

ONLY

BRITISH LIBRARY
OF POLITICAL AND
ECONOMIC SCIENCE



LONDON SCHOOL OF
ECONOMICS AND
POLITICAL SCIENCE
10, PORTUGAL STREET,
LONDON WC2A 2HD
Tel. 01-405 7686

BRITISH LIBRARY
OF POLITICAL AND ECONOMIC SCIENCE
(London School of Economics)

HEADING

TITLE & VOL. NO.

STATISTICS
BACK-UP

EDITION

CLASS MARK

DATE OF PUBLICATION

BOOK NUMBER

42 (HA 251)

NOT FOR HOME READING
Date of issue

PA361

BRITISH LIBRARY
- 1 JUN 1977
OF POLITICAL AND
ECONOMIC SCIENCE

1973

STATISTICS
BACK-UP/
42
(HA 25)

Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production

Electrical machinery



HMSO

Department of Industry
Business Statistics Office

2775/3

PA361

Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1973

Electrical machinery

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

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

List of Industry Reports, etc.

- PA1001 Introductory notes
- PA101 Coal mining
- 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
- PA218 Fruit and vegetable products
- 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
- 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
- PA333 Pumps, valves and compressors
- 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, ventilating and air-conditioning equipment
- PA339.5 Scales and weighing machinery and portable power tools
- PA339.7 Food and drink, processing machinery and 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
- PA367 Radio, radar and electronic capital goods
- PA368 Electrical appliances primarily for domestic use
- PA369.1 Electrical equipment for motor vehicles, cycles and aircraft
- PA369.2 Primary and secondary batteries
- PA369.4 Electric lamps, electric light fittings, wiring accessories, etc.
- PA370 Shipbuilding and marine engineering
- PA380 Wheeled tractor manufacturing
- PA381.1 Motor vehicle manufacturing
- PA381.2 Trailers, caravans and freight containers
- PA382 Motor cycle, tricycle and pedal cycle manufacturing
- PA383 Aerospace equipment, manufacturing and repairing
- PA384 Locomotives, railway track equipment, railway carriages, wagons and trams
- PA390 Engineers' small tools and gauges
- PA391 Hand tools and implements
- PA392 Cutlery, spoons, forks and plated tableware, etc.
- PA393 Bolts, nuts, screws, rivets, etc.
- PA394 Wire and wire manufactures
- PA395 Cans and metal boxes
- PA396 Jewellery and precious metals
- PA399.1 Metal furniture
- PA399.5 Drop forgings, etc.
- PA399.6 Metal hollow-ware
- PA399.8 Miscellaneous metal manufacture
- PA411 Production of man-made fibres
- PA412 Spinning and doubling on the cotton and flax systems
- PA413 Weaving of cotton, linen and man-made fibres
- PA414 Woollen and worsted
- PA415 Jute
- PA416 Rope, twine and net
- PA417.1 Hosiery and other knitted goods
- PA417.2 Warp knitting
- PA418 Lace
- PA419 Carpets
- PA421 Narrow fabrics
- PA422.1 Household textiles and handkerchiefs
- PA422.2 Canvas goods and sacks and other made-up textiles
- PA423 Textile finishing
- PA429.1 Asbestos
- PA429.2 Miscellaneous textile industries
- PA431 Leather (tanning and dressing) and fellmongery
- PA432 Leather goods
- PA433 Fur
- PA441 Weatherproof outerwear
- PA442 Men's and boys' tailored outerwear
- PA443 Women's and girls' tailored outerwear
- PA444 Overalls and men's shirts, underwear, etc.
- PA445 Dresses, lingerie, infants' wear, etc.
- PA446 Hats, caps and millinery
- PA449.1 Corsets and miscellaneous dress industries
- PA449.2 Gloves
- PA450 Footwear
- PA461.1 Refractory goods
- PA461.2 Building bricks and non-refractory goods
- PA462 Pottery
- PA463 Glass
- PA464 Cement
- PA469.1 Abrasives
- PA469.2 Miscellaneous building materials and mineral products
- PA471 Timber
- PA472 Furniture and upholstery
- PA473 Bedding, etc.
- PA474 Shop and office fittings
- PA475 Wooden containers and baskets
- PA479 Miscellaneous wood and cork manufactures
- PA481 Paper and board
- PA482.1 Cardboard boxes, cartons and fibre-board packing cases
- PA482.2 Packaging products of paper and associated materials
- PA483 Manufactured stationery
- PA484.1 Wallcoverings
- PA484.2 Miscellaneous manufactures of paper and board
- PA485 Printing, publishing of newspapers and periodicals
- PA489 General printing and publishing
- PA491 Rubber
- PA492 Linoleum, plastics floor-covering, leathercloth, etc.
- PA493 Brushes and brooms
- PA494.1 Toys, games and children's carriages
- PA494.3 Sports equipment
- PA495 Miscellaneous stationers' goods
- PA496 Plastics products
- PA499.1 Musical instruments
- PA499.2 Miscellaneous manufacturing industries
- PA601 Gas
- PA602 Electricity
- PA603 Water supply
- PA1002 Summary tables

