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OF POLITICAL AND ECONOMIC SCIENCE

Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production

Explosives, fireworks and matches



Department of Industry
Business Statistics Office

Special Note for Purchasers

Commencing with the 1971 Census, the Census of Production reports will be numbered in a uniform series embracing all industrial inquiries in the Business Monitor series. These Business Monitors will 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).

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PA279.3 Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production 1971

Explosives, fireworks and matches

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 1974

PA603 Water supply PA1002 Summary Tables The information in this report relates to establishments classified to the Explosives, fireworks and matches industry, minimum list heading 279.3 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

Manufacturing explosives, detonators, fuses (not shell fuses), percussion caps, flares, signal rockets, etc. Manufacturing fireworks and matches, and 'live ammunition'. Filling bombs, cartridges, shells, etc. Establishments making live military ammunition which also make the cases for it are excluded, and are classified to minimum list heading 342, reported in part PA342.

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

Electronic computers
Radio, radar and electronic capital goods

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Input and output, 1970 and 1971

All United Kingdom establishments classified to the industry (a)

	Unit	1970	1971
	Numbe r	33	28
Enterprises	1	45	44
Establishments			
090	£,000	67,488	1
Sales of goods produced and work done	1 000	861	ar his cost
Services rendered to other organisations (b)		1,946	74,855
Goods merchanted or factored	11	321	
Canteen takings	II .	021	Janeary Control
Total sales and work done	II.	70,617	74,855
Increase during the year, goods on hand	11	957	914
for sale	11	170	3,858
Increase during the year, work in progress			i dikarana
Gross output	II .	71,744	79,627
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		articular days are	20.001
Cost of purchases	11	30,657	33,681
Increase during the year, stocks of materials, stores and fuel	II -	836	841
Payments to other organisations	11	321	
for work done on materials given out	"	409	1,164
for transport by road	"	1500 700	As of so solded
for transport by rail, water, air and Post Office parcel services	II	315	Sol e Carol
Total costs	n .	30,867	34,004
Net output	11	40,877	45,624
Total employment (including working proprietors) (c)	Thousands	18.2	17.0
Net output per head	£	2,245	2,676

⁽a) For 1971, estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons, accounted for 7 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 6 per cent. For 1970 the comparable figures were 5 per cent and 4 per cent respectively.

⁽b) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered.

⁽c) Average number of persons employed during the year.

TABLE 2
Capital expenditure and stocks, 1970 and 1971
All United Kingdom establishments classified to the industry (a)

	1970	1971
Capital expenditure (b)	£,000	£'000
New building work	660	1,428
Land and existing buildings	THE REPORT OF THE PARTY OF THE	choos to being
Acquisitions	202(c)	- 90(c)
Disposals	202(6)	- 30(8)
Plant and machinery	ľ	
Acquisitions	3,521	5,597
Disposals	85	275
Vehicles	e designation	alox (c)
Acquisitions	377	233
Disposals	82	43
Total net capital expenditure (c)	4,593	6,850
Stocks and work in progress at end of year (d)	afonts , aper and a	COMPANY OF THE PARTY OF THE PAR
Materials, stores and fuel	5,935	6,572
Work in progress	4,478	8,647
Goods on hand for sale	4,951	5,613
Total stocks	15,364	20,832

⁽a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.

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

⁽c) Acquisitions less disposals.

⁽d) The stock changes in Table 1, based on opening and closing values returned by firms, may be different from those obtained from end-year values. The differences are attributable to variation in valuation by firms between the years and to differences in respondents, and in total employment.

TABLE 3

Analysis of establishments by size, 1971

All United Kingdom establishments classified to the industry (a)

				Employe	es	Wages and s	alaries	Wages and s per he		Total sales and	Gross	Net	Net output	Capital expenditure	Total stocks and work in progress at
Size group (b)	Estab- lishments	Enter- prises (c)	Total employment (b)	Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)	work done (e)	output	output	per head		end of year
(6)	Number	Number	Number	Number	Number	£'000	£'000	£	£	£'000	£'000	£'000	£	£,000	£,000
1-10	6	6	39					7 3 3	100			1 000	1 500	7	742
11-24	9	9	141	597	208	405	269	679	1,292	2,189	2,199	1,323	1,592		142
25-99	9	9	651						1 700	10.000	10 500	5,268	2,787	821	2,448
100-299	8	4	1,890	1,290	600	1,449	1,079	1,124	1,799	10,309	10,583			540	956
300-499	3	3	926	765	161	887	319	1,160	1,979	4,537	4,655	2,696	2,912	340	350
500 and over	9	5	13,402	9,988	3,408	12,985	7,522	1,300	2,207	57,820	62,190	36,336	2,711	5,481	16,687
								1 7 7 7						+ 7	
Total	44	28	17,049	12,640	4,377	15,727	9,188	1,244	2,099	74,855	79,627	45,624	2,676	6,850	20,832

- (a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.
- (b) Average number employed 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 will therefore exceed the total for the industry.

