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ECONOMIC SCIENCE

Business Statistics Office

Business Monitor

Report on the **Census of Production**

Refractory and ceramic goods



C C

HMSO

A publication of the Government Statistical Service

PRICE INCREASES

Prices of Business Monitors in 1982 have been set to make some contribution for the first time to the costs incurred at the Business Statistics Office in the preparation of Monitors.

SPECIAL NOTE FOR PURCHASERS

Reports on the Census of Production for separate industries are being published in the Business Monitor series. These Monitors have a code P (for production) followed by A (indicating an annual series) and then by a number indicating the industry covered by the report.

Commencing with the 1980 census, the first Annual Census of Production to be conducted on the Standard Industrial Classification (Revised 1980), separate reports will in general appear for each 3 digit Group of the new classification. Results for 1980 will include 1979 back data but more detailed 1979 figures based on the new classification will be published as a single separate Business Monitor (PA1002.1). This will also include the results of the 1979 Purchases Inquiry. Reports on the Census of Production for the years prior to 1980 are available at the Minimum List Heading, or sub division of a Minimum List Heading, of the Standard Industrial Classification (Revised 1968).

The Census of Production (PA) reports are available on standing order from HMSO, PO Box 569, London, SE1 9NH, Tel No: 01-928-6977. A standing order ensures that selected titles in the annual series are supplied automatically on publication. A £20 deposit will open an account.

Additionally single copies of the reports can be obtained from HMSO Bookshops and are individually priced.

GOVERNMENT STATISTICAL SERVICE

A service of statistical information and advice is provided to the Government by specialist staffs employed in the statistics division of individual Departments. Statistics are made generally available through their publications and further information and advice on them can be obtained from the Departments concerned.

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Business Monitor

A publication of the Government Statistical Service

Report on the **Census of Production** 1980

Refractory and ceramic goods

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

LIST OF INDUSTRY REPORTS

The following is a list of 1980 Industry Reports based on the Standard Industrial Classification Revised 1980. The number of the Monitor will indicate each 3 digit Group industry of the new classification. This will produce about 110 Monitors in this series compared with around 165 Monitors in recent years.

HMSO will automatically supply the nearest comparable, and, if necessary, supplementary Monitors to all account holders. If your requirements are not fully met please consult the list printed below and advise HMSO.

If you have any enquiries about the new classification please ring Newport (STD 0633) 56111 Extension 2455.