PA361 ELECTRICAL MACHINERY

The information in this report relates to establishments classified to the Electrical machinery industry, minimum list heading 361 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Manufacturing machinery for generating, transmitting and distributing electric power including electricity generators, turbines for electricity generation and transformers; starting and controlling gear for electric motors, and switchgear; electric motors (including electric traction motors and transmission equipment and associated rectifiers), and electrical machinery not reported elsewhere. Electrical equipment for motor vehicles, cycles and aircraft is excluded.

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

Table No	Title	Page
	United Kingdom establishments classified to the industry	
1	Output and costs, 1970, 1971, 1972 and 1973	PA361 2
2	Capital expenditure, 1970, 1971, 1972 and 1973	PA361 3
3	Stocks and work in progress, 1970, 1971, 1972 and 1973	PA361 3
4	Analysis of establishments by size, 1973	PA361 4 - 5
5	Regional distribution of employment, net capital expenditure and net output, 1973	PA361 6
6	Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 20 or more persons, 1973	PA361 7
7	Percentage analysis of employees, by full and part-time employment and sex, 1973	PA361 7
8	Sales of principal products of the industry by establishments employing 25 or more persons, including sales by establishments classified to other industries, 1972 and 1973	PA361 8-12

TABLE 1

PA361 2

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

	Unit	1970	1971	1972	1973
Enterprises (b)	Number	661	683	708	812
Establishments (b)	"	766	812	834	938
Sales of goods produced, work done and industrial services rendered (c)	£'000				724,889
Capital goods produced for establishments' own use (d)	"	568,012	606,564	633,825	2,750
Non-industrial services rendered (e)	"				5,420
Goods merchanted or factored	"	66,137	93,348	66,971	50,519
Total sales and work done (c) (e)	"	634,149	699,911	700,796	783,578
Increase during the year, work in progress and goods on hand for sale	"	27,485	3,391	8,258	15,244
Gross output (c) (e)	"	661,635	703,301	709,054	798,822
Purchases of materials for use in production, and packaging and fuel (d)	"				369,690
Purchases of goods for merchenting or factoring (d)	"	349,754	386,892	367,452	43,403
Increase during the year, stocks of materials, stores and fuel	"	6,596	406	-3,396	20,103
Cost of industrial services received (f)	"	11,818	11,064	9,885	14,885
Net output (g)	"	306,658	305,751	328,321	390,947
Total employment (h)	Thousands	149.7	142.9	144.0	138.6
Net output per head (g)	£	2,048	2,140	2,280	2,822
Payments for non-industrial services (j)					
Rents, hire of plant, machinery and vehicles	£'000				3,153
Commercial insurance premiums	"				3,634
Bank charges	"				607
Other non-industrial services	"				15,404
Licensing of motor vehicles (k)	"				218
Rates, excluding water rates (k)	"				4,600
Gross value added at factor cost	"				363,332
Gross value added at factor cost per head	£				2,622

(a) For 1973, estimates for establishments not making satisfactory returns and for establishments employing less than 20 persons accounted for 15 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 12 per cent.

(b) Increase from 1972-1973 largely attributable to improved estimates of the number of establishments with less than 20 employees - see note on page (iii)

(c) The figures for 1970-1972 do not include receipts for repairs and maintenance.

(d) Not recorded separately for 1970-1972.

(e) The figures for 1970-1972 do not include revenue from rents for industrial buildings.

(f) The figures for 1970-1972 exclude the amounts payable for repairs and maintenance.

