000-2,499	5	4	10,478	8,054	2,424	38,047	4,724	14,221	5,867
2,500-2,999	5	5	14,120	10,846	3,274	48,962	4,514	19,876	6,071
3,000-7,499	5	5	21,114	16,487	4,627	76,103	4,616	29,820	6,445
7,500-9,999	5	4	43,870	33,409	10,461	137,511	4,116	56,021	5,355
10,000 and over	4	3	232,314	175,756	56,558	833,705	4,744	375,645	6,642
Total	1,990	1,768	463,183	350,578	111,244	1,582,905	4,515	672,396	6,044

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

Total sales and work done (g)	Gross output	Gross output Net output		Gross value added at factor cost		Net capital expenditure (h)	Total stocks and work in progress at end of year
		Total	per head	Total	per head		
£ thousand	£ thousand	£ thousand	£	£ thousand	£	£ thousand	£ thousand
469,516	478,515	200,836	7,511	(j)	(j)	17,739	89,817
262,050	266,463	114,143	7,755	278,853(j)	6,726(j)	9,715	55,953
182,150	182,810	72,097	8,115	62,471	7,031	4,825	44,137
147,694	152,214	65,412	9,290	58,042	8,243	6,626	36,370
161,370	164,530	61,387	8,451	52,602	7,242	5,983	34,426
231,308	236,143	105,880	8,519	91,629	7,373	7,550	51,600
273,590	279,901	125,828	9,233	113,713	8,344	12,300	66,779
605,467	628,977	267,655	8,338	238,792	7,439	23,318	148,240
355,577	360,541	150,514	8,143	134,984	7,303	15,336	79,261
206,402	210,739	91,767	8,758	82,442	7,868	8,903	43,710
282,539	285,747	121,271	8,589	104,827	7,424	12,912	62,573
383,704	390,633	177,852	8,423	167,857	7,950	106,703	91,317
773,134	783,396	233,296	5,318	198,673	4,529	34,951	223,083
5,782,477	5,937,657	2,477,966	10,666	2,153,680	9,271	402,791	1,393,166
10,116,978	10,358,267	4,265,904	9,210	3,738,564	8,071	669,651	2,420,433

⁽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 £410,251 thousand. The remuneration of outworkers on returns received was £326 thousand.

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

⁽c) The count of enterprises shown in each row represents the number of enterprises, irrespective of size, owning the establishments shown in the previous column, i.e. the number of enterprises owning the establishments within the size group indicated by the row heading. It should be noted that because an enterprise may own establishments in more than one size group, the sum of the individual enterprise counts may exceed the total for the industry.

⁽d) Including working proprietors.

⁽e) Administrative, technical and clerical employees.

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

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

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

PA381.1

TABLE 6

Regional distribution of employment, net capital expenditure, net output and gross value added at factor cost, 1979 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	8.1	1.7	6,739	1.0	62,578	47,468	57.0
Yorkshire and Humberside	15.2	3.3	13,807	2.1	125,297	111,956	50.6
East Midlands	13.2	2.8	12,451	1.9	137,593	121,803	27.4
East Anglia	6.6	1.4	9,315	1.4	51,652	47,265	28.1
South East	140.5	30.3	205,490	30.7	1,683,506	1,487,823	8.5
South West	11.8	2.6	13,978	2.1	94,728	82,351	36.6
West Midlands	149.2	32.2	171,526	25.6	1,130,055	973,259	28.1
North West	71.7	15.5	108,420	16.2	658,343	579,992	24.9
England	416.3	89.9	541,725	80.9	3,943,752	3,451,918	
Wales	22.9	5.0	110,579	16.5	177,647	156,265	41.9
Scotland	21.7	4.7	16,274	2.4	130,588	117,477	90.7
Great Britain	460.9	99.5	668,578	99.8	4,251,987	3,725,660	-
Northern Ireland	2.3	0.5	1,073	0.2	13,916	12,905	84.3
United Kingdom	463.2	100.0	669,651	100.0	4,265,904	3,738,564	

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

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

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

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.

