PA211

BRITISH LIBRARY

OF POLITICAL AND ECONOMIC SCIENC

1977

HMSO

Business Statistics Office

Business Monitor

05/42(MA2

Report on the Census of Production

Grain milling



A publication of the Government Statistical Service

PA211

A publication of the Government Statistical Service

Special Note for Purchasers

Commencing with the 1971 Census, the Census of Production reports are being numbered in a uniform series embracing all industrial inquiries in the Business Monitor series. These Business Monitors have a code P (for production) followed first by A (indicating that it is an annual series) or Q (quarterly) or M (monthly): and then by a number indicating 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 (details on application to Her Majesty's Stationery Office, P.O. Box 569, London SE1 9NH. Telephone 01-928 6977), although they are not included in the global subscription arrangements for the Business Monitor series.

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.

Enquiries: **Business Statistics Office** Newport, Gwent NPT 1XG Newport 56111 (STD code 0633) ext 2455 Telex 497121 Answer Back BSONPT G

Report on the **Census of Production** 1977

Grain milling

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**



List of Industry Reports, etc.

PA1001	Introductory notes
	Coal mining
PA101	
PA102	Stone and slate quarrying and mining
PA103	Chalk, clay, sand and gravel extraction
PA104	Petroleum and natural gas
PA109	Miscellaneous mining and quarrying
PA211	Grain milling
PA212	Bread and flour confectionery
PA213	Biscuits
PA214	Bacon curing, meat and fish products
PA215	Milk and milk products
PA216	Sugar
PA217	Cocoa, chocolate and sugar confectionery
	Fruit and vegetable products
PA218	
PA219	Animal and poultry foods
PA221	Vegetable and animal oils and fats
PA229.1	Margarine
PA229.2	Starch and miscellaneous foods
PA231	Brewing and malting
PA232	Soft drinks
PA239.1	Spirit distilling and compounding
PA239.2	British wines, cider and perry
PA240	Tobacco
PA261	Coke ovens and manufactured fuel
PA262	Mineral oil refining
and the second second second second	
PA263	Lubricating oils and greases
PA271.1	Inorganic chemicals
PA271.2	Organic chemicals
PA271.3	Miscellaneous chemicals
PA272	Pharmaceutical chemicals and preparations
PA273	Toilet preparations
PA274	Paint
PA275	Soap and detergents
PA276	Synthetic resins and plastics materials and
	synthetic rubber
PA277	Dyestuffs and pigments
PA278	Fertilizers
PA279.1	Polishes
PA279.2	Formulated adhesives, gelatine, etc.
PA279.3	Explosives and fireworks
PA279.4	Formulated pesticides, etc.
PA279.5	Printing ink
PA279.6	Surgical bandages, etc.
PA279.7	Photographic chemical materials
PA311	Iron and steel (general)
PA312	Steel tubes
PA313	Iron castings, etc.
PA321	Aluminium and aluminium alloys
PA322	Copper, brass and other copper alloys
PA323	Miscellaneous base metals
PA331	Agricultural machinery (except tractors)
PA332	Metal-working machine tools
	U
PA333.1	Pumps
PA333.2	Valves
PA333.3	Compressors and fluid power equipment
PA334	Industrial engines
PA335	Textile machinery and accessories
PA336	Construction and earth-moving equipment
PA337	Mechanical handling equipment
PA338	Office machinery
PA339.1	Mining machinery
PA339.2	Printing, bookbinding and paper goods machinery
PA339.3	Refrigerating machinery, space-heating,
1 4000.0	ventilating and air-conditioning equipment
PA339.5	Scales and weighing machinery and portable
	power tools
PA339.7	Food and drink processing machinery and
1 4003.7	
	packaging and bottling machinery
PA339.9	Miscellaneous (non-electrical) machinery
PA341	Industrial (including process) plant and steelwork
PA342	Ordnance and small arms
PA349.1	Ball, roller, plain and other bearings
PA349.2	Precision chains and other mechanical engineering
PA351	Photographic and document copying equipment
PA352	Watches and clocks
PA353	Surgical instruments and appliances
PA354	Scientific and industrial instruments and systems
PA361	Electrical machinery
PA362	Insulated wires and cables
PA363	Telegraph and telephone apparatus and
	equipment
PA364	Radio and electronic components
PA365.1	Gramophone records and tape recordings
PA365.2	Broadcast receiving and sound reproducing
	equipment
PA366	Electronic computers