(g) The definition of net output used in previous census reports provided for the deduction of amounts payable to other organisations for transport of goods within the United Kingdom. The net output and net output per head figures on that basis were:-

Year	Net output £'000	Net output per head £
1970	301,842	2,017
1971	300,211	2,101
1972	322,093	2,237

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

(h) Average number employed (full and part-time; see table 7) during the year (including working proprietors) by the establishment.

(j) Not collected for 1970-1972 except for amounts payable to other organisations for transport of goods within the United Kingdom.

(k) Not collected for 1970-1972.

TABLE 2

PA361 3

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

	£'000			
	1970	1971	1972	1973
Land and buildings				
New building work	2,794	3,300	2,148	3,490
Land and existing buildings				
Acquisitions	962	546	615	1,747
Disposals	1,060	1,721	1,433	1,855
Vehicles				
Acquisitions				
Motor cars (c)				2,093
Other vehicles (c)	1,821	1,880	2,319	599
Disposals				
Motor cars (c)				668
Other vehicles (c)	657	667	833	85
Plant and machinery				
Acquisitions	13,358	12,023	12,692	15,980
Disposals	1,775	1,112	931	405
Total net capital expenditure (d)	15,442	14,249	14,577	20,894

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

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

(c) Not recorded separately for 1970-1972.

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

TABLE 3

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

	£'000			
	1970	1971	1972	1973
			Increase	Value at end of year
Materials, stores and fuel	6,596	406	-3,396	82,757
Work in progress	26,456	3,127	9,719	213,505
Goods on hand for sale	1,029	264	-1,461	23,190
Total	34,081	3,797	4,862	319,452

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

TABLE 4

PA361 4

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

Size group (b)	Establishments	Enterprises (c)	Employment			Wages and salaries (e)			
			Total (b)	Operatives	Others (d)	Operatives		Others (d)	
						Total	per head	Total	per head
Number	Number	Number	Number	Number	£'000	£	£'000	£	
1-10	361	360	1,921	10,109	3,646	13,805	1,366	7,003	1,921
11-19	177	173	2,615						
20-49	137	135	4,377						
50-99	80	71	5,482						
100-199	60	57	8,982	6,140	2,818	9,218	1,501	5,407	1,919
200-299	31	28	7,645	5,164	2,480	7,205	1,395	4,545	1,833
300-399	14	13	4,920	3,153	1,767	4,832	1,532	3,248	1,838
400-499	10	10	4,456	3,176	1,277	4,936	1,554	2,368	1,855
500-749	26	26	15,769	10,664	5,103	16,675	1,564	9,994	1,959
750-999	13	8	11,149	7,227	3,922	10,254	1,419	7,493	1,910
1,000-1,499	12	6	14,701	9,368	5,333	13,961	1,490	10,302	1,932
1,500-1,999	4	3	7,127	4,142	2,985	6,799	1,641	5,958	1,996
2,000-2,999	6	4	15,015	10,248	4,767	15,084	1,472	8,760	1,838
3,000 and over	7	4	34,397	20,563	13,834	34,457	1,676	28,943	2,092
Total	938	812	138,556	89,954	47,932	137,224	1,525	94,022	1,962

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

PA361 5

Total sales and work done (f)	Gross output	Net output		Gross value added at factor cost		Net capital expenditure (g)	Total stocks and work in progress at end of year				
		Total	per head	Total	per head						
								£'000	£	£'000	£
£'000	£'000	£'000	£	£'000	£	£'000	£'000				
75,127	76,952	38,405	2,668	(h)	(h)	1,869	15,980				
56,890	59,390	25,471	2,836	57,674(h)	2,467(h)	1,654	13,597				
45,662	47,678	21,962	2,873	20,232	2,646	1,532	12,089				
25,252	25,560	13,443	2,732	12,482	2,537	453	7,720				
21,474	22,237	11,052	2,480	10,288	2,309	664	7,231				
81,110	83,470	45,100	2,860	41,864	2,655	2,873	26,530				
67,433	68,614	28,924	2,594	26,577	2,384	1,288	21,578				
85,805	85,680	34,144	2,323	30,450	2,071	1,423	47,631				
46,548	48,836	19,842	2,784	18,322	2,571	1,971	16,469				
75,657	78,288	47,102	3,137	45,101	3,004	2,230	24,397				
202,619	202,117	105,500	3,067	100,342	2,917	4,939	126,229				
783,578	798,822	390,947	2,822	363,332	2,622	20,894	319,452				

- (e) Another important component of labour costs, employers' national insurance contributions, graduated pensions, contributions to other pensions and welfare schemes and the running costs of canteens, is estimated for the industry at £21,148 thousand. In addition, for 1973, the remuneration of outworkers on returns received was £488 thousand.
 (f) Comprises sales of goods produced (including capital goods manufactured, buildings constructed by establishments for their own use), work done, industrial and non-industrial services rendered, goods merchanted or factored.
 (g) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.
 (h) Gross value added data relates to establishments employing 1 - 199 persons.

