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DEPARTMENT OF TRADE AND INDUSTRY
BUSINESS STATISTICS OFFICE

Report on the Census of Production 1968

87 - 124

Presented by the Department of Trade and Industry
to Parliament in pursuance of the Statistics of Trade Act 1947
(10 & 11 Geo. 6 Cha. 39 Sec. 7)

NOTES

1. These notes give the main information needed for interpreting the Census figures. More detailed information about the Census is given in a separate booklet - 'Description of the Census': Part I of the Report on the Census of Production for 1968.

SCOPE OF THE 1968 CENSUS AND CHANGES COMPARED WITH 1963

2. The Census for 1968 was taken within the framework of the Standard Industrial Classification (Revised 1968) and covered all industries listed in Orders II to XXI, ie industries engaged in manufacturing, mining and quarrying, construction, and gas, electricity and water supply. As a result of the revision to the Standard Industrial Classification there have been changes compared with 1963 in the definitions of individual industries (details of which are given in the separate parts of the Report relating to them) and their allocation to Orders of the Standard Industrial Classification. Details are now given for some industries (in particular in the chemical and engineering sectors) which have not been separately distinguished before; while for the production of perambulators, hand trucks, etc for which there was a separate report for 1963, the particulars are now mainly included in the Report on the Toys, Games, etc Industry.

3. The number of separate industry reports has increased from 128 in the 1963 Census to 153 for the 1968 Census. Apart from the increase in the number of industries identified in the 1968 Census the revision of the Standard Industrial Classification also led to changes in the scope of the Census and the following activities, which were out of scope of the 1963 Census are included in the Census for 1968. The minimum list heading to which each is classified is shown in brackets.

Peat cutting and digging	(109/4)
Heat treatment of milk	(215/1)
Coffee blending, grinding and roasting	(229/2)
Tea blending	(229/2)
Jacquard card cutting and designing	(335)
Preparation of oven ready poultry at packing stations	(214/2)

Agricultural machinery repairing; boiler and motor-car breaking; and the sorting and cleaning of woollen and worsted hair rags which was in scope of the 1963 Census were excluded for 1968.

4. The rules used in classifying establishments to industries and to sub-divisions of industries were slightly changed for 1968. The most general change concerned the dropping of the rule by which in 1963 the classification of an establishment was only changed if the pattern of its output had altered considerably between two consecutive censuses. A number of changes which had limited application were also made, the most notable being

the treatment given to parts of machines, principal products of the mechanical engineering group of industries.

5. Another change concerned the exemption from the requirement to complete a detailed return. In this Census exemption applied to the establishment and not, as in previous censuses, to the firm. This meant that a firm with more than one establishment employing fewer than 25 persons at each, but with 25 or more persons in total, was exempted for 1968 from completing a detailed return (except in industries in which short forms were used - see paragraph 19). In previous censuses such a firm would have been required to provide a combined detailed return covering all establishments.

6. There were a number of differences in the information collected compared with 1963, notably that the questions asked about employers' contributions to National Insurance, private pension schemes, etc for 1963 were not asked for 1968. Instead information was obtained from the Department of Employment resulting from their Labour Costs Survey, 1968 upon which estimates could be based.

7. The method of collection of information on small establishments also differed between the 1963 and 1968 Censuses in selected industries where a short form was used; for the 1963 Census only a sample of small establishments was approached to give detailed information on their businesses, the remainder being required to provide simply a statement of the nature of work done and the average number of persons employed. For the 1968 Census all the small establishments in the selected 'short form' industries (with the exception of the Construction Industry (other than Public Authorities) where a 1 in 12 sample was used) were asked to provide detailed information.

8. Additional information about payments for certain services was obtained from a sample of enterprises in a supplementary inquiry into business expenses and receipts. This was in respect of payments for advertising, market research, professional services, royalties, etc and commercial insurance premiums. Receipts from royalties, etc were also collected in the supplementary inquiry. Similar data (except for that relating to professional services) were collected in 1963. The information is incorporated with Census data in Summary Tables 4 and 5 in Part 156.

9. For the purpose of this Report the 1963 returns for larger establishments have been reclassified to bring them into line with the Standard Industrial Classification (Revised 1968) wherever possible, but because of the nature of the questions asked in the 1963 Census it was not always possible to do so and the correspondence therefore is not always exact. It was more difficult to reclassify the 1963 forms for small establishments because of the absence of sales data and in such cases the pattern of reclassification

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of returns from larger establishments was taken as a guide. Nevertheless the figures for 1963 in the reports are fairly closely comparable with those for 1968, except for some industries where new activities have been included or where significant changes were made in the coverage of sales headings. All important changes in classification are described in the introduction to the relevant industry reports.