PA1001		PA352	Motor vehicle bodies, trailers and caravans
PA111	Coal extraction and manufacture of solid fuels	PA353	Motor vehicle parts
PA120	Coke ovens	PA361	Shipbuilding and repairing
PA130	Extraction of mineral oil and natural gas	PA362	Railway and tramway vehicles
PA140	Mineral oil processing	PA363	Cycles and motor cycles
PA161	Production and distribution of electricity	PA364	Aerospace equipment manufacturing and repairing
PA162	Public gas supply	PA365	Miscellaneous vehicles
PA170	Water supply industry	PA371	Measuring, checking and precision instruments and
PA210	Extraction and preparation of metalliferous ores		apparatus
PA221	Iron and steel industry	PA372	Medical and surgical equipment and orthopaedic
PA222	Steel tubes		appliances
PA223	Drawing, cold rolling and cold forming of steel	PA373	Optical precision instruments and photographic
PA224	Non-ferrous metals industry	.,	equipment
PA231	Extraction of stone, clay, sand and gravel	PA374	Clocks, watches and other timing devices
PA239	Extraction of miscellaneous minerals (including salt)	PA411	
PA241	Structural clay products	PA412	Organic oils and fats
PA242	Cement, lime and plaster		Processing of bacon, meat and poultry
PA243	Building products of concrete, cement or plaster	PA413	Preparation of milk and milk products
PA244	Asbestos goods	PA414	Processing of fruit and vegetables
PA245	Working of stone and other non-metallic minerals	PA415	Fish processing
PA246	Abrasive products	PA416	Grain milling
PA240		PA419	Bread, biscuits and flour confectionery
PA:248	Glass and glassware	PA420	Sugar and sugar by-products
	Refractory and ceramic goods	PA421	Ice-cream, cocoa, chocolate and sugar confectione
PA251	Basic industrial chemicals	PA422	Animal feeding stuffs
PA255	Paints, varnishes and printing ink	PA423	Starch and miscellaneous foods
PA256	Specialised chemical products mainly for industrial	PA424	Spirit distilling and compounding
	and agricultural purposes	PA426	Wines, cider and perry
PA257	Pharmaceutical products	PA427	Brewing and malting
PA258	Soap and toilet preparations	PA428	Soft drinks
PA259	Specialised chemical products mainly for household	PA429	Tobacco industry
	and office use	PA431	Woollen and worsted industry
PA260	Production of man-made fibres	PA432	Cotton and silk industries
PA311	Foundries	PA433	Throwing, texturing, etc. of continuous filament y
PA312	Forging, pressing and stamping	PA434	Spinning and weaving of flax, hemp and ramie
PA313	Bolts, nuts, washers, etc.; springs; non-precision	PA435	Jute and polypropylene yarns and fabrics
	chains; metals treatment	PA436	Hosiery and other knitted goods
PA314	Metal doors, windows, etc.	PA437	Textile finishing
PA316	Hand tools and finished metal goods	PA438	
PA320	Industrial plant and steelwork	PA439	Carpets and other textile floorcoverings Miscellaneous textiles
PA321	Agricultural machinery and tractors	PA441	
PA322	Metal-working machine tools and engineers' tools		Leather (tanning and dressing) and fellmongery
PA323	Textile machinery	PA442	Leather goods
PA324	Machinery for the food, chemical and related	PA451	Footwear
	industries; process engineering contractors	PA453	Clothing, hats and gloves
PA325	Mining machinery, construction and mechanical	PA455	Household textiles and other made-up textiles
1.020	handling oquipment	PA456	Fur goods
PA326	handling equipment	PA461	Sawmilling, planing, etc. of wood
PA327	Mechanical power transmission equipment	PA462	Manufacture of semi-finished wood products and
	Machinery for printing, paper, wood, leather, rubber,		further processing and treatment of wood
	glass and related industries: laundry and dry cleaning	PA463	Builders' carpentry and joinery
	machinery	PA464	Wooden containers
PA328	Miscellaneous machinery and mechanical equipment	PA465	Miscellaneous wooden articles
A329	Ordnance, small arms and ammunition	PA466	Articles of cork and plaiting materials, brushes and
A330	Manufacture of office machinery and data processing		brooms
	equipment	PA467	Wooden and upholstered furniture and shop and
A341	Insulated wire and cables		office fittings
A342	Basic electrical equipment	PA471	Pulp, paper and board
A343	Electrical equipment for industrial use, and batteries	PA472	
	and accumulators		Conversion of paper and board
	Telecommunication equipment, electrical measuring	PA475	Printing and publishing
	equipment, electronic capital goods and passive	PA481	Rubber products
	electronic components	PA483	Processing of plastics
		PA491	Jewellery and coins
A346	Miscellaneous electronic equipment	PA492	Musical instruments
A340 A347	Domestic-type electric appliances	PA494	Toys and sports goods
	Electric lamps and other electric lighting equipment	PA495	Miscellaneous manufacturing industries
A351	Motor vehicles and their engines	PA500	Construction
			Summary tables

PA248 REFRACTORY AND CERAMIC GOODS

The information in this report relates to establishments classified to the Refractory and ceramic goods industry, Group 248 in the Standard The information devised 1980. The industry Group covers the following Activity Headings:-

2481 Refractory goods Manufacture of heat-resisting products such as magnesite, silica and high alumina bricks and shapes, fireclay and graphite crucibles, gas retort and kiln linings, steel moulders' composition and radiants for gas and electric fires.

2489 Ceramic goods

1. Glazed earthenware tile Manufacture of glazed earthenware tiles including unglazed (biscuit) tiles and tiled hearths and fireplace surrounds. Other unglazed tiles are classified to Group 241.

2. Ceramic sanitary ware

Manufacture of sanitary ware of fireclay and vitreous china, but excluding drain-pipes, angles, bends, elbows and traps which are classified to Group 241.

3. Domestic china and other pottery

Manufacture of ceramic ware for the preparation and serving of food and drink and ceramic ornamental ware. The decorating of china and earthenware is included.