TABLE 5

PA361 6

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

Area	Employment (b)		Net capital expenditure (c)				Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (e)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	£'000	£'000	Estimated net output	Average number employed as a percentage of total average number employed in the industry in the region	Net output as a percentage of total of the industry in the United Kingdom
Standard regions of England									
North	*	*	*	*	*	*	*	*	*
Yorkshire and Humberside	11.3	8.1	1,777	8.5	70	1,708	25,881	80.8	6.6
East Midlands	10.0	7.2	2,201	10.5	*	*	29,076	86.6	7.4
East Anglia	*	*	*	*	*	*	*	*	*
South East	25.0	18.0	4,751	22.7	608	4,143	47,113	62.6	12.1
South West	10.9	7.9	1,768	8.5	*	*	20,135	80.4	5.2
West Midlands	29.2	21.1	5,249	25.1	*	*	59,992	77.9	15.4
North West	19.3	13.9	3,106	14.9	297	2,809	33,936	62.9	8.7
England	124.9	90.1	19,281	92.3	*	*	261,582	75.5	66.9
Wales	3.3	2.4	713	3.4	262	452	4,477	78.8	1.2
Scotland	8.6	6.2	808	3.9	*	*	16,633	84.9	4.3
Great Britain	136.8	98.7	20,802	99.6	*	*	282,692	76.2	72.3
Northern Ireland	1.8	1.3	93	0.4	*	*	3,650	96.2	0.9
Unallocated (a) (f)	-	-	-	-	-	-	104,605	-	26.8
United Kingdom	138.6	100.0	20,894	100.0	-108	21,002	390,947		100.0

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

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

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

(d) Acquisitions less disposals.

(e) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.

(f) Includes unallocated net output of establishments covering addresses in two or more regions.

TABLE 6

PA361 7

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

Accounting year ended	Percentage of total returns received	Percentage of total number employed
	per cent	per cent
1973 April (a)	2.6	0.6
May	1.9	0.3
June	5.9	1.9
July	2.6	0.5
August	1.1	0.1
September	7.4	7.1
October	3.0	1.0
November	3.0	1.6
December	38.5	47.8
1974 January	3.3	0.7
February	3.3	1.5
March (b)	27.4	36.9
	100.0	100.0

(a) From 6th April.

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

TABLE 7

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

Sex	Full-time	Part-time	All employees
	per cent	per cent	per cent
Male	75	-	75
Female	21	4	25
	96	4	100

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

Source: Department of Employment

TABLE 8

PA361 8

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

	1973	
	Quantity	Value
	Units	£'000
Machinery for generating, transmitting and distributing electric power:		
AC generators:		
Complete:		
Not over 100 kva	58,173	9,549
Over 100 but not exceeding 1,000 kva	5,648	8,665
Over 1,000 kva	264	20,438
Parts of AC generators	..	6,251
DC generators:		
Complete:		
Not over 375 kw	2,859	2,586
Over 375 kw
Parts	..	929
Turbines for electricity generation:		
Complete	..	69,115
Parts	..	24,918
Generator sets, complete:		
Other than marine:		
Driven by internal combustion engines	15,835	21,828
Driven by gas turbines	14	7,923
Driven by steam turbines
Driven by other prime movers	3,473	2,619
Marine	508	791
Transformers for lighting, heating and power:		
Complete:		
Not over 5 kva	Thousands 1,653	7,631
Over 5 but not exceeding 1,500 kva	Thousands 110	16,539
Over 1,500 kva for voltages not exceeding 72.5 kv	Units 928	10,345
All ratings for voltages over 72.5 but less than 200 kv	59	5,050
All ratings for voltages of 200 kv and over	47	6,940

TABLE 8 (continued)

