# Report on the Census of Production 1993 

PA2 I.I Manufacture of pulp, paper and paperboard

## BUSINESS MONITOR

A publication of the Government Statistical Service

Presented by the Chancellor of the Exchequer
to Parliament in pursuance of the Statistics of Trade Act 1947 ( 10 \& $11 \mathrm{Geo}$.6 Cha .39 sec 7 )

| PA1001 | In | PA27.3 | Other first processing of iron and steel and production of $n$ ECSC ferro-alloys |
| :---: | :---: | :---: | :---: |
| PA10.1 | Mining and agglomeration of hard coal |  |  |
| PA11.1 | Extraction of crude perroleum and natural gas | PA27.4 | Manufacture of basic precious and non-ferrous metals |
| PA14.1 | Quarrying of stone | PA27.5 | Castings of metals |
| PA14.2 | Quarrying of sand and clay | PA28.1 | Manufacture of structural metal products |
| 14 | Mining of chemical and ferrilizer minerals | PA28.2 | Manufacture of tanks, reservoirs and contain |
| PA14.4 | Production of salt |  | manufacture of central heating radiators and boilers |
| PA15. 1 | Production, processing and preserving of meat and meat products | PA2 | Manufacture of steam generators, except central heating |
| PA15.2 | Processing and preserving of fish and fish products |  | chual heain |
| PA15.3 | Processing and preserving of fruit and vegetables | PA28.4 | Forging, pressing, stamping and roll forming of metal; powder metallurgy |
| PA15.4 | Manufacture of vegetable and animal oils and fats |  |  |
| 15 | Manufacture of dairy Products | PA28.5 | Treatment and coating of metals; general mechanical engineering |
| PAIS | Manufacture of grain mill products, starches and starch produc |  |  |
| PA15 | Manufacture of prepared animal feed | PA28 | Manufacture of cutery, tools and general hardware |
| PA15.8 | Manufacture of ocher food products | PA28 | Manufacture of other fabricated metal products |
| PA15.9 | Manufacture of beverages | PA29. | Manufacture of machinery for the production and |
| 16. | Manufacture of tobacco products |  | mechanical power, except aircraft, vehicle and cycle engines |
| PA17 | Preparation and spinning of textile fibres | PA29 | Manufacture of other general purpose machinery |
| PA17.2 | Texile weaving | PA29.3 | Manufacture of agricultural and forestry machin |
| PA17.3 | Finishing of textiles | PA29.4 | Manufacture of machine tools |
| PA17.4 | Manufacture of made-up textile articles, except apparel | PA29.5 | Manufacture of other special purpose machin |
| PA17.5 | Manufacture of other textiles | PA29.6 | Manufacture of weapons and ammunition |
| PA17.6 | Manufacture of knitted and crochered fabrics | PA29.7 | Manufacture of domestic appliances not elsewhere classified |
| PA17.7 | Manufacture of knitted and crocheted articles | PA30.0 | Manufacture of office machinery and computers |
| PA18.1 | Manufacture of leather clothes | PA31.1 | Manufacture of electric motors, generators and |
| PA18.2 | Manufacture of other wearing apparel and accessories | PA31.2 | Manufa |
| PA18.3 | Dressing and dyeing of fur; manufacture of articles of fur | PA31.3 | Manufacture of insulated wire and cable |
| PA19.1 | Tanning and dressing of leather | PA3 | Manufacture of accumulators, primary cells and primary |
| PA19.2 | Manufacture of luggage, handbags and the like, saddlery and harness | PA31.5 | batteries <br> Manufacture of lighting equipment and electrical lamp |
| PA | Manufacture of foorwear | . 6 | Manufacture of electrical equipment not |
| PA20 | Sawmilling and planing of wood; impregnation of wood | PA32.1 | Manufacture of electronic valves and tubes and o |