- (d) Administrative, technical and clerical employees.
- (e) Including sales of goods merchanted or factored, canteen takings and services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered).
- (f) Acquisitions less disposals.

TABLE 5

Percentage analysis of employees, by full and part time employment and sex, 1971 (a)
All United Kingdom establishments classified to the industry

Sex	Full time	Part time	All employees
	7		
	per cent	per cent	per cent
Male	63	1	64
Female	29	7	36
		B B (8)	5.695
	92	8	100

Source: Department of Employment

Regional distribution of employment, net capital expenditure and net output, 1971 All United Kingdom establishments classified to the industry

Area	Average	number ed (a)	Net ca expendit	pital ure (b)	Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (c)					
	e mak over				Estimated net output	Average number employed as a percentage of total average number employed in the industry in the region	Net output as percentage of total of the industry in the United Kingdom			
	Thousands	per cent of United Kingdom	£,000	per cent of United Kingdom	£,000					
Standard Regions of England										
North	**************************************	-	-	-	-	-				
Yorkshire and Humberside	*	*	*	*	*	*	*			
East Midlands	*	*	*	*	*	*	*			
East Anglia	-	-	-	-	-	-				
South East	2.2	13.2	*	*	3,505	68.5	7.7			
South West	*	*	*	*	*	*	*			
West Midlands	-		-	-		- 11	and the same of the same of			
North West	*	*	*	*	*	*	*			
England	7.8	46.0	2,057	30.0	15,438	85.9	33.8			
Wales	*	*	*	*	*	*	*			
Scotland	*	*	*	*	*	*	*			
Great Britain	17.0	100.0	6,850	100.0	42,624	92.6	93.4			
Northern Ireland	-	-	-	-	-	- 400	-			
Unallocated (d)	-	-	-	-	3,000	-	6.6			
United Kingdom	17.0	100.0	6,850	100.0	45,624		100.0			

- (a) Including working proprietors.
- (b) New building work plus acquisitions less disposals of land and existing buildings, plant and machinery and vehicles.
- 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.
- (d) Includes estimates of net output for establishments not making satisfactory returns and establishments employing less than 25 employees, and unallocated net output of establishments covering addresses in two or more regions.

⁽a) The percentages relate to the numbers employed (excluding working proprietors) in the 'Other chemical' industries, minimum list heading 279 at mid-June, 1971. In the 1971 census the employment of the Explosive fireworks and matches industry represented 23 per cent of the employment of the minimum list heading 279.3 at whole.

9.3

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 25 or more persons, 1971

Accounting year ended	Percentage of total returns received	Percentage of total number employed
	per cent	per cent
1971 April (a)	0.0	0.0
May	0.0	0.0
June	0.0	0.0
July	0.0	0.0
August	0.0	0.0
September	4.5	1.4
October	0.0	0.0
November	9.1	1.0
December	45.5	50.2
972 January	0.0	0.0
February	0.0	0.0
March (b)	40.9	47.4
	100.0	100.0

- (a) From 6th April.
- (b) Including returns made for twelve-month period ended 1st to 5th April 1972.

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Notes

These notes give the main information needed for interpreting the figures in the industry reports, (more detailed information about the census is given in a separate booklet—"Introductory Notes", Part PA1001 of the Report on the Census of Production for 1971).

GENERAL INFORMATION

Changes compared with 1970

The questions asked in the 1971 census were the same as those in the 1970 census with one main exception: for 1971 establishments were asked to include in capital expenditure, expenditure on units that were not in production in the year of return; for 1970 this expenditure was collected in a separate inquiry. This change of method of collection does not affect the results for 1970 and 1971 because capital expenditure for units not yet in production is included in the aggregates for both years.

Industrial classification

The Annual Censuses of Production are conducted on the Business Statistics Office's Production Register. Normally establishments on the Register are classified to industries on the basis of major activity in conformity with the third edition of the Standard Industrial Classification (Revised 1968). Normally an establishment was classified to an industry if its sales of the principal products of that industry accounted for a greater proportion of its total sales than in its sales of the principal products of any other industry; classification is generally based on an establishment's returns to the quarterly production inquiry. Where this was not possible-for example where a quarterly production inquiry had not then been introducedthe classification of an establishment reflects its return to the Census of Production, 1968. Establishments for which information was not available either from the quarterly inquiries or the 1968 Census were classified on the basis of the description of the business given by the establishments to the Business Statistics Office, for instance, in the course of registration.

Coverage

Detailed census returns were generally sought only from establishments employing on average 25 or more persons, but in some industries where firms employing less than 25 persons account for a relatively high proportion of total employment and output the exemption limit was lowered to 11. Census returns were also sent to establishments whose employment was not known to the Business Statistics Office at the time of dispatch.