4. Other ceramic goods

Manufacture of insulators and other electrical ware of ceramic materials. Manufacture of other ceramic goods not elsewhere specified including those for laboratory, industrial and agricultural uses.

For a full description of the 1980 classification see Standard Industrial Classification Revised 1980 obtainable from Her Majesty's Stationery ffice, price £2.50.

		In interpreting the data in the tables it is essential to in mind the notes and definitions which commence or	
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	8.81 case cities		
STOF	ONTENTS		
	8.885		
Table No	Title		
1	Output a	and costs, 1979–1980	
2	Capital e	expenditure, 1979–1980	
3	Stocks a	nd work in progress, 1979–1980	
4	Analysis	of establishments by size, 1980	
5		age analysis of twelve-month periods covered by returns received fro n establishments, 1980	m
6	Operatio	ng ratios, 1979—1980	

In interpreting the data in the tables it is essential to bear page 9.

United

3

Page

> 8 8

Output and costs, 1979-1980

All United Kingdom establishments classified to the industry (a) Unit 1979 1980 Enterprises Number 643 648 Establishments 741 742 Sales of goods produced £ million 798.7 810.9 Receipts for work done and industrial services rendered 4.9 9.1 Capital goods produced for establishments' own use 0.9 1.4 Non-industrial services rendered 1.4 3.7 Goods merchanted or factored 42.8 47.1 Total sales and work done 848.8 872.2 Increase during the year, work in progress and goods on hand for sale 19.2 19.1 Gross output 868.0 891.3 Purchases of materials for use in production, and packaging and fuel 307.2 297.7 Purchases of goods for merchanting or factoring 35.8 36.5 Increase during the year, stocks of materials, stores and fuel 7.0 5.7 Cost of industrial services received 16.1 19.8 Net output .. 515.9 543.0 Total employment (b) Thousand 72.9 65.8 Net output per head £ 7,074 8,256 Payments for non-industrial services Hire of vehicles, plant and machinery £ million 4.1 4.3 Rents of industrial and commercial buildings .. 1.9 2.3 Commercial insurance premiums ... 4.9 5.8 Bank charges 0.6 0.7 Other non-industrial services 53.7 56.4 Licensing of motor vehicles 03 0.4 Rates, excluding water rates 7.6 8.6 Gross value added at factor cost 442.9 464.5 Gross value added at factor cost per head £ 6,073 7,062

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

4

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

TABLE 2

PA248

Capital expenditure, 1979-1980 All United Kingdom establishments classified to the industry (a)(b)

Land and buildings				
New building work				
Land and existing buildings				
Acquisitions				
Disposals				
Plant and machinery				
Acquisitions				
Disposals				
Vehicles (c)				
Acquisitions Disposals				
Total net capital expendit	ure			
	100.07	 T12708 3.3	<u> (5</u> 47	

Capital expenditure in respect of manufacturing establishments where production had not commenced before the end of the year, is h included.

For 1980 the values of acquisitions and disposals of motor cars were collected separately. These were £3,315 thousand and £1,292 (c) thousand respectively, and are included in the values shown for vehicles.

TABLE 3 Stocks and work in progress, 1979–1980 All United Kingdom establishments classified to the industry (a)

Materials, stores and fuel Work in progress Goods on hand for sale Total

5

		£ million
1979	1980	Size and
(86)	Elester (st	(Q.
5.5	3.9	
1.0	1.4	
1.4	0.8	
30.3	25.6	
1.2	1.1	
4.9	4.1	
1,6	1.4	
37.6	31.7	

d establishments not selected for the Census.

		£ million
1979	1980	Value at end of 1980
Increase	e during year	AND A CONTRACTOR
7.0	5.7	76.5
3.2	7.7	45.7
16.0	11.4	105,0
26.2	24.8	227.2