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments, 1979

Accounting year end	ed Percenta	Percentage of total returns received		er employed
	per cent		per cent	
979 April (a)	2.7		0.1	
May	3.0		0.4	
June	2.4		0.8	
July	4.8		4.2	
August	3.3		1.0	
Septembe	11.1		2.9	
October	2.7		0.6	
Novembe	0.9		0.1	
Decembe	48.5		86.6	
1980 January	2.1		0.2	
February	1.5		0.3	
March (b	17.1		3.0	

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1980.

TABLE 7

Percentage analysis of employees, by full and part-time employment and sex, 1977(a) Motor vehicle manufacturing minimum list heading 381.1

Sex	Full-time	Part-time	All employees
	per cent	per cent	per cent
Male	88	_	88
Female	10	2	12

Source: Department of Employment

PA381.1

The percentages relate to the numbers employed (excluding working proprietors) in the United Kingdom in minimum list heading 381 at mid-June, 1977, the latest date for which information is available. In the 1977 Census of Production the employment of the Motor vehicle manufacturing industry represented 96 per cent of the employment of minimum list heading 381 as a whole.

TABLE 8

Operating ratios, 1978–1979
All United Kingdom establishments classified to the industry (a)

	Unit	1978	1979
Gross output per head	£	18,777	22,363
Net output per head	£	7,718	9,210
Gross value added per head	£	6,874	8,071
Gross value added as a percentage of gross output	%	37	36
Ratio of gross output to stocks (b)		4.2	4.3
Wages and salaries as a percentage of gross value added	%	61	60
Ratio of operatives to administrative, technical and clerical employees		3.4	3.2
Wages and salaries per administrative, technical and clerical employee	£	5,207	6,044
Wages and salaries per operative	£	3,938	4,515
Net capital expenditure per head	£	872	1,446
Net capital expenditure as a percentage of gross value added	%	13	18

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

(b) Stocks include materials, stores and fuel, work in progress and goods on hand for sale at the end of the business year.

NOTES

PA381.1

These notes give the main information needed for interpreting the figures in the industry Business Monitors: more detailed information about the census is given in a separate Business Monitor - PA 1001 (Introductory Notes) of the Report on the Census of Production, 1979.

GENERAL INFORMATION

Changes made for 1979

The Census for 1979 is in line with similar inquiries being conducted in other member countries of the European Community.

The census differed from the 1978 census in three respects. A question on the leasing of capital assets was removed from the form and a question on road transport costs was added. The sample of units in the 10 to 19 employment size band included for the 1978 census was not repeated.

Suppression of information relating to individual undertakings Section 9(5) (b) of the Statistics of Trade Act 1947 states - "The following provisions shall have effect with respect to any report, summary or other communication to the public of information obtained under the foregoing provisions of this Act—

in compiling any such report, summary or communication the competent authority shall so arrange it as to prevent any particulars published therein from being identified as being particulars relating to any individual person or undertaking except with the previous consent in writing of that person or the person carrying on that undertaking, as the case may be; but this provision shall not prevent the disclosure of the total quantity or value of any articles produced, sold or delivered; so, however, that before disclosing any such total the competent authority shall have regard to any representations made to them by any person who alleges that the disclosure thereof would enable particulars relating to him or to an undertaking carried on by him to be deduced from the total disclosed."

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

Symbols used

The following symbols are used throughout the PA series of Rusiness Monitors:

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

Rounding of figures

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

Industrial classification

The United Kingdom Standard Industrial Classification (SIC) was first issued in 1948 and was subsequently revised in 1958, 1968 and 1980. It exists to promote uniformity and comparability in the official statistics of the United Kingdom.

Prior to the 1980 revision the general principles followed were those of the International Standard Industrial Classification of all Economic Activities of the United Nations Statistical Office but the United Kingdom SIC has reflected the organisation and structure of industry and trade as it existed in the United Kingdom. For the 1980 revision an attempt was made to align the United Kingdom classification as closely as practicable with NACE, the classification in use by the Statistical Office of the European Community. The SIC is a classification by activity and is not a commodity classification. An index, based on the 1968 SIC for all commodity headings for which sales data are provided in the Quarterly Business Monitors is published in Business Monitor PO 1000.