| PA20.2 | Manufacture of veneer sheets; manufacture of plywood, laminboard,particle board, fibre board and other panels and boards | PA32.2 | electronic components Manufacture of televisio |
| PA20.3 | Manufacture of builders' carpentry and joinery |  | for line telephony and line telegraphy |
| PA20.4 | Manufacture of wooden containers | PA32.3 | Manufacture of television and radio rectiver |
| PA20.5 | Manufacture of ocher products of wood; manufacture of articles of cork, straw and plaiting materials | PA33.1 | recording or reproducing apparatus and associated goods Manufacture of medical and surgical equipment and |
| PA2 | Manufacture of pulp, paper and paperboard |  | orthopaedic appliances |
| A2 | Manufacture of articles of paper and paperboard | PA33 | Manufacture of instruments and appliances for measuring, |
| PA22.1 | Publishing |  | checking, testing, navigating and other purposes, except |
| PA22.2 | Printing and service activites related to printing |  | industrial process control equipment |
| PA22.3 | Reproduction of recorded media | PA33.3 | Manufacture of industrial process cos |
| PA2 | Manufacture of coke oven products | PA33.4 | Manufacture of optical instruments and photogra |
| PA23.2 | Manufacture of refined perroleum products |  | equipment |
| PA24.1 | Manufacture of basic chemicals | PA33.5 | Manufacture of watches and clocks |
| PA24.2 | Manufacture of pesticides and ocher agro-chemical products | PA34.1 | Manufacture of motor vehicles |
| PA24.3 | Manufacture of paints, varnishes and similar coatings, printing ink and mastics | PA34.2 | Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers |
| PA24.4 | Manufacture of pharmaceuticals, medicinal chemicals and botanical products | PA34.3 | Manufacture of parts and accessories for motor vehicles and their engines |
| PA24.5 | Manufacture of soap and detergents, cleaning and polishing | PA35. 1 | Building and repairing of ships and boats |
| PA24.6 | preparations, perfumes and toilet preparations Manufacture of other chemical products | PA35. 2 | Manufacture of railway and tramway locomotives and |
| PA24.7 | Manufacture of man-made fibres | PA35.3 | Manufacture of aircraft and spacecrat |
| PA | Manufacture of rubber products | PA35.4 | Manufacture of motorcycles and bicycles |
| PA2 | Manufacture of plastic products | PA35.5 | Manufacture of other transport equipment not elsewhere classified |
| PA26.1 | Manufacture of glass and glass products |  |  |
| PA26.2 | Manufacture of non-refractory ceramic goods other that | PA36.1 | Manufacture of furniture |
|  | construction purposes; manufacture of refractory ceramic | PA36. 2 | Manufacture of jewellery and related articles |
|  | products | PA36. | Manufacture of musical instruments |
| PA26.3 | Manufacture of ceramic tiles and flags | PA36.4 | Manufacture of sports goods |
| PA26.4 | Manufacture of bricks, tiles and construction products, in | PA36.5 | Manufacture of games and to |
|  | baked clay | PA36.6 | Miscellaneous manufacturing not elsewhere classified |
| PA26.5 | Manufacture of cement, lime and plaster | PA40.1 | Production and distribution of electricity |
| PA26.6 | Manufacture of articles of concrete, plaster and cement | PA40.2 | Manufacture of gas; distribution of gaseous fuels through |
| PA26.7 | Cutring, shaping and finishing of stone |  | mains |
| PA26.8 | Manufacture of other non-metallic mineral products | PA41.0 | Collection, purification and distribution of water |
| PA27.1 | Manufacture of basic iron and steel and of ferro-alloys (ECSC) | PA45.0 | Construction |
| PA27.2 | Manufacture of tub | PA1002 | Summary volume |