TERMS USED IN THE CENSUS REPORTS

Average number employed

10. Establishments were required to state the number of persons on the payroll (ie 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) operatives (see below). 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 (see below) where appropriate and these are included in total employment figures. Information on outworkers (ie persons employed by firms, who worked in their own homes on materials supplied by the establishment making the return) are excluded. The figures also include persons engaged in merchanting and factoring and canteen workers where particulars 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 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, but directors paid by fee only are excluded.

Employees

(i) 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.

(ii) Operatives cover all other classes of employees, that is, broadly speaking all manual wage earners. They include those employed in or about the factory or works; in power houses, transport work, stores warehouses, shops and canteens; inspectors, viewers and similar workers; maintenance workers; cleaners. Operatives engaged in outside work of erection, fitting, etc are

also included, but outworkers are excluded. Information about the numbers of outworkers employed was collected only for the Gloves Industry.

Capital expenditure

(i) New building work

This represents the cost incurred during the year of new building and other new construction 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 and 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.

(ii) 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 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.

(iii) 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. No deduction is made for depreciation, amortisation or obsolescence. The proceeds of items disposed of during the year exclude amounts written off for items scrapped.

(iv) Capital expenditure during the year in respect of establishments where production had not started before the end of the year is excluded from the figures for both 1963 and 1968.

Combined returns

11. A combined return is one which covers two or more establishments in the same census industry and in the same country (England, Scotland or Wales); the number of operatives employed in each of the establishments covered by the return was required to be given.

Enterprise

12. The term enterprise is used in this Report to mean one or more establishments under common ownership or control. An enterprise 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.

Establishment

13. For the 1968 Census an establishment is defined in accordance with the Standard Industrial Classification (Revised 1968) as being the smallest unit which can provide information normally required for an economic census, for example employment, expenses, turnover, capital formation. Establishments were asked to exclude from all sections of their returns particulars relating to any department not engaged in production for which separate records were kept. Where separate accounts were not kept, returns included details of merchanting or factoring, and other ancillary activities such as bottling, packing and manufacture of containers for packing their own products, whether or not these activities were carried on at the same address as the works, building and engineering maintenance, selling and transport and the operation of canteens.

Larger establishments are establishments in which 25 or more persons were employed on average during the year.

Small establishments are establishments in which fewer than 25 persons were employed on average during the year.

Gross output

14. The gross output of an industry is the aggregate value of goods made and other work done during the year by establishments classified to the industry. It is derived by subtracting from the value of sales and work done, the value of stocks of goods on hand for sale and work in progress at the beginning of the year and adding the value at the end of the year.

Net output

15. The net output of an industry represents the value added to the materials by the process of production. It includes the gross margin on any merchanted or factored goods sold: it constitutes the fund from which wages, salaries, hire of plant and machinery, payments for repairs and maintenance, cost of operating the road goods vehicles, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits. There is no appreciable duplication involved in adding together the net output of several establishments.

Net output has been obtained by deducting from gross output (see paragraph 14) the cost of purchases adjusted for stock changes, payments for work given out to other establishments and payments for transport.

Normally any customs duty or excise duty on materials purchased is included in the cost of materials. Similarly, finished goods sold have been valued as they were sold, duty paid or duty free. The amounts of duties, subsidies, allowances and levies receivable or payable, where of substantial importance to the industry, were required to be stated separately, and these items were taken into account when calculating net output.

Net output per person employed

16. The figures for 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

17. 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 full 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 parts for machinery purchased during the year of return 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 organisation, for delivery of materials and fuels are, therefore, excluded. Materials purchased overseas are included at their 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.

Sales

18. 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 by 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 (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, allowance 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.

Short form

19. This term is used to mean the simplified version of the full census forms sent to small establishments in industries where small establishments account for a relatively high proportion of total employment.

Standard Industrial Classification

20. The industries to which establishments and enterprises are classified are defined in terms of the Standard Industrial Classification (Revised 1968).

Stocks and work in progress

21. Values are given of stocks of goods on hand for sale, and of materials and fuel, at the beginning and end of year of return, including any stocks of goods held for merchanting or factoring. The values include duty in the case of dutiable goods held out of bond. The value of work in progress at the beginning and end of the year is also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received. Separate detail is,

however, given for progress payments received by manufacturers in industries producing capital items. In practice, figures of stocks and work in progress normally show the end of year values and the change, plus or minus, during the year.

Transport payments

22. These represent the total amount paid or credited during the year for both outward transport of finished goods sold and inwards transport of materials and fuel purchased. They include payments 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 the payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, ie railways, road haulage, canals, coast-wise shipping, air, etc. Payments made for sea and air freight on goods sold to overseas customers and on materials and fuel purchased from overseas suppliers are excluded.