PA361 9

	1973	
	Quantity	Value
	Units	£'000
Machinery for generating, transmitting and distributing electric power: (continued)		
Transformers for lighting, heating and power: (continued)		
Parts:		
On load tap changers	487	1,296
Other parts	..	4,983
Shunt and limiting reactors:		
Complete	..	577
Parts	..	42
Capacitors for power factor improvement:		
Complete	..	2,794
Ancillary equipment and parts	..	529
Total machinery for generating, transmitting and distributing electric power	..	232,338
Switchgear and control gear:		
Starting and control gear for industrial traction and marine electric motors:		
Complete:		
Standard equipment	..	31,648
Other (made to order)	..	27,928
Parts	..	6,542
Switchgear and switchboards:		
Alternating current:		
Complete:		
Not exceeding 660 v	..	42,815
Over 660 v but not exceeding 15,000 v or 350 mva	..	21,030
Over 15,000 v or 350 mva	..	27,168
Parts	..	6,533
Direct current:		
Complete	..	1,213
Parts	..	389

TABLE 8 (continued)

PA361 10

	1973	
	Quantity	Value
	Units	£'000
Switchgear and control gear: (continued)		
Switchgear and switchboards: (continued)		
Fuses and fuse gear:		
Complete	..	18,327
Parts	..	1,448
Relays, power circuit protection
Total switchgear and control gear	..	185,041
Other electrical machinery:		
Traction motors other than for railways, tramways and trolley buses:		
Complete	33,700	4,731
Parts	..	1,100
Non-traction motors sold separately:		
Less than 0.75 kw:		
Complete:		
Alternating current (including ac/dc):		
Not exceeding 0.075 kw	Thousands 4,381	12,394
Over 0.075 but not exceeding 0.25 kw	Thousands 3,113	13,863
Over 0.25 but not exceeding 0.75 kw	Thousands 660	7,060
Direct current	Thousands 274	3,166
Parts		1,734
Other:		
Alternating current (including ac/dc):		
Complete:		
0.75 but not exceeding 7.5 kw	543	14,617
Over 7.5 but not exceeding 75 kw	Thousands 155	17,006
Over 75 but not exceeding 375 kw	Units 6,937	8,601
Over 375 but not exceeding 750 kw	516	2,164
Over 750 kw	353	5,361
Parts	..	3,247

TABLE 8 (continued)

PA361 11

	Quantity		Value	
	Units		£'000	
	Units	£'000	Units	£'000
Other electrical machinery: (continued)				
Non-traction motors sold separately: (continued)				
Other: (continued)				
Direct current:				
Complete:				
0.75 but not exceeding 7.5 kw	24,318	2,152		
Over 7.5 but not exceeding 75 kw	3,932	2,540		
Over 75 but not exceeding 375 kw	886	1,920		
Over 375 kw but not exceeding 750 kw	123	1,249		
Over 750 kw				
Parts	..	1,650		
Converting machinery:				
Complete	..	4,519		
Parts	..	6		
Rectifiers and rectifier plant:				
Complete:				
Mercury arc	..	84		
Selenium and copper (including plates and stacks)	..	252		
Germanium and silicon	..	5,107		
Parts				(b)
Moulded case circuit breakers (including miniature and earth leakage circuit breakers)	Thousands 2,759	4,150		
Battery chargers	Thousands 727	5,723		
Other new electrical machinery (c):				
Complete	..	21,358		
Parts	..	12,663		
Reconditioned machinery:				
Complete	..	1,838		
Parts	..	91		
Total other electrical machinery	..	160,352		

TABLE 8 (continued)

PA361 12

	1973	
	Quantity	Value
	Units	£'000
Unclassified sales	..	16,421
Sales of waste products, residues etc.	..	2,225
Work done:		
Erection, installation and repair of electrical machinery	..	38,184
Other	..	6,126
Total sales of principal products of the Electrical machinery industry (MLH 361) and work done		640,681

Source: Business Monitor (PQ 361). Quarterly Statistics

- (a) Sales are deliveries on sale for home or abroad; forward sales are excluded. Values are net selling values, value added tax (or purchase tax where previously applicable) trade discounts and commissions are excluded.
- (b) Included in Other new electrical machinery: complete.
- (c) Includes Traction motors for railways, tramways and trolley buses and parts of rectifiers and rectifier plant.

