## PA334

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## Business Monitor

## Report on the Census of Production <br> Industrial engines

## Business Monitor

A publication of the Government Statistical Service

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## Report on the Census of Production 1976

Industrial engines

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

| PA1001 | Introductory notes | PA369.1 | Electrical equipment for motor vehicles, cycles and aircraft |
| :---: | :---: | :---: | :---: |
| PA101 | Coal mining | PA369.2 | Primary and secondary batteries |
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| PA214 | Bacon curing, meat and fish products |  | ospace equi |
| PA215 | Sugar | PA384 | Locomotives, railway track equipment, railway carriages, |
| PA217 | Cocoa, chocolate and sugar confectio | PA390 | Engineers' small tools and gauges |
| PA218 | Fruit and vegetable products |  | Hand tools and implements |
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| PA232 | Soft drinks | PA399. | Metal furniture |
| PA239.1 | Spirit distliling and compounding | PA399.5 | Drop forgings, etc. |
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|  | Synthetic rubber |  | Household textiles |
| PA278 | Fertilizers | PA422. 2 | Canvas goods and sacks and other made-up textil |
| PA279. 1 | Polishes | PA429, | Textie inishing |
| PA279.2 | Formulated adhesives, gelatine, etc. | PA429.2 | Miscellaneous textile industries |
| ${ }_{\text {PA }}{ }_{\text {PA27979 }}$ | Explosives and fireworks | PA431 | Leather (tanning and dressing) and fellmongery |
| PA279.5 | Printing ink | PA432 |  |
| PA279.6 | Surgical bandages, etc. | PA441 | Weatherproof out |
| ${ }^{\text {PA279, }}$ PA311 | Photographic chemical materials | PA442 | Men's and boys' tail ored outerwear |
| PA311 | ${ }_{\text {l }}{ }_{\text {Iron and steel (general) }}^{\text {Stel tubes }}$ | PA443 | Women's and giris' tailored outerwear |
| PA313 | Iron castings, etc. | PA444 | Overalls and men's shirts, underwear |
| PA321 | Aluminium and aluminium alloys | PA445 | Dresses, lingerie, in |
| PA322 | Copper, brass and other copper alloys | PA449. 1 | Corsets and miscellaneous dress industries |
| PA323 | Miscellaneous base metals | PA449. 2 | Gloves |
| PA33 | Agricultural machinery (except tractors) | PA450 | Footwear |
| PA333.1 | Pumps | PA461.1 | Refractory goods |
| РАЗ33.2 | Valves | PA461. 2 | Building bricks and |
| PA333.3 | Compressors and fluid power equipment | P462 | Glass |
| PA334 | Industrial engines | PA464 | Cement |
| PA335 | Textile machinery and accessories | PA469. 1 |  |
| PA336 | Mechanical handling equioment | PA469. 2 | Miscellaneous building materials and mineral products |
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| PA339. 1 | Mining machinery | PA472 | Furniture and |
| PA339. 2 | Printing, bookbinding and paper goods machinery | PA474 | Sedding, etc. Shop and office fitting |
| PA339.3 | Refrigerating machinery, space-heating, | PA475 | Wooden containers and baskets |
| PA339.5 | Scales and weighing machinery and portable | PA479 | Miscellaneous wood and cork ma |
|  | power tools | PA481 | Paper and board |
| PA339.7 | Food and drink processing machinery and | PA482.1 | Packaging products of paper and associated materials |
|  | packaging and bottling machinery | PA483 | Manufactured stationery |
| ${ }_{\text {PA341 }}$ | Industrial (including process) plant and steelwork | PA484. 1 | Wallcoverings |
| PA342 | Ordnance and small arms | PA484. 2 | Miscellaneous manufactures of paper an cead |
| PA349.1 | Ball, roller, plain and other bearings | PA485 | Printing, publishing of newspape General printing and publishing |
|  | Precision chains and other mechanical engineering |  |  |
| PA351 | Photographic and document copy ing equipment | PA492 | Linoleum, plastics floor-covering, leathercloth, etc. |
| ${ }_{\text {PA3535 }}$ | Watches and clocks | PA493 | Brushes and |
| ${ }_{\text {PA354 }}$ | Scientific and industrial instruments and systems | PA494. 1 | Toys, games and children's carriages |
| PA361 | Electrical machinery | PA494.3 | Sports equipment |
| PA362 | Insulated wires and cables | PA495 | Miscellaneous stationers |
| PA363 | Telegraph and telephone apparatus and | PA496 | Plastics product |
|  | equipment | PA499. 2 | Miscellaneous manufacturing industri |
| ${ }_{\text {PA365. }} 1$ | Gramophone records and tape recordings | PA500 | Construction |
| PA365. 2 | Broadcast reeeiving and sound reproducing | PA601 |  |
|  | equipment | PA602 |  |
|  | Electronic computers | PA1002 | Summary tables |
| ${ }_{\text {PA368 }}$ | Electrical appliances primarily for domestic use |  |  |