| PA1001 | Introductory notes |
| :--- | :--- |
| PA10.1 | Mining and |

PA10.1 Mining and agglomeration of hard coal
PA14.1 Quarrying of stone
$\begin{array}{ll}\text { PA14.2 } & \text { Quarrying of sand and clay } \\ \text { PA14.3 } & \text { Mining of chemical and fertilizer minerals }\end{array}$
PA14.4 Production of salt
PA15. 2 Production, processing and preserving of meat and meat products
PA15.3 Processing and preserving of fish and fish product
PA15.4 Manufacture of vegetable and animal oils and fats
PA15.5 Manufacture of dairy products
PA15.6 Manufacture of grain mill products, starches and starch products
A15. Manufacture of prepared animal feed
$\begin{array}{ll}\text { PA15.8 } & \text { Manufacture of other foo } \\ \text { PA15.9 }\end{array}$
$\begin{array}{ll}\text { PA16.0 } & \text { Manufacture of tobacco products } \\ \text { PA17.1 } & \text { Preparation and spinning of textile fibres }\end{array}$
PA17.2 Texcile weaving
PA17.4 Manufacture of made-up textile articles, except apparel
$\begin{array}{ll}\text { PA17.5 } & \text { Manufacture of other textiles } \\ \text { PA17.6 } & \text { Manufacture of knitted and crochered fabrics }\end{array}$
PA17.7 Manufacture of knitted and crocheted articles
PA18.1 Manufacture of leather cloches
PA18.3 Dressing and dyeing of furi mpparel and accessories
PA18.3 Dressing and dyeing of fur; manufacture of articles of fur
Tannig and leath
of lugage, handbags and the like, saddlery and
Manufacture of foorwear
Manufacture of veneer sheects; manufacture of plywood, lami
board,particle board, fibre board and ocher panels and boards
PA20.3 Manufacture of builders' carpentry and joinery
PA20.4 Manufacture of wooden containe
Manicle of cof odre products of wood; manufacture
Manufacture of pulp, paper and paperboard
Manufacture of articles of paper and paperboard
Printing and service activities related to prinuing
Manufacture of recorded media
Manufacture of refined pecroleum products
Manufacture of basic chemicals
Manufacture of paints, varnishes and similar coatings printing
Manufacture of pharmaceuticals, medicinal chemicals and
botanical products
reparations, perfumes and teetents, cleaning and polishing
Manufins, perfumes and toilet preparation
Manufacture of man-made fibres
Manufacture of plastic products
Manufacture of non-refractory ceramic goods other than for
construction purposes; manufacture of refractory ceramic
Manufacture of ceramic tiles and flag
Manufacture of bricks, iles and construction products, in
baked clay
Manufacture of articles of concrete, plaster and cement
Manufacture of other non-meatlic mineral products
Manufacture of basic iron and steel and of ferro-alloys (ECSC)

Other first processin
Manufacture of basic precious and non-ferrous metals Castings of metals
Manufacture of sut
Manufacture of structural mecal products Manufacture of tanks, reservoirs and containers of metal
manufacture of central heating radion manufacture of central heating radiators and boilers
Manufacture of steam generators, except central hea hot water boilers Forging, pressing, stamping and roll forming of metal; powder metallurgy engineering
Manufacture of cutery, tools and general hardware
Manufaccure of Manufacture of other fabricated metal products Manufacture of machinery for the production and use
mechanical power, except aircraft, vehicle and cycle engi Manufacture of other general purpose machinery Manufacture of machine tols forestry machinery Manuf octine tools
Manufacture of weas pecial purpose mach
Manufacture of domestic appliances not elsewhere chssited Manufacture of office machinery and computers Manulacture of electricity distribution and control appara Manufactere of insulated wire and cable batreries
Manufacture of lighting equipment and elecrical lamps Manufacture of electronic valves and rubes and oher electronic components
for line telephony and line celegraphy Manufacture of television and radio receivers, sound or vide Manufacture of orthopaedic appliances
checking, testing, navigating and appliances for industrial process control equipment
nuacurc of industrial process control equipment equipment
Manufacture of Manufacture of bodies (icces manufacture of trailers and semi-rrailers

Building and reparing of ships and boats Manufacure of rallway and tramway locomotives and , stock
frecraft
Manufacture of other transport equipment not elsewher

Manufacture of jewellery and related articles Manuacture of musical instrumens
Manufacture of games and toys Prodaneous manuacturing not elsewhere classified Manufacture of gas; distriburion of gaseous fuels through Conlection Summary volume

## PA $2 . .1$

The information in this report relates to businesses classified to the Manufacture of pulp, paper and paperboard industry, Group 21.1 in the standard Industrial Classification Revised 1992. The Industry Group covers the following Classes:-
21.11 Manufacture of pulp

This class includes:
manufacture of bleached, semi-bleached or unbleached paper pulp:
-manufacture by mechanical, cheachical (dissolving or non-dissolving) or semi-chemical processes of paper pulp
-emoval of ink and manufacture of pulp from waster paper
removal of ink and manufacture of pulp from waster paper
21.12 Manufacture of paper and paperboard

## This class includes:

manufacture of paper and paperboard intended for furcher industrial processing
coating, covering and impregnation of paper and paperboard.
manutacture of creped or crinkled paper.
manufacture of cellulose wadding and webs of cellulose fibres.

For a full description of the 1992 classification see Standard Industrial Classification of economic activities 1992, obtainable from HMSO, price $£ 19.95$.

## In interpreting the data in the tables it is essential to bear in mind the notes and definitions which commence on page 4 .