171000	Electronic compators
PA367	Radio radar and electro

1 4007	riadio, radar and ciccitonic capital goods
PA368	Electrical appliances primarily for domestic use

- in annital an ada

PA369.1	Electrical equipment for motor vehicles, cycles
DA260.2	and aircraft Primary and secondary batteries
PA369.2 PA369.4	Electric lamps, electric light fittings, wiring
	accessories, etc.
PA370 PA380	Shipbuilding and marine engineering Wheeled tractor manufacturing
PA381.1	Motor vehicle manufacturing
PA381.2	Trailers, caravans and freight containers
PA382 PA383	Motor cycle, tricycle and pedal cycle manufacturing Aerospace equipment manufacturing and repairing
PA384	Locomotives, railway track equipment, railway carriages,
	wagons and trams
PA390 PA391	Engineers' small tools and gauges Hand tools and implements
PA392	Cutlery, spoons, forks and plated tableware, etc.
PA393	Bolts, nuts, screws, rivets, etc.
PA394 PA395	Wire and wire manufactures Cans and metal boxes
PA396	Jewellery and precious metals
PA399.1	
PA399.5 PA399.6	Drop forgings, etc. Metal hollow-ware
PA399.8	Miscellaneous metal manufacture
PA411 PA412	Production of man-made fibres Spinning and doubling on the cotton and flax systems
PA412 PA413	Weaving of cotton, linen and man-made fibres
PA414	Woollen and worsted
PA415 PA416	Jute Rope, twine and net
PA410 PA417.1	
PA417.2	Warp knitting
PA418 PA419	Lace Carpets
PA421	Narrow fabrics
PA422.1	Household textiles and handkerchiefs
PA422.2 PA423	Canvas goods and sacks and other made-up textiles Textile finishing
PA429.1	Asbestos
PA429.2	Miscellaneous textile industries Leather (tanning and dressing) and fellmongery
PA431 PA432	Leather goods
PA433	Fur
PA441 PA442	Weatherproof outerwear Men's and boys' tailored outerwear
PA442 PA443	Women's and girls' tailored outerwear
PA444	Overalls and men's shirts, underwear, etc.
PA445 PA446	Dresses, lingerie, infants' wear, etc. Hats, caps and millinery
	Corsets and miscellaneous dress industries
PA449.2	
PA450 PA461.1	Footwear Refractory goods
PA461.2	
PA462	Pottery
PA463 PA464	Glass Cement
PA469.1	Abrasives
PA469.2	Miscellaneous building materials and mineral products Timber
PA471 PA472	Furniture and upholstery
PA473	Bedding, etc.
PA474 PA475	Shop and office fitting Wooden containers and baskets
PA479	Miscellaneous wood and cork manufactures
PA481	Paper and board
PA482.1 PA482.2	Cardboard boxes, cartons and fibre-board packing cases Packaging products of paper and associated materials
PA483	Manufactured stationery
PA484.1	
PA484.2 PA485	Miscellaneous manufactures of paper and board Printing, publishing of newspapers and periodicals
PA489	General printing and publishing
PA491	Rubber Linoleum, plastics floor-covering, leathercloth, etc.
PA492 PA493	Brushes and brooms
PA494.1	
PA494.3 PA495	Sports equipment Miscellaneous stationers' goods
PA495 PA496	Plastics products
PA499.1	
PA499.2 PA500	Miscellaneous manufacturing industries Construction
PA601	Gas
PA602	Electricity Water supply
PA603 PA1002	Water supply Summary tables

PA211 GRAIN MILLING

The information in this report relates to establishments classified to the Grain milling industry, minimum list heading 211 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Milling wheat (including the production of self-raising and patent flour at milling establishments); milling, flaking or rolling barley, oats, maize, rye, rice, etc., the production of wheat and other grain offal, splitting or grinding peas, beans, lentils, soya beans, sago, tapioca, or manufacturing ready-to-eat breakfast cereals such as cornflakes, puffed or shredded wheat.