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 and (b) all other employees (operatives). Averages could be calculated from 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 establishments) 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 fixed 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 managing and other directors in receipt of a definite wage, salary or commission, managers, superintendents and works foremen; research, experimental development, technical and design

employees (other than operatives); draughtsmen and tracers; editorial staff, staff reporters, canvassers, competition and advertising staff; travellers; and office (including works office) employees.

Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work (including roundsmen), stores, warehouses, shops and canteens; inspectors, viewers and similar workers; maintenance workers, and cleaners. Operators engaged in outside work of erecting, fitting etc. are also included, but out-workers 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 both 1970 and 1971.

(a) New building work

This represents the cost incurred during the year of new building and other constructional work (including office buildings, canteens and the like used in connection with the business covered by the return, but not dwelling houses for employees). 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 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. 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.

Enterprise

The term enterprise is used in this report to mean one or more establishments under common ownership or control. An enterprise normally consists of a single establishment, more than one establishment owned by the same firm, or a number of establishments owned by a parent company and its subsidiary companies. Information about the relationship between constituent companies of enterprises was obtained mainly from published sources such as the Stock Exchange Year Book supplemented by information from company reports and information supplied by establishments. The information available is not complete but covers the largest and most important groups of industrial establishments and is believed sufficient to provide a worthwhile basis for analysis.

Fstablishment

The definition of an establishment in 1970 and 1971 was that of the Standard Industrial Classification (Revised 1968): "the smallest unit which can provide the information normally required for an economic census, for example, employment, expenses, turnover, capital formation". Sometimes activities which are conducted as a single business are carried on at a number of addresses, termed local units. Where the activities of such a business are closely integrated, and detailed census information is not available for each unit, it is treated as a multi-unit establishment and a single return accepted. Separate figures are obtained, however, of employment and net capital expenditure at each unit.

Gross outpu

Gross output measures the total value of production (including work done) by establishments during the year. It is calculated as follows:—

Value of sales and work done

Plus/Less: Increase/decrease in value of stocks of goods on hand for sale

Plus/Less: Increase/decrease in value of work in progress

Gross output.

Net output

Net output represents the value added to materials by the process of production (including the margin on selling any merchanted or factored goods). It is calculated as follows:—

Gross output

Less: Purchases adjusted for change in value of stocks of fuel and raw materials

Less: Payments for work given to other establishments

Less: Payments for transport

Less: Net amount of any duties, subsidies, allowances and levies payable

= Net output.

Net output per person employed

The figures of net output per person employed are derived by dividing the net output by the average number of persons employed (full time 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, plants 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. In general, purchases of goods for merchanting or factoring and canteen supplies are included. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account.

The values shown include any duty paid (less rebate, etc.) but 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 was 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.

Sale

Sales are in respect of goods made by the business covered by the return, goods made for it by outworkers or by other establishments from materials given out to them (sometimes described as goods made on commission) and waste products. Any machinery or other capital items produced for use in the business covered by the return are included, the value being that adopted in the establishment's asset accounts. Goods sold without being subjected to any manufacturing process (i.e. merchanted or factored) and canteen takings are included.

The value shown for sales is the net selling value, defined as the amount charged to customers whether on an ex-works or delivered basis excluding any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packaging materials is included. Goods charged on a delivered basis to customers overseas are included at the f.o.b. value.

Goods produced in one establishment and transferred to another establishment of the same firm not covered by the return were 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 were kept were valued on the same basis.

To the extent that sales of finished products of one establishment constitute the materials purchased by another, total figures of the value of sales (and of materials and fuel purchased) include an element of duplication. In some industries, e.g. motor vehicle manufacturing, and woollen and worsted, this duplication is substantial; and aggregates of the figures for a number of industries contain significantly greater amounts of duplication. For work done on commission, sub-contract work, etc., the value shown is the total amount charged for the work, including the value of any materials bought and used in such work.

Services rendered

This represents the amounts charged for hiring out plant, machinery and other goods, providing transport, or for any technical or other services rendered to other organisations. It includes amounts credited for similar services rendered to other establishments of the same enterprise not covered by the return,

Standard Industrial Classification

Industry classification is based on the Standard Industrial Classification (Revised 1968). It is published by HM Stationery Office together with a separate index in the form of an alphabetical list of industries.

Stocks and work in progress

Values are given of stocks of goods on hand for sale, and of materials and fuel, at the end of the year of return, including any stocks of goods held for merchanting or factoring. Values of the change during the year are also shown. The values include duty in the case of dutiable goods held out of bond.

The value of work in progress at the end of, and the change during, the year are also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received.

Transport payments

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payment to other establishments, and to any separate transport organisation of the same establishment not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, i.e. railways, road haulage, canals, coastwise shipping, air, etc. Payments made for sea and air freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded

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 is excluded.

Work given out

The figures shown represent the total amount paid for work done by other establishments (whether part of the same enterprise or not) on materials supplied to them. They do not include payments to individual outworkers or payments for business and other services.

SYMBOLS USED

The following symbols are used throughout the report:

.. 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 be an apparent slight discrepancy between the sum of the constituent items and the total shown.

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