Wages and salaries

23. These are the amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments made 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 Insurance and pensions schemes is excluded.

Symbols used

24. The following symbols are used throughout the report:

.. not available

- nil or negligible (less than half the final digit shown)

* figures cannot be shown owing to the risk of disclosing information about individual enterprises.

Rounding of figures

25. The figures in the tables have, where necessary, been rounded to the nearest final digit. There may, therefore, be discrepancies between the sums of the constituent items and the totals shown.

LIST OF INDUSTRY REPORTS, ETC

The symbol * indicates a report which includes additional tables containing particulars for small firms. In the report marked // the additional analysis for small establishments relates to a part of the industry only.

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TIMBER, FURNITURE, ETC

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PAPER, PRINTING AND PUBLISHING

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OTHER MANUFACTURING INDUSTRIES

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87 Engineers' small tools and gauges

This Report on the Engineers' Small Tools and Gauges Industry relates to establishments engaged wholly or mainly in manufacturing engineers' small tools, tool holders and work holders of the types used with metal-working machine tools, and engineers' gauges (other than pressure and vacuum measuring instruments, and optical gauges).

This industry corresponds to minimum list heading 390 in the Standard Industrial Classification (Revised 1968) which has been used for the first time as a basis of classification in the 1968 Census.

The industry corresponds to the Engineers' Small Tools and Gauges Industry (Part 43) in the Reports on the last detailed Census of Production for 1963, except that woodboring machine bits formerly included in this industry are now included in the Report on the Hand Tools and Implements Industry (Part 88).

Throughout this Report, the figures given for 1933 have been reclassified, as far as possible, according to the Standard Industrial Classification (Revised 1968) so that data for 1963 and 1968 are on the same industrial basis. However the reclassification of small firms, which provided limited information only, has been arbitrary.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which appear on pages (i) to (iv).

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(c) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).

(d) Administrative, technical and clerical employees.

(e) Excluding expenditure for establishments not yet in production.

(f) Acquisitions less disposals.

TABLE 1 Industry summary, 1963 and 1968

United Kingdom (a) (b)

	Unit	All establishments	
		1963	1968
Number of enterprises	No.	1,340	1,452
Number of establishments	"	1,413	1,594
Gross output	£'000	112,427	170,629
Net output	"	74,312	113,695
Net output per head	£	1,294	1,730
Sales and work done	£'000	103,724	158,202
		merchanted goods and canteen takings	8,000
Purchases	"	28,183	43,513
		materials for use in production and packaging and fuel	6,863
		goods for merchandising and canteen purchases	2,436
Payments to other organisations	"	530	555
		for work done on materials given out for transport by road	276
		by rail and other means excluding postal services	
Stocks and work in progress			
Total stocks and work in progress	"	+ 600	+ 2,200
	"	27,969	40,489
Goods on hand for sale	"	+ 274	+ 279
	"	10,400	13,271
Work in progress	"	+ 429	+ 1,690
	"	9,326	15,985
Materials, stores and fuel	"	- 103	+ 231
	"	8,242	11,233
Number employed on average during the year	Th.	57.4	65.7
	"	42.4	48.6
	"	13.0	15.5
Wages and salaries	£'000	30,096	48,244
	"	12,288	18,907
Capital expenditure (e)			
Total	"	6,429	10,457
New building work	"	1,368	1,519
Land and existing buildings (f)	"	134	218
Plant and machinery (f)	"	4,532	8,071
Vehicles (f)	"	395	648

(a) For 1968, estimates for establishments not making satisfactory returns and for small establishments, from which only employment data were collected, accounted for 19 per cent. of the total figures in which they were incorporated: of this, unsatisfactory returns accounted for 3 per cent. For 1963 the comparable figures were 20 per cent. and 3 per cent. respectively.

(b) The following information relates to small establishments (employing fewer than 25 persons) in this industry. It includes an estimate for small establishments not making satisfactory returns.

	1963	1968
Number of establishments	963	1,079
Average number employed		
Working proprietors	1,719	1,279
Other persons employed	8,862	10,281

Footnotes continued on page 87/2.