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

LIST	OF	CONTENTS
	U 1	CONTENTS

Table No	Title	
1	Output and costs, 1973-1977	
2	Capital expenditure, 1973-1977	
3	Stocks and work in progress, 1973–1977	
4	Analysis of establishments by size, 1977	
5	Regional distribution of employment, net capital exp at factor cost, 1977	enditure, net output and
6	Percentage analysis of twelve-month periods covered be Kingdom establishments employing 20 or more person	by returns received from ns, 1977
7	Percentage analysis of employees, by full and part-tim	e employment and sex,
8	Operating ratios, 1977	

(ii)

1

	Pag
	2
	3
	3
	4—
nd gross value added	
	6
m United	7
<, 1977	7
	8

Output and costs, 1973–1977 All United Kingdom establishments classified to the industry (a)

	Unit	1973	1974	1975	1976	1977
Enterprises	Number	248	241	234	236	238
Establishments		303	301	293	289	293
Sales of goods produced	£ thousand	451,687	701,784	768,111	842,814	1,019,673
Receipts for work done and industrial services rendered	"	(b)	(b)	(b)	1,487	1,774
Capital goods produced for establish- ments' own use	,,	309	631	734	811	1,185
Non-industrial services rendered	"	1,286	5,868	1,438	1,210	1,790
Goods merchanted or factored	"	28,501	30,918	29,298	40,508	57,654
Total sales and work done (c)	"	481,784	739,201	799,581	886,830	1,082,077
Increase during the year, work in progress and goods on hand for sale	"	3,199	3,967	541	4,387	3,532
Gross output	"	484,982	743,168	800,123	891,218	1,085,609
Purchases of materials for use in pro- duction, and packaging and fuel	,,	344,641	545,034	583,445	634,734	782,811
Purchases of goods for merchanting or factoring	"	25,197	27,306	27,787	36,993	51,696
Increase during the year, stocks of materials, stores and fuel	"	12,585	9,451	5,931	4,209	14,215
Cost of industrial services received	"	3,010	4,749	5,425	8,091	13,402
Net output	"	124,719	175,530	189,396	215,609	251,915
Total employment (d)	Thousands	20.6	20.2	19.4	18.4	18.8
Net output per head	£	6,051	8,709	9,741	11,731	13,424
Payments for non-industrial services						
Hire of vehicles, plant and machinery	£ thousand	790	1,078	1,440	641	1,248
Rents of industrial and commercial buildings		(e)	(e)	(e)	1,215	1,330
Commercial insurance premiums		1,536	1,806	2,248	2,552	3,361
Bank charges	"	112	315	422	214	340
Other non-industrial services	"	18,386	.26,203	30,780	35,360	47,667
Licensing of motor vehicles	"	341	283	362	408	455
Rates, excluding water rates	"	1,744	1,975	2,923	3,132	3,009
Gross value added at factor cost	,,	101,811	143,870	151,221	172,088	194,505
Gross value added at factor cost per head	£	4,940	7,139	7,777	9,363	10,365

Including estimates for establishments not making satisfactory returns, non-response and establishments with fewer than 20 persons. Satisfactory returns accounted for 87 per cent of employment within the industry. (a)

(b) Included in sales of goods produced.

Details of manufacturers' quarterly sales of principal products are published regularly in Business Monitor PQ211. (c)

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

For 1973-1975 rents of industrial and commercial buildings were not recorded separately, but included in hire of vehicles, plant and (e) machinery.

TABLE 2

PA211

Capital expenditure, 1973–1977 All United Kingdom establishments classified to the industry (a)(b)

	and the second	and the second se	
and the second	1973	1974	1975
Land and buildings			
New building work	1,284	1,638	2,428
Land and existing buildings			
Acquisitions	141	387	997
Disposals	362	838	135
Vehicles			
Acquisitions	2,217	2,088	2,851
Disposals	685	506	586
Plant and machinery			
Acquisitions	5,431	7,768	11,296
Disposals	290	398	106
Total net capital expenditure	7,736	10,138	16,745

Including estimates for establishments not making satisfactory returns, non-response and establishments with fewer than 20 persons.

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

TABLE 3

Stocks and work in progress, 1973—1977 All United Kingdom establishments classified to the industry (a)

	1973	1974	1975	1976		1977
	48,388,185	309E.4	Increase			Value at end of year
laterials, stores and fuel	12,585	9,451	5,931	4,209	14,215	78,521
ork in progress	176	-23	165	-244	177	450
oods on hand for sale	3,023	3,990	377	4,631	3,355	23,631
Total	15,784	13,418	6,472	8,597	17,747	102,603

Including estimates for establishments not making satisfactory returns, non-response and establishments with fewer than 20 persons.