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

TABLE 4

Analysis of establishments by size, 1980 All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab- lish- ments (c)	Enter- prises (d)	Employme	nt		Wages and	salaries (g)	1	nibilue pulidin	Total sa and wor done (h
			Total (e)	Opera- tives	Others (f)	Operatives	798.7	Others (f)		
						Total	per head	Total	per head	
Antoni andre inic	Number	Number	Thousand	Thousand	Thousand	£ million	£	£ million	£	£ million
1–10	430	413	1.6)						nutham bris _{that} a	
11-19	89	88	1.3)							
20-49	71	69) 2.1)	6.1	1.5	25.4	4,159	8.4	5,480	124.4
50–99	40	36) 2.9)						lof selanes	
100-199	33	27	·4.8	3.8	1.0	15.0	3,898	5.4	5,640	69.8
200–299	28	24	7.0	5.5	1.5	25.2	4,559	8.7	5,968	111.4
300-399	18	16	6.1	5.0	1.2	19.8	3,981	6.3	5,471	75.9
400-499	ot selei 7 elei to	n arra 6 n dailde	3.2 40000	2.6	0.7	10.9	4,229	3.8	5,610	42.5
500-749	tore the gand of th	ed b 9 erend	5.5	4.2	1.2 dei dea	17.3	4,086	8.1	6,599	69.5
750-999	6	5	5.1	4.3	0.8	17.9	4,132	4.1	5,302	59.9
,000—1,499	6	5	7.4	5.8	1.6	28.9	4,997	10.3	6,563	120.1
,500 and over	r 5	4	18.8	15.5	3.2	61.8	3,982	17.6	5,429	198.7
dauger, a line										
									E BERN	

and work done (h)				, added at factor cost
ne 1994) com Andreit com Andreit com Andreit com		ene 1875 <u>1</u> . et stocks and rue ster <u>stocks</u> and rue ster <u>stocks</u> and rue	nanin tesokit. Logisoti costi heve teori teori-	The basic up the regime of second to For the second bioget
		Total	per head	Total
£ million	£ million	£ million	£	£ million
124.4	125.7	69.0	8,744	(k)
69.8	69.2	40.7	8,454	93.1(k)
111.4	113.0	63.6	9,097	53.9
75.9	77.0	47.5	7,754	41.9
42.5	42.1	24.5	7,544	20.3
69.5	69.2	44.2	8,079	37.5
59.9	60.3	41.8	8,188	38.7
120.1	124.0	66.2	8,981	53.0
198.7	210.8	145.6	7,758	126.1

Net output

Gross value

Gross output

Total	742	648	65.8	52.9	12.6	222.3	4,200	72.7	5,775

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

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

(c) Establishments employing fewer than 20 persons are generally exempt from Business Statistics Office inquiries and data for these establishments are therefore of doubtful reliability. Figures for establishments employing 1-10 persons are particularly at risk. They should be regarded merely as the best estimates available and used with caution.

(d) 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.

6

(e) Including working proprietors. f) Administrative, technical and clerical employees.

891.3

872.2

(q) The cost of employers' contributions to national insurance, pensions and welfare schemes and the running costs of canteens, is estimated for the industry at £48.6 million. The remuneration of outworkers on returns received was £33 thousand.

464.5

8,256

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.

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

(k) Gross value added data relate to establishments employing 1-199.

543.0

ion telione in telione basines te basines telo ins teodit o a major pa	Net capital expenditure (j)	Total stocks and work in progress at end of year		
ber nead				
2	£ million	£ million		
(k)	4.4	28.5		
7,328(k)	2.5	17.2		
7,718	4.5	21.6		
6,841	2.2	18.1		
5,243	1.0	15.1		
6,863	2.3	20.8		
,577	1.4	14.2		
,194	7.5	33.0		
6,718	6.0	58.6		

PA248

7,062 31.7 227.2

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments, 1980

Accounting year ended	Percenta	ge of total retur	ns received	Percentage of to	Percentage of total number employed			
and a second sec	per cent	ectors value active at factor cost		per cent	NUMBER OF STREET	and a second		
1980 April (a)	2.2			1.0				
Мау	-			Coaratou				
June	5.2			3.1				
July	2.9			1.9				
August	1.5			1.2				
September	0.7	•		0.2				
October	2.2			0.4				
November	0.7			0.1				
December	55.9			57.0				
	())858.1							
1981 January	2.9			2.0				
February	- 6841			- <u>a</u> gga				
March (b)	25.7	8.09	7,544	33.0	42,95			
(a) From 6th April.	888.8	exp.	0,079	6364.2		S. S. C. L. L.		