The information in this report relates to establishments classified to the Industrial engines
industry minimum Iist heading 334 in the Standard Industrial Classification (revised ine
industry minimum list heading 334 in the Standar
1968). The activities of the industry include:-

Manufacturing industrial internal combustion engines (other than in marine engineering establishments),
gas turbines and internal combustion engines for rail vehicles; other types of prime movers except gas turbines and internal combustion engines for rail vehicles; other types of prime movers except
furbines for electricity generation, marine engines and steam ocomotives. Internal combustion engines
for the propulsion of wheeled tractors, motor vehicles and aircraft are not included.

## ruit and vegetable products

Animal and poultry foods
Vegetable and animal oils and fats
Margarine Starch and miscellaneous foods
Brewing and malting
Soft drinks
Spirit distilling and compounding
British wines, cider and perry
Coke ovens and manufactured fuel
Mineral oil refining
Mineral oil refining
Lubricating oils and
Inorganic chemicals
Organic chemicals
Miscellaneous chemicals
Pararmaceutical chemicals and preparations
Toilet preparations
Paint
Soap and detergents
Synthetic resins and plastics materials and
synt
Devestut sand pigments
Fertilizers
Polishes
Formulated adhesives, gelatine, etc
xplosives and fireworks
Formulated pesticides, etc.
Surgical bandages, etc.

ron castings, etc
Copper, brass and other copper alloys
Agricultural machinery (except tractors)
Pumps
Valves
Industria engines ant
Construction and earth-moving eq
Mechanical hand ing equipment
Mining machinery
Refrigerating machinery, space-heating,
PA339. 5 ventiliating and arir-conditioning equipment
A339 7 power tools Food and drink processing machinery and
PA339.9 Miscellaneous (nonelelectrical) mach
PA341 Industrial lincludinglecrocess) plant and steelwork
Ball, roller, plain and other bearings
Preeision chains and other mechanica
Photographic and document copying equipment
Surgical instruments and appliances
scientific and industrial instruments and system
In
Electrical machinery
Insulated wires and cables
Telegraoh and teleopone a
equipment Radio and electronic components Gramophone records and taper recordings
Broadcast receiving and sound reproducing
PA366 Electronic computers
$\begin{array}{ll}\text { PA367 } & \text { Radio. radar and electronic capital goods } \\ \text { PA368 } & \text { Electrical appliances primarily for domestic use }\end{array}$