TABLE 2 Analysis by size of establishment within the industry, 1968

(i) Output and employment

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Estab-lish-ments	Enter-prises (b)	Total number employed on average during the year (a)	Gross output	Net output	Net output per head
1-5	253	252	783	..	..	..
6-10	231	229	1,786	..	..	..
11-24	452	450	7,751	..	..	..
25-49	204	197	7,540	18,334	13,991	1,856
50-99	164	151	11,184	27,941	19,938	1,783
100-199	68	58	9,132	23,095	15,161	1,660
200-299	28	25	6,590	17,355	11,634	1,765
300-399	11	10	3,979	11,857	7,818	1,965
400-499	5	5	2,355	7,205	3,752	1,593
500-749	10	9	5,858	15,332	9,904	1,691
750 and over	5	5	6,527	16,958	9,765	1,496
Unsatisfactory returns	163	160	2,248	..	..	..
Total	1,594	1,452	65,733	170,629(c)	113,695(c)	1,730(c)

(ii) Employees, wages and salaries

All establishments: United Kingdom

Number employed on average during the year by the establishment (a)	Employees		Wages and salaries		Wages and salaries per head	
	Oper-atives	Others (d)	Oper-atives	Others (d)	Oper-atives	Others (d)
1-5	..	..	..	..	..	..
6-10	..	..	..	..	..	..
11-24	..	..	..	..	..	..
25-49	5,904	1,461	6,869	1,971	1,163	1,349
50-99	8,712	2,360	9,548	3,088	1,096	1,308
100-199	6,814	2,287	6,622	2,742	972	1,199
200-299	4,830	1,756	4,931	2,066	1,021	1,176
300-399	2,784	1,195	2,746	1,529	986	1,279
400-499	1,729	626	1,461	681	845	1,088
500-749	4,198	1,658	3,851	1,836	917	1,107
750 and over	5,079	1,448	3,712	1,674	731	1,156
Unsatisfactory returns	..	..	..	..	..	..
Total	48,608(c)	15,508(c)	48,244(c)	18,907(c)	993(c)	1,219(c)

(a) Including working proprietors.

(b) The sum of the figures for the size groups exceeds the total for the industry to the extent that enterprises made returns for establishments in more than one size group.

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

(d) Administrative, technical and clerical employees.

TABLE 3 Percentage analysis of employees, by age and sex, 1969 (a)

All establishments: United Kingdom

Ages	Males	Females	All employees
	Per cent.	Per cent.	Per cent.
Under 18	4	1	5
18 and over	73	22	95
All ages	77	23	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) at June 1969, the earliest date for which the information is available on the basis of the Standard Industrial Classification (Revised 1968).

Footnotes to Table 4.

- (a) Some establishments employing fewer than 25 persons were included in returns for larger establishments. These amounted to 21 establishments in 1968 and 18 in 1963.
- (b) The method of classifying returns to sub-divisions of the industry is explained in the notes; the characteristic products of each sub-division are identified in Table 5.
- (c) The sum of the figures for the sub-divisions exceeds the total for the industry to the extent that enterprises made returns for more than one sub-division.
- (d) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered).
- (e) Direct sales of goods (excluding canteen takings) made to, and work done for, the general public by larger establishments are included. These amounted to £6,000 in 1968. Similar information is not available for 1963.
- (f) Characteristic products relate only to sub-divisions of the industry.
- (g) For sub-divisions of the industry, this is the ratio of sales of characteristic products to total sales of goods produced and work done. For the industry as a whole, this is the ratio of total sales of principal products by the industry to total sales of goods produced and work done.
- (h) Administrative, technical and clerical employees.
- (i) Excluding expenditure for establishments not yet in production.

TABLE 4 Analysis of larger establishments, 1963 and 1968

Establishments employing 25 or more persons: Analysis of returns received, United Kingdom (a)