Including returns made for twelve-month period ended 1st to 5th April 1981. (b)

TABLE 6

Operating ratios, 1979-1980 All United Kingdom establishments classified to the industry (a)

	Unit			1979	1980	_
				11.000	10 550	
Gross output per head	£			11,902	13,550	
Net output per head	£			7,074	8,256	
Gross value added per head	£			6,073	7,062	
Gross value added as a percentage of gross output	%			51	52	
Ratio of gross output to stocks				4.1	3.9	
Wages and salaries as a percentage of gross value added	%	e oracilary com an		62	64	
Ratio of operatives to administrative, technical and clerical employees				4.2	4.2	
Wages and salaries per administrative, technical and clerical employee	£			4,803	5,775	
Wages and salaries per operative	£			3,566	4,200	
Net capital expenditure per head	£			516	482	
Net capital expenditure as a percentage of gross value added	%			8	7	•

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

PA248 NOTES

> nese notes give the main information needed for interpreting the _{gures} in the industry Business Monitors: more detailed information _{put the} census is given in a separate Business Monitor – PA1001 roductory Notes) of the Report on the Census of Production,

ENERAL INFORMATION

ANGES MADE FOR 1980

1980 census differed from the 1979 in three main respects. stions relating to standard cost stocks and road transport costs re removed from the questionnaire. Motor cars have been separiv identified in the capital expenditure questions in order to sist in the 1980 rebasing of national accounts. Sampling arrangents were extended as detailed in the para headed Coverage ere are also two major changes in the presentation of census ults. Publication of the Business Monitor PA1000 showing proional results has been discontinued, and industry reports are being ed, whenever possible, for each 3 digit Group of the SIC Revised A limited range of information for most 4 digit Activity 080 adings is published in the Summary Volume (PA1002). Regional Its are restricted to 2 digit class level, and appear only in the mmary Volume

IDUSTRIAL CLASSIFICATION

1980 census is the first being conducted on the SIC (Revised 80). The United Kingdom SIC was first issued in 1948 and ised in 1958, 1968 and 1980. It exists to promote uniformity and comparability in the official statistics of the United Kingdom. or to the 1980 revision the general principles followed were those the International Standard Industrial Classification of all omic Activities of the United Nations Statistical Office but for 1980 revision an attempt was made to align the United Kingdom ification as closely as practicable with NACE, the classification use by the Statistical Office of the European Community. The is a classification by activity and not a commodity classi-

TATISTICAL UNIT

The statistical unit for the purpose of the census is the establishent, which is defined in the SIC as the smallest unit which can rovide the information normally required for an economic census, r example, employment, expenses, turnover, and capital formon. Usually the principal activities carried on in an establishment fall within a single heading of the classification (e.g. steel making or ugar refining). Typically the establishment embraces all the activities carried on at a single address e.g. a mine or factory, including se which are ancillary to the principal activities. Frequently tinct activities characteristic of different industries are carried on one address, but normally these are not classified separately and e whole establishment is classified according to the main activity. owever, the required range of data can be provided for each ivity, each is taken to constitute a separate establishment. Some nes activities which are conducted as a single business are carried at a number of addresses. Where this is so, businesses are asked provide the full range of information in respect of each address, ther or not the activities are different. Their activities may, vever, be intergrated to such an extent that they constitute a gle establishment. In the latter case the establishment is defined cover the combined activities at these addresses (termed local ts). Separate figures of employment and net capital expenditure obtained for each local unit in order to compile regional tables. orts are made by the BSO to ensure, by negotiating with responts, that the return from an establishment does not cover local ts in more than one of the countries of the United Kingdom. stablishments are asked to exclude from their returns particulars ting to any department not engaged in production e.g. mer-

ting, transport or warehousing, for which they keep a separate of accounts. Transfers of goods produced to such departments treated as sales and respondents are asked to value them as far as ble as if sold to an independent purchaser. Where separate unts are not kept, responders are asked to include details of all activities in their return. Particulars relating to head offices ly engaged in the administration of the production units within scope of the census are included. Where more than one return is ade the information in respect of the head office is apportioned g them. For certain purposes in the censuses of production for disclosure testing and the preparation of the enterprise vses shown in Business Monitor PA1002) related establishments combined to enterprise level. An enterprise group is defined as a less consisting of either a single establishment or two or more ulishments under common ownership or control. Information ut relationships between establishments, the changing structure groups of companies and about common ownership links is ned from many sources, including the Stock Exchange Year k, company reports, press reports, and information supplied by dividual establishments.