Statistical units

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

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

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

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

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

THE REGISTER

The register permits a questionnaire to be sent direct to the reporting establishment on which the latter can include information relating to all the manufacturing (or local) units which it comprises. The inquiries provide a major source of information for keeping the register continuously up-to-date and act as a check on its detail and structure. For the establishments on the register making returns to the quarterly inquiries, the industrial classification is derived from an analysis of their sales of commodities and is reviewed annually. Employment data are entered on the register from returns to the annual census of production. In cases where an establishment does not make a return to these inquiries the employment data are based on information provided by the Department of Employment from the annual censuses of employment. New additions to the register are obtained from various sources including the Department of Employment and HM Customs and Excise. The 1973 Finance Act allows the latter to pass lists of businesses registered for VAT to the BSO. Where necessary details are sought directly from new businesses. Units which cease to trade are removed from the live register.

Coverage

In recent censuses returns have been required from all establishments employing 20 or more. For the 1979 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.

Region

The regions defined in Table 5 take account of the boundary changes arising out of the Local Government Act 1972 and the Local Government Act (Scotland) 1973. These changes came into effect in April 1974 in England and Wales and May 1975 in Scotland.

TERMS USED IN THE CENSUS REPORT

Average number employed

Establishments were required to state the average number of persons on the payroll during the year of return. Separate figures were required for:

(a) administrative, technical and clerical employees

(b) all other employees (operatives)

Averages could be calculated from the figures relating to the last week of each calendar month. Establishments were also required to state the number of working proprietors where appropriate and these are included in total employment figures. Full-time and part-time employees are included but outworkers (ie persons employed by establishments who worked in their own homes etc on materials supplied by the establishment) are excluded. The figures include persons engaged on merchanting or factoring and canteen workers where particulars in respect of these activities could not be excluded from the return.

Working proprietors

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

Employees

Administrative, technical and clerical employees include directors in receipt of a definite wage, salary or commission, managers and works foremen; research and design employees (other than operatives); draughtsmen, editorial staff, advertising staff, travellers and all office employees

Operatives include all other classes of employees, that is, broadly, speaking, all manual wage earners. They include operatives employed in power stations, transport (including roundsmen), warehouses, stores, shops and canteens, inspectors, maintenance workers and cleaners. Operatives engaged in outside work of erecting, fitting etc are also included, but outworkers are excluded.

Capital expenditure

Capital expenditure during the year in respect of manufacturing units where production had not started before the end of the year is included. Establishments were asked not to deduct from the value of capital expenditure amounts received or expected to be received in grants or allowances from the Government or any statutory body or local authority. Establishments with 100 or more employees were asked to include a total net capital expenditure figure for each calendar year:

(a) New building work

This represents the cost incurred during the year of new building and other constructional work to be used in connection with the business covered by the return. The value is that charged to capital account during the year of return; it includes expenditure on new buildings and on the extension or reconstruction of old buildings, the value of works of a capital nature carried out by the establishment's own staff and the cost of any newly constructed buildings purchased. Figures shown include legal charges, stamp duties, agents' commissions etc.

(b) Land and existing buildings

The items shown are the capital cost of freeholds purchased and the capital cost or premium payable for leaseholds acquired (excluding the value of assets acquired in taking over an existing business), and the amounts receivable for freeholds or leaseholds disposed of. The value is that charged to capital account during the year of return.

(c) Plant, machinery and vehicles

The items shown are the value of plant and machinery and of

vehicles acquired, both new and second-hand, and the amount received for items disposed of during the year. The value of plant and machinery acquired includes plant, etc which firms produced for their own use in connection with the business covered by the return. The value of plant, etc acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. Deductible value added tax is excluded but non-deductible value added tax on motor cars acquired is included. No deduction is made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written-off for items scrapped.