	Unit	Sub-divisions of the industry (b)				Sub-divisions of the industry (b)						Total	
		Hard metal tipped tools, tips and dies 01		Metal cutting tools other than hard metal tipped 02		Metal forming tools other than hard metal tools 04		Tool and work holders 03		Engineers gauges and other small tools 05			
		1963	1968	1963	1968	1963	1968	1963	1968	1963	1968	1963	1968
Number of enterprises (c)	No.	30	31	66	62								
Number of establishments	"	36	41	91	87								
Gross output	£'000	11,492	15,167	35,966	50,156	115	145	119	134	48	60	363	404
Net output	"	6,568	9,301	22,009	30,942	124	171	130	147	53	70	434	516
Net output per head	£	1,651	1,823	1,219	1,634	12,739	28,579	17,223	25,348	12,100	19,523	89,520	138,773
Sales and work done	£'000	10,350	13,914	32,135	45,534	9,882	21,763	12,753	18,521	7,960	11,940	59,172	92,468
						1,264	1,856	1,260	1,712	1,381	1,735	1,294	1,730
Sales of characteristic products	"	8,417	10,964	25,356	37,206	12,308	27,875	16,869	24,455	10,928	16,888	82,590	128,666
						265	309	407	772	890	2,357	6,370	8,505
Index of specialisation (g)	Per cent.	81	79	79	82	7,644	21,559	12,003	18,092	9,101	14,593	(f)	(f)
Purchases	£'000	3,979	4,729	9,838	14,617	62	77	71	74	83	86	88	90
						2,102	5,307	3,181	5,383	3,342	5,354	22,441	35,389
Payments to other organisations	"	837	887	3,268	3,606	252	290	384	551	723	1,926	5,465	7,260
						499	1,183	743	751	196	336	1,940	3,167
Stocks and work in progress	"	114	196	388	701	36	94	58	56	63	13	422	224
Goods on hand for sale	"	- 22	+ 78	+ 125	+ 10	594	1,178	1,114	1,328	947	1,382	6,563	9,136
Work in progress	"	+ 88	+ 100	- 26	+ 620	6,296	9,239	7,757	8,261	4,318	5,163	34,809	40,279
						977	1,287	2,718	5,114	1,431	2,355	2,261	2,448	1,413	1,677	10,652	12,851
Materials, stores and fuel	"	+ 54	- 6	- 247	+ 62	5,368	11,007	6,301	8,941	3,007	4,954	24,668	39,978
						1,294	1,396	2,613	3,852	1,547	3,390	2,160	3,132	1,479	2,041	10,082	15,668
Number employed on average during the year	No.	3,979	5,101	18,055	18,932	853	1,191	812	1,082	696	960	709	993
						2,705	3,321	13,733	14,295	1,081	1,439	956	1,279	1,046	1,217	946	1,219
Wages and salaries	£'000	1,955	3,290	8,037	11,785	106	341	287	233	171	123	1,089	1,236
						1,152	2,032	3,744	5,073	139	106	33	58	14	122	214	406
Wages and salaries per head	£	723	991	585	824	10	23	5	43	34	29	108	229
						909	1,150	875	1,102	714	2,301	839	1,312	442	896	3,841	6,906
Capital expenditure (i)	£'000	153	113	372	425	47	110	48	42	39	42	232	342
						98	217	126	208	66	110	540	939
Land and existing buildings	"	-	17	28	104	37	75	48	92	26	40	226	411
						6	114	52	21				
Plant and machinery	"	393	531	1,453	1,865								
						21	23	77	125				
Vehicles	"	72	89	178	315								
						29	48	86	158				

For notes to this table - see page 87/5.

TABLE 5 Sales of principal products of the industry by larger establishments, including sales by establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

Industry sub-division (a)	1963		1968				
	Quantity	Value	Quantity	Value	Enter-prises	Entries	
01 Engineers' cutting and forming small tools, and tool and work holders and parts thereof	Thousands	£'000	Thousands	£'000	Number	Number	
	Hard metal tipped tools, tips and dies						
	Hard metal tipped tools	2,432	2,439	8,939	6,932	65	78
	Hard metal tips and inserts, sold separately	6,757	2,268	..	3,423	28	35
	Hard metal dies and die pellets, sold separately	..	849	74.5	444	20	22
02 Metal cutting tools other than hard metal tipped	Detachable tools (drilling bits etc used in rock drilling machinery)	2,268	2,057	1,481	2,529	19	19
	Total hard metal tipped tools, tips and dies		13,840		16,874	..	..
04 Metal forming tools other than hard metal tools	Drills, cylindrical, helically grooved (commonly known as twist drills), and bit stock drills (but excluding auger bits and wood boring machine bits) (b)	56,945	5,506	58,187	7,770	29	32
	Bandsaws for metal	..	1,052	..	1,307	15	15
	Circular saws for metal	..	..	..	253	9	9
	Circular saw blades fitted with toothed segments of metal and toothed segments therefor (for metal or wood)	..	1,185	..	983	7	7
	Slitting saws	473	445	714	731	9	9
	Hacksaw blades (including power driven hacksaw blades) (c)	..	2,985	..	4,240	13	14
	Milling cutters	528	1,839	950	3,369	42	47
	Reamers, end mills and similar shank tools	3,172	2,489	3,460	3,079	49	54
	Lathe and planer tools	3,678	1,445	3,498	1,303	19	20
	Broaches	..	1,331	41.9	1,267	20	21
	Cut and ground thread screwing tackle	..	6,516	..	7,402	26	31
	Other cutting tools (excluding saws and saw blades)	..	2,637	..	5,912	79	85
	Total metal cutting tools other than hard metal tipped		30,405		42,017	..	..
	Press tools	..	16,768	..	18,598	265	284
	Moulds and dies (including moulds and dies for plastics) (d)	..	4,654	..	14,160	196	207
Total metal forming tools other than hard metal tools		21,422		32,758	..	..