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

TABLE 1
Output and costs, 1973 -1976

|  | Unit | 1973 | 1974 | 1975 | 1976 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Enterprises | Number | 54 | 64 | 65 | 73 |
| Establ ishments | " | 61 | 72 | 71 | 80 |
| Sales of goods produced <br> Receipts for work done and industrial services rendered | £ thousand | 152,503 | 195,649 | 260,058 | 336,240 |
|  | " | (b) | (b) | (b) | 8,354 |
| Capital goods produced for establishments' own use | " | 325 | (b) | (b) | 949 |
| Non-industrial services rendered | " | 416 | 494 | 586 | 718 |
| Goods merchanted or factored | " | 19,597 | 27,681 | 32,326 | 40,978 |
| Total sales and work done (c) | n | 172,840 | 223,824 | 292,970 | 387,239 |
| Increase during the year, work in progress and goods on hand for sale | " | 5,971 | 13,981 | 24,174 | 13,037 |
| Gross output | n | 178,811 | 237,805 | 317,144 | 400,276 |
| Purchases of materials for use in production, and packaging and fuel | " | 80,260 | 114,656 | 140,432 | 175,532 |
| Purchases of goods for merchanting or factoring | " | 16,216 | 20,760 | 24,327 | 33,183 |
| Increase during the year, stocks of materials, stores and fuel | " | 4,723 | 11,421 | 4,153 | 3,808 |
| Cost of industrial services received Net output | " | 5,719 | 9,517 | 9,887 | 13,062 |
|  | " | 81,339 | 104,294 | 146,651 | 182,307 |
| Total employment (d) | Thousands | 26.0 | 27.2 | 25.1 | 28.4 |
| Net output per head | £ | 3,127 | 3,829 | 5,852 | 6,415 |
| Payments for non-industrial services |  |  |  |  |  |
| Rents, hire of plant and machinery (e)(f) | £ thousand | 785 | 1,049 | 978 | 1,543 |
| Commercial insurance premiums | " | 733 | 833 | 1,176 | 1,682 |
| Bank charges | " | 91 | 133 | 207 | 259 |
| Other non-industrial services (g) | " | 3,563 | 5,993 | 6,826 | 7,638 |
| Licensing of motor vehicles | " | 35 | 40 | 46 | 68 |
| Rates, excluding water rates | " | 971 | 1,376 | 1,542 | 1,784 |
| Gross value added at factor cost | " | 75,160 | 94,870 | 135,877 | 169,333 |
| Gross value added at factor cost per head | £ | 2,889 | 3,483 | 5,422 | 5,958 |
| (a) Including estimates for establishments not making satisfactory returns, non-response and establishments exempt because of size. Satisfactory returns accounted for 92 per cent of employment within the industry. |  |  |  |  |  |
| (b) Included with sales of goods produced. |  |  |  |  |  |
| (c) Details of manufacturers' sales of principal products are published regularly in Business Monitor PQ 334. |  |  |  |  |  |
| (d) Average number employed, including full proprletors. | and part-time | mployees | (table 7) | nd workin |  |
| (e) 1973 figures include hire of vehicles. |  |  |  |  |  |
| (f) For 1973-1975 rents of industrial and cosamount payable was $£ 706$ thousand.(g) 1974-1976 figures include the cost of $h$ | mmercial bui | ngs were | recorded | arately | or 1976 |
|  | ring goods ven | cles. |  |  |  |

TABLE 2
Capital Expenditure, 1973-1976
All United Kingdom establishmen
ted Kingdom establishments classified to the industry (a)(b)

|  |  |  |  | $£$ thousand |
| :---: | :---: | :---: | :---: | :---: |
|  | 1973 | 1974 | 1975 | 1976 |
| Land and buildings |  |  |  |  |
| New bullding work | 369 | 1,389 | 1,964 | 1,931 |
| Land and existing buildings |  |  |  |  |
| Acquisitions | 214 | 184 | 6 | 14 |
| Disposals | 48 | 12 | 55 | 540 |
| Venicles |  |  | (3004\% |  |
| Acquisitions |  |  |  |  |
| Motor cars | 209 | 294 |  |  |
| Other vehicles | 118 | 108 | ; 249 | 780 |
| Disposals |  |  |  |  |
| Motor cars | 49 | 69 |  |  |
| Other vehicles | 12 | 10 |  | 221 |
| Plant and machinery |  |  |  |  |
| Acquisitions | 3,751 | 7,473 | 8,767 | 15,267 |
| Disposals | 153 | 84 | 121 | 355 |
| Total net capital expenditure | 4,398 | 9,272 | 10,769 | 16,875 |

Including estimates for establishments not making satisfactory returns, non-response and
estabilishments exempt because of size. Satisfactory returns accounted for 92 per cent of employment
within the industry. Capital expenditure in respect of manufacturing establishments where production had not commenced
before the end of the year, is included.
table 3
Stocks and work in progress 1973-1976
All United Kingdom establ ishments classified to the industry (a)

| 1973 |  |  | £ thousand |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\xrightarrow{1974}$ | $\frac{1975}{}$ |  |  |
|  |  |  | Value at end of year |  |
| 4,723 | 11,421 | 4,153 | 3,808 | 43,063 |
| 3,580 | 5,142 | 10,512 | 5,528 | 49,653 |
| 2,391 | 8,839 | 13,662 | 7,508 | 51,177 |
| 10,694 | 25,403 | 28,327 | 16,845 | 143,893 |

Including estimates for establishments not making satisfactory returns, non-response and
estabilishments exempt because of size. Satisfactory returns accounted for 92 per cent of employment
within the industry.