## LST OF CONTENTS

Explanatory notes and definitions49
Table $1 \quad$ Output and costs, 1993 Output and costs, 199310
Table 2 Capital expenditure, 199311
Table 3 Stocks and work in progress, 1993 ..... 11
Table 4 Employment, labour costs, output, net capital expenditure and $\begin{aligned} & \text { stocks and work in progress by size of total employment , } 1993\end{aligned}$ ..... 12-13
Table 5 Percentage analysis of twelve-month periods covered by returnreceived for the 1993 Census by number of returns and totalemployment14
Table 6 ..... 14
Table $7 \quad$ Regional distribution of employment, net capital expenditure, net output and gross value added at factor cost, 199

EXPLANATORY NOTES AND DEFINITIONS INTRODUCTION

These notes give basic information to help with the inter pretation of tables in this Industry Report. More general inform tion about the Census is given in a separate Business Monitor Report on the Census of Production,Introductory Notes (PA1001)

Since 1980 , Censuses have been conducted on the Standard
strial Classification Revised 1980 SIC(80). The Standard 2. Sin Industrial Classification Revised 1980 SIC(80). The Standard
Industrial Classification exists to promote uniformity and comp Industrial Classification exists to promote uniformity and comp
rability in the official statistics of the United Kingdom. Th SIC(80) is the result of an attempt to align the United Kingdon classification with the General Industrial Classification of Economic Activities within the European Communities (NACE). is based on activity rather than commodities produced. A full description of SIC (80) is given in Standard Industrial Classification Revised 1980 , obtainable from HMSO, price $£ 4.25$

In 1990, however, the first revision of NACE was made by EC regulation. This regulation makes it necessary for the UK to introduce a new Standard Industrial Classification, SIC(92), base on NACE Rev 1. The regulation guarantees comparability be tween national and Community classifications and therefore be tween national and Community statistics. Full details of SIC (92) are given in 'Standard Industrial Classification 1992', obtainable from HMSO, price $£ 17.50$, reference ISBN 0116205512

The 1993 census is the first conducted on SIC (92) and busines monitors published in respect of 1993 will contain data for that ye only and are being issued, whenever possible, for each 3 digit Grou of SIC (92). However, a limited range of 1991 and 1992 dat reworked to SIC(92) Section and Sub-Section level has been published as a supplement to the Census Summary Volume (PA1002)

## REPORTING UNIT

4. From the earliest censuses of production until that for 198 the reporting unit to the census was the establishment. This was defined as the smallest unit which could provide the full range of data required for an economic census. Establishments were asked where possible to exclude from their returns to the census any non production activity

In 1987, for a number of administrative and statistica . In 1987 , for a number of administrative and statistical
reasons, a newwsysem of company -based reporting wasintroduced
Under the new system the reporting unit to the census is, generally the company, but there are some exceptions. These arise, for example, for large mixed activity companies which are asked to make separate returns to the census for each of their production activities on an establishment basis. Throughout this monitor this mixture of reporting units are referred to as "businesses". Thes businesses are no longer asked to exclude non-production activities.

In practice, since most businesses, both before and after the 6. In practice, since most businesses, both before and after the
change, reported forthe company as a whole, little difference to the main economic series has resulted from the change.
7. For most businesses, the returned data are appropriate to a
single activity heading of SIC(80) and fall within a single geograph cal region. Where information covers a mixture of activities, th cal region. Where information covers a mixture of activities, the
business is classified according to the main activity. Where th business is classitied according to the main activity. Where the
business operates at a number of different addresses then, in order business operates at a number of different addresses then, in order
to enable regional data to be compiled, separate information o employment and capital expenditure is sought for each address.

## THE REGISTER

8. A register of businesses throughout the United Kingdom held on the CSO computer and provides the basis for CSO inquiries. For each business the register contains identificatio particulars and information about its eligibility for inclusion in an inquiry, its relationship with other businesses in common owner ship, its industrial classification, the nationality of its parent and location indicators for regional analyses. Regional and size analyse of manufacturing units are published in Business Monitor PA1003 - Size analyses of United Kingdom businesses.

The Annual Census and other CSO inquiries provide major source of information for checking the register and updatin employment data. Where businesses do not make returns to these inquiries, estimates of employment are imputed from VAT turi over. For businesses which have an imputed employment of 11 more, the estimates are checked by means of register proving forms. For businesses on the register making returns to the Quarterly or Annual Sales Inquiries, industrial classification reviewed annually and isderived from an analysis of their commod
ity sales. For other businesses the classification is obtained eithe ity sales. For other businesses the classification is obtained either
from VAT sources or from the register proving forms. Estimates of employment made by the CSO and the Department of Employ ment differ because they are derived from two separate inquirie and use different procedures and employment definitions.