TABLE 5 (continued)

Industry sub-division (a)	1963		1968				
	Quantity	Value	Quantity	Value	Enter-prises	Entries	
03 Engineers' cutting and forming small tools and tool and work holders and parts thereof (continued)	£'000		£'000		Number	Number	
	Tool and work holders						
	Lathe chucks	..	2,366	..	3,030	15	16
	Drill chucks	..	731	..	1,508	6	6
	Jigs and fixtures	..	14,884	..	17,160	320	349
05 Diamond tipped tools and diamond dies	Other tool and work holders	..	4,287	..	6,407	131	140
	Total tool and work holders		22,268		28,106	..	..
05 Unspecified tools	Thousands		Thousands				
	Diamond tipped tools and diamond dies	100	790	141	1,196	14	14
05 Engineers' gauges (excluding optical and pressure and vacuum measuring instruments)	..	1,070	..	4,072	..	..
	Engineers' small tools not elsewhere specified	..	8,139	..	5,614	93	95
05 Other	Unclassified engineers' small tools	..	..	786	13	13	
	Dial gauges and other dial indicators	198	557	84.6	896	15	16
05 Total engineers' gauges	..	963	..	843	..	..
	Other	1,411	2,199	756	1,891	105	110
Other products	..	2,978	..	4,004	..	..
	Total		6,697		7,633	..	..
Waste products	..	301	..	414	25	27	
	Scrap iron and steel	..	225	13.5	645	143	166
Work done	..	33	..	115	51	55	
	Repair work	..	1,218	..	1,714	72	79
Other work done	..	(e)	..	3,215	94	109	
	Total		107,996		145,433	..	..
Sales in other industries (see Table 6)	..	1,588	..	3,215	94	109	
	Principal products of this industry sold by establishments in the industry		72,859		115,896	404	468(f)

(a) The number given is that of the sub-division of which the item is a characteristic product. The sales shown are total sales by larger establishments, not merely sales by establishments classified to the sub-division.

(b) For 1963 'woodboring machine bits' were specifically included.

(c) For 1963 'power driven hacksaw blades' were not specifically included.

(d) For 1963 'moulds and dies for plastics' were not specifically included.

(e) Included jobbing work in 1963.

(f) This figure represents the total number of returns made for larger establishments in this industry which is less than the total number of establishments shown in Table 4 on account of combined returns covering more than one establishment.

TABLE 6 Sales of principal products of the industry by larger establishments classified to other industries, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963		1968	
	Value	Value	Entries	Principal industries in which produced (a)
Engineers' cutting and forming small tools and tool and work holders and parts thereof	£'000	£'000	Number	
Hard metal tipped tools, tips and dies				
Hard metal tipped tools	1,968	1,229	13	51,63,89,97
Hard metal tips and inserts, sold separately	947	89	5	51,55,97
Hard metal dies and die pellets, sold separately		456	10	47,48,89,95
Detachable tools (drilling bits etc) used in rock drilling machinery	593	1,512	8	52,55,63,88
Total hard metal tipped tools, tips and dies	3,507	3,286		
Metal cutting tools other than hard metal tipped				
Drills, cylindrical, helically grooved (commonly known as twist drills) and bit stock drills (but excluding auger bits and woodboring machine bits) and other cutting tools (except saws and saw blades)	1,377	2,249	36	45,51,63,66
Bandsaws and circular saws for metal	145	205	9	44,51,63,88
Hacksaw blades (including power driven hacksaw blades)	1,509	1,632	10	51,65,89,147
Cut and ground thread screwing tackle				
Milling cutters	190	265	6	63,66,82,88
Reamers, end mills and similar shank tools	385			
Lathe and planer tools	142			
Total metal cutting tools other than hard metal tipped	3,749	4,352		
Metal forming tools other than hard metal tools				
Press tools	11,139	8,299	97	51,63,82,97
Moulds and dies (including moulds and dies for plastics)	1,817	2,115	60	47,51,63,65
Total metal forming tools other than hard metal tools	12,956	10,414		
Tool and work holders				
Lathe chucks	671	753	6	44,51
Drill chucks		-	-	-
Jigs and fixtures	5,200	3,427	119	51,63,66,82
Other tool and work holders	1,951	2,270	44	51,53,64,82
Total tool and work holders	7,822	6,450		
Other and unclassified engineers' small tools (including circular saw blades fitted with toothed segments of metal) and toothed segments thereof (for metal or wood)	5,480	3,414	47	44,63,68,74

TABLE 6 (continued)

	1963	1968		
	Value	Value	Entries	Principal industries in which produced (a)
Engineers' gauges (excluding optical, and pressure and vacuum gauges)	£'000	£'000	Number	
Dial gauges and other dial indicators	394	754	6	64,70
Other and unclassified	1,228	867	26	51,66,88,111
Total engineers' gauges	1,622	1,622		
Total	35,136	29,537	..	