Analysis of establishments by size, 1976
All United Kingdom establishments classified to the industry (a)

| $\begin{aligned} & \text { size } \\ & \text { (rooup } \end{aligned}$ | Estab-lishments | $\begin{aligned} & \text { Enter- } \\ & \text { prises } \\ & \text { (c) } \end{aligned}$ | Emp loyment |  |  | Wages and salarles(f) |  |  |  | Total sales and work done ( g ) | Gross output | Net output |  | Gross value added at factor cos $\dagger$ | Net capital expenditure (h) |  | Total stocks and work in end of year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \text { Total } \\ & \text { (d) } \end{aligned}$ | $\begin{aligned} & \text { Opera- } \\ & \text { tives } \end{aligned}$ | $\begin{aligned} & \text { Others } \\ & \text { (e) } \end{aligned}$ | Operatives | \% | Others(e) |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | head | Total | per head |  |  | Total | per e , | Total | per e |  |  |
|  | Number | Number | Number | Number | Number | £ thousand |  | $£$ thousand | £ | thousand | £ thousand | £ thousand | £ | £ thousand | £ | $£$ thousand | £ thousand |
| 1-10 | 35 | 35 | 200) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11-19 | 10 | 10 | 137) | 676 | 288 | 1,818 | 2,690 | 1,060 | 3,682 | 13,014 | 13,119 | 4,016 | 4,036 | (j) | (j) | 276 | 3,046 |
| 20-49 | 9 | 9 | 272 ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50-99 | 6 | 6 | $386)$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 100-199 | 3 | 3 | 427 | 228 | 197 | 874 | 3,833 | 955 | 4,848 | 6,957 | 7,634 | 3,683 | 8,625 | 6,806(j) | 4,786(j) | 78 | 2,906 |
| 200-399 | 4 | 4 | 1,150 | 800 | 350 | 2,322 | 2,902 | 1,251 | 3,574 | 11,107 | 11,342 | 5,619 | 4,886 | 4,979 | 4,330 | 806 | 4,925 |
| 400-749 | 3 | 3 | 1,609 | 959 | 650 | 2,881 | 3,005 | 2,005 | 3,084 | 25,674 | 27,429 | 13,588 | 8,445 | 12,959 | 8,054 | 1,414 | 10,627 |
| 750-1,999 | 3 | 3 | 4,349 | 2,734 | 1,615 | 8,852 | 3,238 | 6,331 | 3,920 | 82,984 | 84,854 | 37,690 | 8,666 | 34,931 | 8,032 | 3,063 | 23,953 |
| 2,000 and over | 7 | 3 | 19,891 | 12,160 | 7,731 | 35,689 | 2,935 | 24,912 | 3,222 | 247,504 | 255,898 | 117,712 | 5,918 | 109,658 | 5,513 | 11,238 | 98,436 |
| Total | 80 | 73 | 28,421 | 17,557 | 10,831 | 52,437 | 2,987 | 36,514 | 3,371 | 387,239 | 400,276 | 182,307 | 6,415 | 169,333 | 5,958 | 16,875 | 143,893 |

(a) Including estimates for establishments not making satisfactory returns, non-response and
b) Average number employed, including full and part-time employees (see table 7) and working Average number
proprletors.
(c) The sum of the figures for the size groups may exceed the total for the industry because some enterprises control establishments in more than one size group.
(d) Including working proprietors.
(e) Administrative, technical and clerical employees.

 New building work plus acquisitions less disposals of land and existing buildings, vehicles and
plant and machinery. Gross value added data relate to establishments employing 1-199

TABLE 5
distribution of employment net capital expenditure, net output and gross value added at factor All United Kingdom establishments classified to the industry.