Notes

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

GENERAL INFORMATION

Changes made for 1973

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

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

Suppression of information relating to individual undertakings.

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

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

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

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

Symbols used

The following symbols are used throughout the P A series of Business Monitors:

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

Rounding of figures

Figures in the tables have, where necessary, been rounded to the nearest final digit. There may, therefore, be an apparent slight discrepancy between a sum of constituent items and a total shown.

Industrial classification

The United Kingdom Standard Industrial Classification (SIC) was first issued in 1948 and was subsequently revised in 1958 and 1968. It exists to promote uniformity and comparability in the official statistics of the United Kingdom. The general principles followed are those of the International Standard Industrial Classification of all Economic Activities of the United Nations Statistical Office but the United Kingdom SIC reflects the organisation and structure of industry and trade as it exists in the United Kingdom. The SIC is a classification by activity and is not a commodity classification. However, an index of all commodity headings for which sales data are provided in the Quarterly Business Monitors is published as PQ1000 in the Business Monitor Series.

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

Statistical units

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

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

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

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

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

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

THE REGISTER

The register permits a questionnaire to be sent direct to the reporting establishment on which the latter can include information relating to all the manufacturing (or local) units which it comprises.

The inquiries provide a major source of information for keeping the register continuously up-to-date and act as a check on its detail and structure. For the establishments on the register which make returns to the quarterly inquiries, the industrial classification is derived from an analysis of their sales of commodities and is reviewed annually. Employment data is entered on the register from returns to the annual census of production. In cases where an establishment does not make a return to these inquiries the employment data is based on information provided by the Department of Employment from the annual censuses of employment.

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

(iii)

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

Coverage

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

Regions

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

TERMS USED IN THE CENSUS REPORT

Average number employed

Establishments were required to state the number of persons on the payroll (i.e. whose national insurance cards were held by them) on the average during the year of return, whether full-time or part-time employees. Separate figures were required for:

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

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

Working proprietors

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

Employees

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

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

Capital expenditure

Capital expenditure during the year in respect of manufacturing units where production had not started before the end of the year is included in the figures for 1970 to 1973. Establishments were asked not to deduct from the value of capital expenditure amounts received or expected to be received in grants or allowances from the Government or any statutory body or local authority. Establishments with 100 or more employees were also asked to include a total net capital expenditure figure for the calendar year 1973.

(a) New building work

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

(b) Land and existing buildings

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

(c) Plant, machinery and vehicles

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

Gross output

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

Net output

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

Net output per head

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

Gross value added at factor cost

Gross value added at factor cost is calculated by deducting from net output the cost of non-industrial services (rent of buildings and capital equipment, commercial insurance premiums, bank charges and amounts paid for professional services, postal etc. services, transport, advertising etc.). This estimate of gross value added approaches more closely than census net output to the definition of net output or value added in national accounts statistics.

Gross value added at factor cost per head

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

Purchases

Purchases include the cost of materials and components bought for use in production; of fuel and electricity for all purposes; of packaging materials including the cost of returnable cases and containers when first purchased; of workshop materials; office materials and materials for repairs to establishment's own buildings, plant and vehicles when carried out by their own work people included in the returns; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also

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

Sales of goods produced, work done and industrial services rendered

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

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

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

Capital goods produced for establishments' own use

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

Non-industrial services rendered

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

Goods merchanted or factored

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

Stocks and work in progress

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

Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to national insurances and pension schemes are excluded.

Remuneration paid to outworkers

The remuneration paid to outworkers (i.e. persons employed by the establishment who do their work in their own homes) is generally on a piece-work basis. Only amounts paid to outworkers whose names appear on the establishment's payroll are included. Amounts paid to outworkers by sub-contractors are excluded.

Employers' insurance and welfare contributions

This item includes employers' contributions to national insurance and graduated pensions as well as commercial insurance premiums to provide pensions, superannuation or other retirement benefits, sickness benefits, personal accident benefits, disability or death benefits for employees or former employees or their dependants. Contributions to the running costs of canteens, social centres, children's holiday homes, etc. for employees, former employees, and their dependants are also included.

© Crown copyright 1977

Her Majesty's Stationery Office

Government Bookshops

49 High Holborn, London WC1V 6HB

13a Castle Street, Edinburgh EH2 3AR

41 The Hayes, Cardiff CF1 1JW

Brazenose 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*