(a) The references given are to the list of industries at the front of this report.

TABLE 7 Sales of other than principal products by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963	1968
	Value	Value
	£'000	£'000
Permanent magnets and other metal manufactures	584	47
Metal working machine tools		
New		
Complete	3,075	2,834
Parts	176	76
Other (non-electric) machinery, complete and parts	1,353	1,021
Mechanical engineering products	499	691
Scientific, surgical and photographic instruments, etc	226	662
Electrical machinery, complete and parts	372	636
Tools and implements, other than engineers' small tools and gauges	1,196	2,394
Cutlery	181	318
Miscellaneous metal goods	547	365
Parts and accessories of motor vehicles and aircraft	172	837
Other products	1,036	1,926
Services rendered to other organisations (a)	315	964
Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored)	6,104	8,180
Canteen takings	266	325
Total	16,101	21,276

(a) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for technical or other services rendered to other organisations.

TABLE 8 Production of certain principal products of the industry by larger establishments, 1963 and 1968

This table is not applicable to this industry.

TABLE 9 Purchases by larger establishments of selected principal products of the industry, 1968

This table is not applicable to this industry.

TABLE 10 Purchases by larger establishments in the industry, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	1963		1968	
	Quantity	Cost	Quantity	Cost
Materials for use in production	Th. tons	£'000	Th. tons	£'000
Iron castings	5.2 ..	537 81	7.6 ..	816 187
Steel				
Ingots, blooms, billets, slabs, and sheet and tinplate bars	2.1 ..	233 238	5.1 ..	1,451 330
Bars and rods (including wire rods), angles, shapes and sections, girders, beams, joists and pillars rolled (not fabricated), including tube rounds and squares	18.7 ..	3,455 1,906	28.5 ..	7,422 933
Plates, 3mm. thick and over	4.0 ..	270 58	7.2 ..	852 171
Sheets under 3mm. thick (including electrical sheets)	2.5 ..	660 153	..	1,082
Hoop and strip (including tape of all thicknesses)	1.4 ..	143 613	2.3	452
Forgings (except drop forgings)	1.1 ..	263 37	1.8	454
Castings	0.7 ..	136 35	1.2 ..	278 49
Drop forgings	3.2	675	1.0 ..	212 71
Iron and steel not elsewhere specified except finished parts, wire and scrap	1.1 ..	207 162	4.3 ..	801 135
Steel wire and wire manufactures, including wire cables and ropes, but excluding insulated wires and cables (a)	..	82	..	260
Light metals and non-ferrous metals in all forms except finished parts, wire and scrap				
Aluminium and aluminium alloys	0.3 ..	129 43	0.6 ..	295 83
Brass and other copper alloys (including nickel silver and cupro-nickel, but excluding all other nickel alloys and cadmium copper) (b)	0.3 ..	128 48	0.2 ..	106 103
Copper (including cadmium copper) (c)	..	11	..	63
Non-ferrous metal wire (single wire, not insulated)	..	18	..	7
Insulated wires, cables, strips and strands	..	..	..	36
Bolts, rivets, nuts and washers, screws, nails, tacks, etc	..	175	..	340
Paint and varnish (including lacquers and stains)	..	41	Th.gal. 33.7 ..	48 13
Manufactures wholly or mainly of rubber (including synthetic rubber), balata and gutta-percha, including sheeting and finished components but excluding replacement parts for firms' own machinery, plant, vehicles, etc (d)	..	7	..	25
Hardwood, sawn or planed, but not further prepared or manufactured	Th.cu.ft. 11.9 ..	7 8	Th.cu.ft. 11.1 ..	19 4

Continued on next page.