| Area | $\begin{aligned} & \text { Total } \\ & \text { employment (a) } \end{aligned}$ |  | Net capital expenditure | (b) (c) | Net output, gross value added and employment in the region from returnsreceived from establishments with more than 80 per cent of theiremployment in the region (d) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Net output |  | Gross value added at factor cost | Emp loyment as a percentregional emp loyment in the industry |
|  | Thousands | per cent <br> of United <br> Kingdom |  | £ thousand | per cent of United Kingdom | £ thousand | £ thousand |  |
| Standard regions of England |  |  |  |  |  |  |  |
| North | * | * | * | * | * | * | * |
| Yorkshire and Humberside | 0.2 | 0.8 | 60 | 0.4 | * | * | * |
| East Midlands | * | * | * | * | , |  |  |
| East Anglia | * | * | * | * | * | * |  |
| South East | 5.2 | 18.4 | 2,175 | 12.9 | 34,526 | 32,034 | 96.4 |
| South West | * | * | * | * | * | * |  |
| West Midlands | 4.6 | 16.1 | 2,341 | 13.9 | * |  |  |
| North West | 5.5 | 19.5 | 3,588 | 21.3 | * | * |  |
| England | 26.9 | 94.8 | 16,166 | 95.8 | 122,068 | 112,667 | 70.2 |
| Wales | - | - | - | - | - | - | - |
| Scotland | * | * | * | * | * | * |  |
| Great Britain | * | * | * | * | * | * | * |
| Northern Ireland | * | * | * | * | * | * | * |
| Unallocated (e) | - | - | - | - | 47,361 | 44,436 | - |
| United Kingdom (b) | 28.4 | 100.0 | 16,875 | 100.0 | 182,307 | 169,333 |  |

(a) Average number employed, including full and part-time employees (see table 7) and working proprietors.
(b) Including estimates for establishments not making satisfactory returns, non-response and
(c) New building work plus acquisitions less disposals of land and existing buildings, vehicles and
(d) Where a census return covered addresses in two or more regions an estimate was made of the net output and gross value added atributable to the region only where more man by per cent that net
 output and gro
the address.
(e) Unallocated net output and gross value added covering establishments with addresses in two or more negions,
of size.

TABLE 6
Percentage analysis of twelve-month periods covered by returns received from United Kingdo
establishments employ ing 20 or more persons, 1976

Accounting year ended
ounting year ended Percentage of total returns receive

Percentage of total number employed

| April (a) | 3.8 | 0.1 |
| :--- | ---: | ---: |
| May | 0.0 | 0.0 |
| June | 0.0 | 0.0 |
| July | 15.4 | 4.9 |
| August | 0.0 | 0.0 |
| September | 3.8 | 0.5 |
| October | 3.8 | 0.1 |
| November | 0.0 | 0.0 |
| December | 46.2 | 59.3 |
| January | 0.0 | 0.0 |
| February | 0.0 | 0.0 |
| March (b) | 26.9 | 35.2 |

From 6th April.
Including returns made for twelve-month period ended 1st to 5th April 1977.

ABLE 7
ercentage analysis of employees, by full and part-time employment and sex, 1976 (a)

| Full-time | Part-time | All employees |
| :--- | :--- | :--- |
| per cent per cent | per cent |  |
| 85 | 1 | 86 |
| 12 | 2 | 14 |

Source: Department of Employment

The percentages relate to the numbers employed (excluding working proprietors) in the United
Kingdom at end June, 1976.

Dd. 597332 K5 Cdf 71 5/79

Notes
These notes give the main information needed for interpreting the figures in the industry Business
Monitors: more detailed information about the Monsus is given in a separate Bus in about the census is given in a separate Business Monitor -
PA1001 (Introductory Notes) of the Report on the Pansus of Production, 1976.
general information
$\begin{array}{llll}\text { Changes made for } & 1976 \\ \text { The Census for } & 1976\end{array}$
The Census for 1976 is in line with similar
inquiries being conducted in inquiries being conducted in other member countries of the European Economic communities. There was a
small number of changes in the scope of the
industry reports compared with 1975. These include Industry reports compare
separate headings for:
separate headings for:
Sales of goods produced
Sales of goods produced
Recelpts for work done and industrial services rendered
Amounts paid for hire of plant and machinery Amounts paid for hire of plant and machinery
Amounts paid for rent of industrial and
commerclal buldings rint Specific changes are explained in the introductions
to the industry reports or by footnotes to the tables