Cost of industrial services

This includes amounts payable to other firms for work done on materials supplied by the establishment, payments for repairs and maintenance (including those in respect of rented buildings) and amounts paid to other firms for contracts which have been sublet. Payments to outworkers are excluded.

Cost of non-industrial services

This includes rents of industrial and commercial buildings, hire of plant, machinery and vehicles (excluding vehicles hired with drivers), commercial insurance premiums, bank charges and amounts paid for professional services, post office services, transport (within the United Kingdom), advertising etc. Amounts payable on royalties for the right to use patents, trademarks, copyrights etc, manufacturing and quarrying rights and technical "know-how" are also included.

Gross output

In the calculation of gross output the value of total sales and work done is increased by the rise (or reduced by the fall) during the year in the value of work in progress and goods on hand for sale.

Net output

Net output, a customary census measure, is calculated by deducting from gross output the cost of purchases (reduced by the rise, or increased by the fall, during the year of stocks of materials etc) and the cost of industrial services received, and where applicable, duting atte

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 parttime) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

Gross value added at factor cost

Gross value added at factor cost is calculated by deducting from net output the cost of non-industrial services eg rent of buildings, hire of plant, machinery and vehicles (excluding vehicles hired with drivers), commercial insurance premiums, bank charges and amounts paid for professional services, post office services, transport (within the United Kingdom) and advertising, rates (excluding water rates) and the cost of licensing motor vehicles. This estimate of gross value added approaches more closely than census net output to the definition of net output or value added in national accounts statistics.

Gross value added at factor cost per head

The figures of gross value added at factor cost per head are derived by dividing the gross value added by the average number of persons employed (full and part-time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

Purchases

Purchases include the cost of raw materials, components, 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 customers; and of food, etc for any canteen covered by the establishment's return. Transfers of goods to the establishment from another department of the same firm not covered by the est-

ablishment's return are included at a cost corresponding to the estimated selling value recorded by the other department. Amounts payable to transport firms or credited to the firm's own transport department for delivery of materials are excluded, as are all purchases of machinery and plant charged to capital account. Purchases of goods for merchanting or factoring have been collected separately since 1973. The values shown exclude VAT. They include, in addition to the actual purchase price, the value of packaging material charged to the establishment. The value of returned goods or packaging material returned to suppliers and any trade discounts are excluded. Materials purchased duty-paid are included at their duty-paid value, less any drawback, rebate, etc. The cost of transport is included only if it is included with the purchase price in the firm's accounts. Imported goods are included at their full delivered cost. If in the firm's accounts the transport from docks or airport is not included in the cost of goods purchased, the cost is entered at cif plus duty (if applicable). Leasing, renting and hire purchase charges are excluded.

Sales of goods produced

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 other establishments from materials given out to them and sales of waste products are included. 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 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

The value shown for sales is the "net selling value" defined as the amount (excluding VAT) charged to customers whether on an exworks or delivered basis, after any trade discounts and agents' commissions have been deducted. The cost of packing materials less allowance for returnable cases is included. In industries where products attract Excise Duty the value stated is usually inclusive of duty if sold duty-paid and exclusive of duty if sold in bond or exported.

Receipts for work done and industrial services rendered

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

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

Capital goods produced for establishment's own use

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

Non-industrial services rendered

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

Goods merchanted or factored

Merchanted goods are those (excluding canteen sales) sold without having been subjected to any manufacturing process by the seller.

Stocks and work in progress

Values are given of stocks of goods on hand for sale and of materials, stores and fuel, at the end of the year of return and of the change during the year, including any stocks of goods held for merchanting or factoring. Work in progress is defined as materials which have been partially processed by the establishment but which are not usually sold or transferred to another establishment without further processing. The values include the cost of materials consumed and labour used. Progress payments made to subcontractors are excluded and progress payments received from other organisations are not deducted.

Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions etc. The value of redundancy payments less any amounts reimbursed from Government sources is included. The value of any payments in kind, travelling expenses etc is excluded.

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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