THE REGISTER register proving forms.

COVERAGE

excluded. mailed for the years upto 1978.

SUPPRESSION OF INFORMATION RELATING TO INDIVIDUAL UNDERTAKINGS Subsection 9(5)(b) of the Statistics of Trade Act, 1947 states that: "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"

Where the publication of any figure is likely to disclose particulars relating to an individual undertaking, either the contributor is approached to seek consent for publication or the figure is suppressed. Where convenient, suppression takes the form of combining the disclosive figure with adjacent cells. Steps are also taken to avoid the release of figures which may lead to disclosure by deduction when compared with other census results.

SYMBOLS USED **Business Monitors:**

- not available
- R revised

A computerised register of about 120,000 production units throughout the United Kingdom is held in the BSO. This register provides the basis for a wide range of BSO inquiries mailed to the production sector. For each production unit the register contains identification particulars and information about a units eligibility for inclusion in an inquiry; its relationship with other units in common ownership; industrial classification; nationality of parent company if foreign owned and location indicators permitting regional analyses. Regional and size analyses of manufacturing local units are published each year in Business Monitor PA1003 (Analyses of United Kingdom Manufacturing (local) units by employment size).

The inquiries provide a major source of information for keeping the register continuously up-to-date and act as a check on its structure. For the establishments on the register making returns to the quarterly inquiries into manufacturers' sales, industrial classification is derived from an analysis of their commodity sales and is reviewed annually. For any other establishments for which no up-to-date information was available classification to SIC Revised 1980 was made on a pro-rota basis in line with the reclassification pattern by industry of establishments for which actual product sales data was held. Employment data are entered on the register from the quarterly inquiries and the censuses of production. Where establishments do not make a return to these inquiries the employment data are based on information provided by the Department of Employment from censuses of employment.

New additions to the register are obtained from various sources including Value Added Tax records, the Census of Employment and

The census covers United Kingdom establishments engaged in production and construction industries (Divisions 1 to 5 of the SIC (Revised 1980)). The Channel Islands and the Isle of Man are

Under the sampling arrangements agreed for the 1980 census, forms were despatched to samples of 1 in 4 and 1 in 2 for the 20 to 49 and 50 to 99 employment size bands respectively for most production industries. For a limited number of production industries, where there were very few units in the sample size bands, all establishments with employment of 20 or more were included. Units employing fewer than 20 continued to be exempt from selection. All units employing 100 or more were subject to a full coverage. The total number of forms mailed was 18,965.

In the construction industry all undertakings employing 50 or more were selected. The 1 in 2 sample for undertakings with 20 to 49 employees introduced for the 1979 census was repeated, but the 5 per cent sample of undertakings with fewer than 20 employees was discontinued. This resulted in a reduction in the number of forms sent out to 6,500, which is about one half of the average

The following symbols are used throughout the PA series of

nil or less than half the final digit shown figures cannot be shown owing to the risk of disclosing

information about individual enterprises.

ROUNDING OF FIGURES

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

EXPLANATION OF TERMS USED IN THE CENSUS REPORT The notes and definitions given in this section are mainly based on the general instructions given to respondents as to the way in which returns were to be completed.

CAPITAL EXPENDITURE

Capital expenditure during the year in respect of production 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 the calendar year.

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 establish ments own staff and the cost of any newly constructed buildings purchased. Figures shown include legal charges, stamp duties, agents commissions. etc.

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.

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 Deductable value added tax is excluded but noninstallation. deductible value added tax on motor cars acquired and Customs and Excise car tax are 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

CAPITAL GOODS PRODUCED FOR AN ESTABLISHMENT'S OWN USE.

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

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.

EMPLOYMENT:

AVERAGE NUMBER EMPLOYED

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

administrative, technical and clerical employees b. all other employees (operatives)

Averages could be calculated from the figures relating to the last 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 parttime employees are included but 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 work in the business without receiving a wage or salary; but such persons who work 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 th 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, traveller and all office employees.