Suppression of information relating to individual Under takings
Sectlon $9(5)$ (b) of the Statistics of Trade Act 1947
states states - "The following provisions shall have effect with respect to any report, summary or other
communication to the public of information obtained under the foregoling provisions of this Act -
in complling any such report, summary or communication the competent report, sumbity shall or arrange it as to prevent any particulars
published therein from beling identifled as being published therein from being identifled as being
particulars relating to any individual person or undertaking except with the previous consent in writing of that person or the person carrying on
that undertaking, as the case may be; but this that undertaking, as the case may be; but this
provision shall not prevent the disclosure of the
total quantity or value of any articles produced total quantity or value of any articles produced,
sold or delivered; so, however, that before sold or delivered; so, however, that before
disclosing any such total the competent authority
hall have regard to any representations made to them by any person who alleges that the disclosure thereof would enable particulars relating to him or to an undertaking carried on by him to If a flgure involved disclosure the contributor concerned was sometimes asked to give permission
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other figures, or as in the regional tables, by other figures, or as in the
omitting the figure altogether
Symbols used
The following symbols are used throughout the PA
serles of Business Monitors:
$\because \quad$ not avallable

* nll or less than half the final digit shown
disclosing information about individual enterprises
revised

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

The United Classification (SIC) was first issued in Industr 1948
was subsequently revised in 1958 and 1968 ind exists to promote uniformity and comparabil the official statistics of the United Kingd The general principles followed are those of
International Standard Industrial Classificat of all Economic Activities of the United Nation Statistical Office but the United Kingdom
reflects the organisation and structure reflects the organisation and structure
industry and trade as it exists in the Unit Kingdom. The SIC is a classification the uni
and is not a ctiv and is not a commodity classififcation. How How
an index of all commodity headings an index of all commodity headings for whi Monitors, is published in Business Monltor PQ1000, Statistical units
statistical unit for the purpose of the cens
s the establishment which is defined in as the smallest unit which can provide information normally required for an econo over, capital formation. Usually the princi activities carried on in an establishment fall ithin a single heading of the classiflcat (e.g. steel making or sugar refining). Typlca
the establishment embraces all the activit carried on at a single address e.g. a farm, a m a factory, including those which are ancillan
to the principal activities. Frequently distinc activities characteristic of different industr carried on at one address, but normally the are not classified separately and activity. If, however, the required range of an be provided for each activity, each is tak activities which are conducted as astatite sometimes business are carried on at a number of addresses, Where tuis is so, businesses are asked to provi feach address; whether or not the activitispect different. Their activitios may, however, integrated to such an extent that they constitut
single establishment. In the latter case a single establishment. In the latter case
estabilishment is defined to cover the combin activities at these addresses (termed lo
units).
Separate flures are obtained units). Separate figures are obtained
employment and net capital expenditure at eac employment and net capital expenditure at ead
unit in order to complle regional tables. Efforts are made by the Business Statistics to ensure, by negotiating with respondents, th the return from an establishment does not cover countries of the United Kingdom.
Further information about the statistical appeared in an article "The statistical unit 1971 inquiries in Statistical News No. 13
Establishments are asked to exclude from their returns particulars relating to any department no
engaged in production eog. merchanting, transport enarehousing, for which they meercha separate set accounts. Transfers of goods produced departments are treated as sales and respondents
are asked to value them as far as possible as are asked to value them as far as possible as
sold to an independent purchaser sold to an independent purchaser. Where separ
accounts are not kept they are asked to detalls of all these activities in their return,
Particulars relating to head offices mainly engaged in the administration of the producti units within the scope of the census wer infurmation in respect of the head office was apportioned among them.
for certain purposes For certain purposes in the annual censuses
roduction Mospech PA1002) related enablyses of Business Monior Par these purposes an enterprise are combined. For these purposes an enterprise
group may be defined as a business consisting of

 groups is also necessary for the purpose of
ensuring that there will be no disclosure of the
cotivities of any one enterprise group. Information about the relationship of
establishments, the changing structure of groups of compan ies and about common ownership links is
obtained from many sources, including the stock xchange Year Book, company reports, press reports
and information supplied by individual establish-