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
Materials for use in production (continued)		£'000		£'000
Purchased components for incorporation in firms' own products				
Ball and roller bearings and parts thereof	..	94	..	82
Electric motors				
Of less than 1 h.p.	..	41	..	38
Of 1 h.p. and over	..	59	..	37
Other electrical components and parts thereof	..	(e)	..	116
Measuring instruments and gauges and parts	..	298	..	359
Wooden handles for tools and implements	..	(e)	..	3
Other components, not elsewhere specified, except those of rubber	..	1,665	..	1,572
	Th. gal.		Th. gal.	
Lubricating oils and greases (including cutting oils and emulsions)	{ 286	{ 89	{ 379	{ 145
	..	28	Th. cwt.	
			2.2	7
			..	35
Replacement parts for firms' own machinery, plant and vehicles, and accessories and consumable tools bought as replacement				
Tyres and other spare parts for firms' own road goods vehicles	{ ..	{ 1,345	{ ..	{ 46
Other	{ ..	{ ..	{ ..	{ 1,728
All other materials for use in production	..	5,580	..	10,366
Packaging materials				
Paper and board				
Boxes, cartons, drums and canisters (with or without metal ends) of paper and cardboard	{ ..	{ 349	{ ..	{ 455
Fibreboard packing cases	{ ..	{ ..	{ ..	{ 36
Plastic moulded and fabricated containers (including closures and inserts) other than reusable crates, large containers (exceeding 1 gallon capacity) and bottles and bottle caps				
Tubes (rigid and collapsible)	{ ..	{ (e)	{ ..	{ 28
Other	{ ..	{ ..	{ ..	{ 37
Containers wholly or mainly of wood (including plywood boxes and drums), baskets and wickerwork crates	..	149	..	136
All other packaging materials	..	122	..	157
Fuel and electricity (f)	Th. tons		Th. tons	
Coal	7.0	43	{ 5.3	{ 34
			..	4
Coke (including screenings) and manufactured fuel	{ 4.3	{ 38	{ 2.2	{ 27
	..	9	..	5
	Th. gal.		Th. gal.	
Derv fuel and motor spirit for use in road vehicles	{ 601	{ 137	{ 726	{ 210
	..	32	..	67
Other liquid fuels (including creosote/pitch mixtures, etc. and liquefied petroleum gases)	4,354	320	{ 4,022	{ 203
			..	37

TABLE 10 (continued)

	1963		1968	
	Quantity	Cost	Quantity	Cost
Fuel and electricity (continued)	Th. therms	£'000	Th. therms	£'000
Gas	{ 6,048	{ 391	{ 1,848	{ 165
	..	84	..	348
	Th. kWh		Th. kWh	
Electricity	{ 118,055	{ 748	{ 93,327	{ 838
	..	263	..	850
All other fuels	..	(e)	..	118
Total cost of materials and fuel		22,441		35,389
Goods purchased for merchandising		5,131		6,858
Canteen purchases		334		401
Total cost of purchases		27,905		42,649

(a) For 1963 described as 'Single steel wire (excluding insulated wires and cables)'.

(b) Cadmium copper was not specifically excluded for 1963.

(c) For 1963 cadmium copper was not specifically included but blister was excluded.

(d) For 1963 described as 'Rubber, including hard rubber, balata, gutta-percha and synthetic rubber in all forms, including finished parts'.

(e) Not recorded separately for 1963.

(f) The total quantity of electricity generated in establishments employing 25 or more persons in this industry in 1963 was 2,083 Th.kWh. None was recorded for 1968.

TABLE 11 Transport costs and employment of larger establishments, 1963 and 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Unit	1963	1968
Average number mainly employed on transport	No.	309	378
Transport costs			
Wages and salaries	£'000	228	400
Derv fuel and motor spirit	"	168	276
Tyres and other spare parts for road goods vehicles	"	..	46
Payments to other organisations for transport	"	{ 422	{ 452
			{ 224
Costs of operating road goods vehicles			
Insurance	"	20	34
Vehicle licences	"	13	31
Depreciation	"	98	149
Payments to other organisations for repairs and maintenance	"	61	91
Total	"	1,010(a)	1,703

(a) Excluding tyres and other spare parts for road goods vehicles, not collected separately for 1963.

TABLE 12 Payments for certain services, etc by larger establishments, 1963 and 1968 (a)

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

	Amounts payable	
	1963	1968
Repairs and maintenance to	£'000	£'000
Buildings	214	328
Road goods vehicles	61	91
Plant, machinery and other capital equipment	497	905
Insurance, licensing and depreciation of road goods vehicles (b)	131	214
Rates, excluding water rates	625	1,083
Hire of plant and machinery	119	226
Postage, telephone, telegrams, cables and telex (c)	523	824
Total	2,170	3,671

(a) No deduction is made for these payments to arrive at the figures of net output given in this report.

(b) For details see Table 11.

(c) Excluding Telex for 1963.

TABLE 13 Percentage analysis of twelve-month periods covered by returns from larger establishments, 1968

Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

Year ended	Percentage of total returns received	Percentage of total number employed
1968	Per cent.	Per cent.
April (a)	2.6	1.6
May	2.6	3.9
June	5.6	5.2
July	3.0	3.6
August	4.5	3.7
September	8.8	9.7
October	4.5	5.3
November	3.8	4.1
December	34.3	31.8
1969		
January	2.4	1.7
February	2.4	0.9
March	22.5	26.1
April (b)	3.0	2.4
	100	100

(a) From 6 April.

(b) To 5 April.