3

	and the second second second second	£ thousand
1976	1977	
	Contraction of the second seco	
4,772	6,257	
1,640	455	
309	199	
4,020	4,511	
819	851	
13,949	21,218	
209	1,050	
23,044	30,342	

Analysis of establishments by size, 1977 All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab- lish- ments		Employment			Wages and salaries (f)			
			Total (d)	Opera- tives	Others (e)	Operatives		Others (e)	
			(0)			Total	per head	Total	per head
	Number	Number	Number	Number	Number	£ thousand	£	£ thousand	£
1-10	148	141	720)						
11—19	53	52	778)	2 5 6 2	1 212	10.076	2 615	4,739	2.010
20-49	35	31	1,053)	3,562	1,212	12,876	3,615	4,739	3,910
50—99	35	21) 2,442)			•			
100—199	9	8	1,173	898	275	2,932	3,266	1,124	4,088
200-499	6	4	1,523	1,215	308	4,386	3,610	1,088	3,532
500-1,499	4	3	3,595	2,410	1,185	8,434	3,500	4,844	4,088
1,500 and over	3	3	7,482	5,682	1,800	19,727	3,472	7,479	4,155

Including estimates for establishments not making satisfactory return (a)

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

(c) The sum of the figures for the size groups may exceed the total for the industry because some enterprises control establishments in more than one size group.

4

(d) Including working proprietors.

(e) Administrative, technical and clerical employees.

	The market and the second			and the second second second second second
Total sales and work done (g)	Gross output	Net output	1990 (1990) 1990 (1990) 1993	Gross value added at factor cost
		Total	per head	Total
£ thousand	£ thousand	£ thousand	£	£ thousand
415,409	415,400	71,979	14,416	(j)
,				
77,605	78,519	15,149	12,915	72,496(j)
135,297	135,532	25,862	16,981	21,872
161,807	162,580	49,215	13,690	34,222
291,959	293,578	89,710	11,990	65,915

PA211

(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 £ 11,375 thousand.

194,505

13,424

(g) Sales of goods produced, capital goods manufactured, 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.

251,915

1,082,077

1,085,609

5

	Net capital expenditure (h)	Total stocks and work in progress at end of year
per head		
	£ thousand	£ thousand
L	I INCUSANO	r thousand
(j)	12,877	34,261
11,757(j)	1,669	8,731
14,361	2,597	9,816

6,607

6,592

9,519

8,810

10,365

30,342

102,603

11,575

38,220

PA211

Regional distribution of employment, net capital expenditure, net output and gross value added at factor cost, 1977 All United Kingdom establishments classified to the industry (a)

Area	Total employment (b)		Net capital expenditure (c)		Net output (d)	Gross value added at factor cost (d)	Gross value added at factor cost returned by establishments with 80 per cent or more of their employment in the region as a proportion of total gross value added at	
							factor cost in the region	
	Thousands	per cent of United Kingdom	£ thousand	per cent of United Kingdom	£ thousand	£ thousand	percentage	
Standard regions of England								
North	0.3	1.5	90	0.3	5,137	3,858	_	
Yorkshire and Humberside	1.0	5.2	1,008	3.3	14,372	11,188	34.8	
East Midlands	3.1	16.4	5,341	17.6	28,977	21,812	59.3	
East Anglia	0.8	4.3	995	3.3	13,438	10,835	56.5	
South East	5.8	31.2	7,898	26.0	73,618	53,481	51.9	
South West	0.8	4.2	2,808	9.3	12,199	10,718	23.5	
West Midlands	0.3	1.6	448	1.5	4,141	3,404	12.8	
North West	4.7	24.9	3,576	11.8	68,571	53,635	86.6	
England	16.8	89.3	22,166	73.0	220,452	168,931		
Wales	0.4	1.9	6,746	22.2	6,136	4,906	-	
Scotland	1.2	6.2	1,008	3.3	19,455	15,991	78.1	
Great Britain	18.3	97.3	29,920	98.6	246,043	189,827		
Northern Ireland	0.5	2.7	422	1.4	5,872	4,677	62.1	
United Kingdom	18.8	100.0	30,342	100.0	251,915	194,505		