## HE REGISTER

the register permits a questionnaire to be sent
irect to the reporting establishment on which he latter can include information relating to all omprises. the inquir les provide a major source of information
for keepling the register continuously up-to-date or keeping the register continuously
up-to-date and act as a check on its detall and structure.
or the establishments on the register making returns to the quarterly inquiries, the th mastrial
classification is derived from an analysis of their classification is derived from an analysis of their
sales of commodities and is reviewed annually. gales of commodities and is reviewed annually.
Employment data are entered on the register from timploym to the annual census of production. In
returns
coses where an establishment does not make a return cases where an establishment does not make a return
to these inquir itis the employment data are based on othese inquiris the employment data are based nent from the annual censuses of employment. Emp loy-
stablishments with 20 or more employees are Included in the censuses each year and the inform-
g+lon they supply to the census is supp emented by
the returns that those with 25 or
 about establishments with fewer than 20 employees
in most industries is less securely based, but
increasing use has been made of data on these Increasing use has been made of data on these
snal I estab/ishments supplied by the Department of
Enployment. One benefit of using this information Enployment. One benefit of using this information
is an improvement in the estimates of the number of s an improvement in the estimates of the number of
snal ler establishments and enterprises, but there Is little effect on other aggregates (e)
ent, output, net capital expenditure).
overage
return
return was required in the 1976 Census from each
istabl ishment with 20 or more employees. stablishment with 20 or more employees. Each
is classified to an industry, as eotined in the SIC, whose principal products form the major part of the establishment's sales.
glons
ine regions defined in Table 5 take account of the Souvary changes arising out of the Local
oct 1972 and the Local Government Act sotland) 1973. These changes came into effect in cotland4 in England and Wales and May 1975 in
:gMS USED IN THE CENSUS REPORT
verage number employed
stablishments were required to state the number
of persons on the payroll on average during the i persons on the payroll on average during the
far of return, whether full-time or part-time
(a) administrative,
(a) administrative, technical and clerical
employees (b) all other

Wrages could be calculated from the figures
ing to the last week of each calendar month.
ilshments were also required to state the
number of working ind proprietors where appropriate
and 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 excluded. The figures include establishment) are merchanting or factoring and canteen workers where
particulars in respect of these activities could
not not be excluded from the return activities could Working proprietors
These include These include all persons regarded as "selfmembers 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
ne working in the business but not in recelpt of a
definite wage, salary or commission are included definite wage, salary or commission are included
under this heading: directors paid by fee only are under this he.
not included.

## Emp loyees Admin istr

Administrative, technical and clerical employees salary or commission, managers, definite wage, and works foremen; research and design employees
(other than operatives): staff, advertising staff, travellers and all office employees.
Operatives include all other classes of employees,
that is, broadly earners. They include operatives employed in power stations, transport (including roundsmen),
wharehouses, stores, shops inspectors, maintenance workers and cleaners ore
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,
Establ ishments were asked not to deduct from the value of capital expenditure amounts recelved or expected to be recelved in grants or al lowances authority. Establishments with 100 or more
and employees were asked to include a total me (a) New bullding work

This represents the cost incurred during the year of new buliding and other constructional work to
be used in connection with the business covered by be used in connection with the business covered by
the return. The value is that charged to capital account during the year of return; it includes expenditure on new buildings and on the extension
or reconstruction of old buildings the orks of a capital nature carried out by the works of a capital nature carried out by the
establishment's own staff and the cost of any newly constructed buildings purchased. Figures
shown include legal charges, stamp duties, shown include legal charges, stamp duties, agents'
(b) Land and existing buildings
he items shown are the capital cost of freeholds purchased and the capital cost or premium payable
for leaseholds acquired (excluding the value of assets acquired in taking over an existing business), and the amounts recelvable for freeholds or leaseholds disposed of. The value is
that charged to capital account during the year of return.
(c) Plant, machinery and vehicles
The items shown are the value of plant and
hachinery and of venicles acquired, both new and
second-hand, and the amount rece ived for items
disposed of during the year. The value of plant
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 recelved, but including the cost of
transport and instal ation. Deductible value added tax is excluded but non-deductible value added tax
on motor cars acquired is included. No deduction on motor cars acquired is included. No deduction cence. The proceeds of items disposed of during the year exclude amounts written-off for items Cost of industrial services
This includes amounts pasable to other firms for
work done on materials supplied by the establish work done on materials supplied by the establish-
ment, payments for repairs and maintenance ment payments for repairs and mainter buildings) and amounts pald to other firms for contracts which
have been sublet. Payments to outworkers are excluded.