Operatives include all other classes of employees, that is, broad speaking, all manual wage earners. They include operativ employed in power stations, inspectors, maintenance workers and cleaners. Staff engaged in transport (including roundsmen), employed in warehouses, stores, shops and canteens, should be included only where separate accounts are not kept. Operative engaged in outside work of erecting, fitting, etc. are also included but outworkers 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 commerci insurance premiums to provide pensions, superannuation or othe retirement benefits, sickness benefits, personal accident benefits disability or death benefits for employees or former employee 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.

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

GROSS VALUE ADDED AT FACTOR COST

Gross value added at factor cost is calculated by deducting fro net output the cost of non-industrial services e.g. rent of building hire of plant, machinery and vehicles (excluding vehicles hired with drivers), commercial insurance premiums, bank charges and amou paid for professional services, post office services, transport (with the United Kingdom) and advertising, rates (excluding water rate 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 account 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 clerica employees and working proprietors, but excluding outworkers.

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. the cost of industrial services received and where applicable, duties,

NET OUTPUT PER HEAD

The figures of net output per head are derived by dividing the ne output by the average number of persons employed (full and part time) on all activities covered by the returns, including operative administrative, technical and clerical employees and working proprietors, but excluding outworkers.

NON-INDUSTRIAL SERVICES RENDERED

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

OPERATING RATIOS

e operating ratios shown are obtained by dividing the estimate of he industry total for the quantity shown in the numerator by the responding estimate for the quantity shown in the denominator. ese estimates cover all establishments classified to each industry duding establishments not selected and non-respondents. Within industry, it is possible to compare ratios for an individual firm with the ratios shown for the relevant industry. However, it is portant to bear in mid that various factors may affect the results differences in definitions, treatment of depreciation (which is identified in the census data) and varying practice with regard to nck valuation, may affect comparability in some respects.

URCHASES

urchases include the cost of raw materials, components, semianufactured goods and workshop materials; of replacement parts nd consumable tools not charged to capital account; of packaging terials of all types; of stationery and printed matter; of fuel, ectricity and water; of materials to be used by the establishment given out to other establishments for the production of inery or other capital items for the establishment's own use; materials for use by the establishment when working on goods inclied by customers; and of food, etc. for any canteen covered the establishment's return. Transfers of goods to the estabment from another department of the same firm not covered by establishment's return are included at a cost corresponding to estimated selling value recorded by the other department ounts payable to transport firms or credited to the firm's own ansport department for delivery of materials are excluded, as are purchases of machinery and plant charged to capital account. chases of goods for merchanting or factoring have been collected parately since 1973. The values shown exclude VAT. They lude, in addition to the actual purchase price, the value of packing material charged to the establishment. The value of returned pods or packaging material returned to the suppliers and any trade counts are excluded. Materials purchased duty-paid are included their duty-paid value, less any drawback, rebate, etc. The cost of ansport is included only if it is included with the purchase price the firm's accounts. Imported goods are included at their full livered 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 tered at cif plus duty (if applicable).

ECEIPTS FOR WORK DONE AND INDUSTRIAL SERVICES RENDERED

igures for work done represent the amount charged for work arried 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 reparatory work on type-setting, block making and binding. Nork done is also significant in the electrical machinery and heavy ineering industries, covering erection, installation and repair and bbing work. Other activities within this heading include ploration work, research and development, glass-cutting and essing and planing of timber

ndustrial services rendered include repairs and maintenance, installtion work, and technical research and studies for other organations

EMUNERATION PAID TO OUTWORKERS

remuneration paid to outworkers (i.e. persons employed by the stablishment 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.

ALES OF GOODS PRODUCED

es for the purposes of the annual censuses means deliveries on ale of goods made by establishments in the United Kingdom vered by the inquiry. Sales of goods made for these establishnts by outworkers or by other establishments from materials ven out to them and sales of waste products are included. orward sales and canteen takings are excluded. All sales in the riod of the inquiry are included irrespective of when the goods e manufactured

valued on the same basis. exported

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 values of any payments in kind, travelling expenses, etc. is excluded.

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 independant purchaser. Goods transferred to wholesale or retail selling organisations, for which separate accounts are kept, are

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' com-missions 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

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 sub-contractors are excluded and progress payments received from other organisations are not

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