Including estimates for establishments not making satisfactory returns, non-response and establishments with fewer than 20 persons. (a)

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

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

Where a census return covered addresses in two or more regions, an estimate of the net output attributable to each address was made by assuming that net output was proportionate to employment. An estimate for each region was obtained by aggregating estimates of net output for addresses located in that region. Gross value added at factor cost is treated similarly. (d)

6

TABLE 6

PA211

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 20 or more persons, 1977

Accounting year ended		Percentage of total returns received
		per cent
1977	April (a)	4.4
	May	0.0
	June	4.4 .
	July	2.9
	August	1.5
	September	13.2 ,
	October	4.4
	November	1.5
	December	19.1
1978	January	8.8
	February	0.0
	March (b)	39.7

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1978.

TABLE 7

Percentage analysis of employees, by full and part-time employment and sex, 1977(a)

Sex	Full-time	Part-time	
	per cent	per cent	_
Male	77	1	
Female	18	4	

The percentages relate to the numbers employed (excluding working proprietors) in the United Kingdom at mid-June, 1976 because 1977 information is not yet available. (a)

7

Percentage of total number employe	ed
per cent	
1.1	
0.0	
8.0	
8.3	
0.5	
17.1	
1.4	
14.6	
14.0	
24.6	
11.5	
0.0	
12.9	

All employees	
per cent	
78	
22	

Source: Department of Employment

Operating ratios, 1977

All United Kingdom establishments classified to the industry (a)

	Unit	1977
Gross output per head	£	57,850
Net output per head	£	13,424
Gross value added per head	£	10,365
Gross value added as a percentage of gross output	%	18
Ratio of gross output to stocks		10.6
Wages and salaries as a percentage of gross value added	%	35
Ratio of operatives to administrative, technical and clerical employees		2.9
Nages and salaries per operative	£	3,512
Nages and salaries per administrative, technical and clerical employee	£	4,032
Net capital expenditure per head	£	1,617
Net capital expenditure as a percentage of gross value added	%	16

(a) Including estimates for establishments not making satisfactory returns, non-response and establishments employing fewer than 20 persons.

8

notes give the main information needed for interpreting figures in the industry Business Monitors: more detailed mation about the census is given in a separate Business tor - PA 1001 (Introductory Notes) of the Report on the Census of Production, 1977.

GENERAL INFORMATION

Changes made for 1977

PA:

NAC

Th

Census for 1977 is in line with similar inquiries being conducted in other member countries of the European Economic munities. There was a small number of changes in the scope of the industry reports compared with 1976.

the first time in the industry monitors a table has been For included on operating ratios, calculated from census measures of put, investment, manpower and labour costs.

Specific changes are explained in the introductions to the industry reports or by footnotes to the tables.

ression of information relating to individual undertakings tion 9(5)(b) of the Statistics of Trade Act 1947 states -"The following provisions shall have effect with respect to any rt, summary or other communication to the public of rmation obtained under the foregoing provisions of this Act n compiling any such report, summary or communication the ompetent 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 erson 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, owever, 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 arried on by him to be deduced from the total disclosed". If a figure involved disclosure the contributor concerned was times 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 pressed, 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 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.

revised

Rounding of figures

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

ustrial classification

United Kingdom Standard Industrial Classification (SIC) was fire 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 wed are those of the International Standard Industrial Cla sification of all Economic Activities of the United Nations istical Office but the United Kingdom SIC reflects the nisation and structure of industry and trade as it exists in the ed Kingdom. The SIC is a classification by activity and is a commodity classification. However, an index of all commodity ings for which sales data are provided in the Quarterly Business Mo nitors, is published in Business Monitor PQ 1000.

Statistical units

statistical unit for the purpose of the Census is the establishment h is defined in the SIC as the smallest unit which can provide information normally required for an economic census, for

example, employment, expenses, turnover, capital formation. Usually the principal activities carried on in an establishment fall within a single heading of the classification (eg steel making or sugar refining). Typically the establishment embraces all the activities carried on at a single address eg a mine or a factory, including those which are ancillary to the principal activities. Frequently distinct activities characteristic of different industries are carried on at one address, but normally these are not classified separately and the whole establishment is classified according to the main activity. If, however, the required range of data can be provided for each activity, each is taken to constitute a separate establishment. Sometimes activities which are conducted as a single business are carried on at a number of addresses. Where this is so, businesses are asked to provide the full range of 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 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 or 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.

activities in their return.