Cost of non-industrial services
This includes rent of industrial and commercial insurance premlums, bank charges and amounts pai for professional services, post office services, transport, advertising etc. Amounts payable on
royalties for the right to use patents, trademarks, copyrights etc., manufacturing and quarrying rights and technical "know-how" are also included.
Gross output
In the calculation of gross output the value of (or reduced by the fall) during the year in the value of work in progress and goods on hand for Net output
Net output, a customary census measure, is of purchases (reduced by the rise, or Increased by the fall, during the year of stocks of materials otc.) and the cost of industrial services received,

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 ifuil and part-time) on al activities comployed by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding

Gross value added at factor cost
ress value added at factor cost is calculated by deducting from net output the cost of non-
industrial services ce.g. rent of bulldings, hire of plant and machinery, commercial insurance
premiums, bank charges and amounts paid for premiums, bank charges and amounts paid for
professional services, post office services, transport and advertising), rates (excluding water rates) and the cost of licensing motor vehicles. This estimate of gross value added approaches mor
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 tigures of gross value added at factor cost per
head are derived by dividing the gross value added head are derived by dividing the gross value added
by the average number of persons employed (full by the average number of persons employed (full and
part-time) on all activities covered by the part-time) on all activities covered by the
returns, including operatives, administrative technilal and clerical employees and working
proprietors, but excluding outworkers. proprietors, but excluding outworkers.

Purchases
include the cost of raw materials,
components
naterlals no
ools no
, of replacement parts and consuman matteris of all types; of stationery and pr materials to be used by the establishment out to other establishments for the product
machinery or other capltal items for the machinery or other capital items for the e istaments own use; of materials for use by
establishment when working on goods supplie customers; and of food, etc. for any can
covered by the establishment's return of goods to the establishment from another to the ment of the same firm not covered by establishment's return are included at a corresponding to the estimated selling to transport firms or oredited to the firm's excluded department for dellivery of materials a excluded, as are all purchases of machinery goods for merchanting or factoring have collected separately since 1973, The values exclude VAT. They include, in addition actual purchase price, the value of packagi
materlal charged to the establishment. The valu of returned goods or packaging materlal returnea to suppliers and any trade discounts are excluded,
Materials purchased duty-pald are included at thell Materials purchased duty-pald are included at
duty-paid value, less any drawback, rebate, The cost of transport is included only if
included with the purchase price in the ncluded with the purchase price in the firm
accounts. Imported goods are included at accounts
full delivered cost. If in the included at thel transport from docks or airport is not included
the cost of goods purchased, the cost is entered the cost of goods purchased, the cost is entered C.l.t. plus duty (if applicable). Leas in
and hire purchase charges are excluded.

Sales of goods produced
Sales for the purposes of the annual censuse means deliveries on sale of goods made by estab
ishments in the United Kinglom inquiry. Sates of goods made for these bester ishments by outworkers or by other establ ishment waste matoriacts given out to thel them and saled New
wuilding waste products are inch mach or other capital Items produce
and
establishments stablishments for hiring out or leasing
egarded as sales, the value included in eqturn being that adopted in the establishments capltal asset accounts. Forward sales and cantee akings are excluded. goods were mane included goods wire manufactured. Goods produced in and transferred either to anclle here are separate accounts, or to anot eturn, are of treated same firm not covered by establishment and valued as far as possible as
they had been sold to an independent purchasil Goods transferred to wholesale or retall sell organisations, for which separate accounts kept are valued on the same basis. ne value shown for sales is the "net se
value" defined as the amount (excluding added tax) charged to customers whether o ex-works or delivered basis, after any discounts and agents' commissions have deducted. The cost of packing materials
allowance for returnable cases is included. industries where products attract Excise Duty sel duty-pald
exported.
Work done and industrial services rendered Figures for work done represent the amount charg for work carrled out on materlals supplied by
customer and include repalr work. Withln corts

Social Securlty Act, 1973) as well as commercial
Insurance premiums to provide pensions, superannuation or other retirement benneflions, sicker- suss
benefits, personal accident benefits, disability benefits, personal accident benefits, disabllity
or dath benefits for employees or former or death beneflts for employees or former
employees or their dependants. Contributions to
the running costs the running costs of canteens, soclal centres,
children's and holiday homes, etc. for mployyes. children's and holiday homes, etc. for employees,
former employees and their dependants are also included.

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