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 Companies Registration Office and the Department of Employment. The 1973 Finance Act allows HM Customs and Excise to pass to the BSO lists of businesses registered for VAT. Information from all these sources is used to improve the register, and where necessary, details are sought directly from new businesses. Units which cease to trade are removed from the live register. Increasing use of the information obtained from the Department of Employment, HM Customs and Excise and BSO inquiries has led to improvements on the register, which in turn enabled the BSO to produce better estimates, particularly of numbers of smaller establishments and enterprises.

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

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. For these purposes an enterprise group may be 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.

Coverage

A return was required in the 1977 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 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 number of persons on the payroll on 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 (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 vear 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 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 eq 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 machine or other capital items for the establishment's own use: of materia for use by the establishment when working on goods supplied by

istomers; and of food, etc for any canteen covered by the stablishment's return. Transfers of goods to the establishment another department of the same firm not covered by the stablishment's return are included at a cost corresponding to the stimated selling value recorded by the other department. Amounts avable to transport firms or credited to the firm's own transport partment for delivery of materials are excluded, as are all rchases of machinery and plant charged to capital account. irchases of goods for merchanting or factoring have been lected separately since 1973. The values shown exclude VAT. ney include, in addition to the actual purchase price, the value packaging material charged to the establishment. The value of urned goods or packaging material returned to suppliers and any ade discounts are excluded. Materials purchased duty-paid are cluded at their duty-paid value, less any drawback, rebate, etc. e cost of transport is included only if it is included with the chase price in the firm's accounts. Imported goods are included their full delivered cost. If in the firm's accounts the transport docks or airport is not included in the cost of goods purchased, e cost is entered at cif plus duty (if applicable). Leasing, ting and hire purchase charges are excluded.

les of goods produced

les for the purposes of the annual censuses means deliveries on ale of goods made by establishments in the United Kingdom ered by the inquiry. Sales of goods made for these establishments outworkers or by other establishments from materials given out them and sales of waste products are included. New building ork and machinery or other capital items produced by establishents for hiring out or leasing are regarded as sales, the value cluded in the return being that adopted in the establishments' pital asset accounts. Forward sales and canteen takings are excluded. Il sales in the period of the inquiry are included irrespective of en the goods were manufactured. Goods produced in one tablishment and transferred either to ancillary departments not gaged in production for which there are separate accounts, or to ther establishment of the same firm not covered by the return, treated as sales by the producing establishment and valued as as possible as if they had been sold to an independent purchaser. ds transferred to wholesale or retail selling organisations, for ich separate accounts are kept are valued on the same basis.

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

eipts for work done and industrial services rendered

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

ustrial services rendered include repairs and maintenance, installation work, and technical research and studies for other anisations.

apital goods produced for establishments' own use

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

on-industrial services rendered

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

ods merchanted or factored

chanted goods are those (excluding canteen sales) sold without

Printed for Her Majesty's Stationery Office by Qualitex Printing Limited, Cardiff Dd 8044623 9800799

Stocks and work in progress 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, commissions and holiday pay, 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 (and/or earnings related basic contributions under the Social Security Pensions Act, 1975) and 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 the industry, including exempted establishments and nonrespondents. 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 practise with regard to stock valuation, may affect comparability in some respects.

having been subjected to any manufacturing process by the seller.

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

© Crown copyright 1979

Her Majesty's Stationery Office

Government Bookshops

49 High Holborn, London WC1V6HB 13a Castle Street, Edinburgh EH2 3AR 41 The Hayes, Cardiff CF1 1JW Brazennose Street, Manchester M60 8AS Southey House, Wine Street, Bristol BS1 2BQ 258 Broad Street, Birmingham B1 2HE 80 Chichester Street, Belfast BT1 4JY

Government publications are also available through booksellers

Extracts from this publication may be reproduced provided the source is acknowledged. Proposals for complete reproduction should be addressed to the Librarian, Business Statistics Office, Newport, Gwent NPT 1XG