## COVERAGE

10. The Census covers United Kingdom businesses engaged ii industrial production, ie mining and quarrying manuactur construction, and gas, electricity and water supply industries (D) visions 1 to 5 of SIC(80)). Businesses in the Channel Islands and the Isle of Man are excluded.
11. Under the sampling arrangements agreed for the 199 Census, forms were despatched to all businesses with 100 or mo 1 employed and, for mosproduction industries, samp 20 or in 5 and 1 in 2 respectively being taken for businesses in the 20 to 49 and 50
to 99 employment size bands. In addition, sampling was extende to the $10-19$ size band and to the $1-9$ size band in selected industrie It was necessary to increase the sample in those industries wher there were few businesses in the sample size band or where respons in earlier years was poor. About 15,700 forms were despatched the United Kingdom for the 1993 Census.

## PERIOD COVERED

12. Businesses were asked to make returns for the calendarye 1993 but, where this was not possible, returns for business years Returns covering fewer than twelve months were accepted for
businesses which had started or ceased trading during the year.

## ESTIMATION

13. All published Census results include estimates for non responders, unsatisfactory returns and businesses not selected for the Census. Estimates are also made for items not covered in the shorter form sent to smaller businesses
14. For the 1993 census a change in estimation procedures wa 14. For the 1993 census a change in estimation procedures $w$ each industry, the "average per head" is calculated for each censu variable by dividing the total returned value for each variable by th total selected employment of each responding business. This value is multiplied by the employment thought to exist in each non responding or non-selected business to yield an estimated value fo that business. Estimates for items not collected on the shorter for are made in a similar way using selected employment.
15. The accuracy of the totals produced by adding togethe estimates and returned data is mainly dependent on the level response. The extent to which businesses making satisfactor returns account for the total employment of any industry is show as a percentage in footnote (a) to table 1 . Thus the accuracy of the data published in an Industry Report where 95 per cent of the employment in the industry is covered by the returns made will, in general, be better than that in an Industry Report where th coverage is only 70 per cent.

$$
16 .
$$

16. Additionally, the extent to which individual headings in an Industry Report are related to employment should be taken into account in assessing the accuracy of estimated data. Thus an estimate of total earnings which bears a close relationship to tota employment is likely to be more accurate than an estimate of clearly marked.

## SUPPRESSION OF INFORMATION RELATING TO NDIVIDUAL UNDERTAKINGS

Sub-section 9(5)(b) of the Statistics of Trade Act 1947 state

The following provisions shall have effect with respect to an report, summary or other communication to the public of inform tion obtained under the foregoing provisions of this Act -
in compiling any such report, summary or communication the competent authority shall so arrange it as to prevent any particulars published therein from being identified as being particulars relating to any individual person or undertaking except with the previous consent in writing of that person or the person carrying on that undertaking, as the case may be; but this provision shall not prevent the disclosure of the total quantity or value of any articles produced, sold or delivered; so, however, that before disclosing any such total the competent authority shall have regard to any representations made to them by any
person who allegest that the disclosure thereof would enable particulars relating to him or to an undertaking carried on particulars relating to him or to an undertaking carried on
by him to be deducted from the total disclosed."
18. Figures which would be likely to disclose particulars relating to an individual undertaking are not published unless the contributor has given written consent for their publicarion

## CHANGES MADE FOR 1993

19. The 1993 census like that for 1992 was a slimline one. Changes in Standard Industrial Classification, sampling and estimation procedures have been detailed in previous paragraphs. The additional question identifying those businesses with employees engaged in Research and Development work and the break down on capital and current costs associated with pollution prevention the breakdown of excluded. Data forthestocks variables in the 1993 reb estimated from informarion collected in the CSO Qurterly Stocks Inquiries. No individual asset types have belish for the Iqquires. No individual asset types have been published for the

## SYMBOLS USED

20. The following symbols are used throughout the PA series of Business Monitors
not available
nil or less than half the final digit shown

* information suppressed to avoid disclosure

R revised

ROUNDING OF FIGURES
21. Figures in the tables have been rounded to the nearest final digit where necessary and, in these instances, the sum of the constituent items may not always agree exactly with the total shown.

## EXPLANATION OF TERMS USED IN THE CENSU

 REPORT22. The notes and definitions given in this section are based on the instructionsgiven to respondents as to the way in which returns were to be completed.

## CAPITAL EXPENDITURE

23. This represents the value charged to capital account together with any other amounts which ranked as capital items for taxation purposes during the year to which each return related. The value is inclusive of any amounts received or expected to be received in grants and/or allowances from government sources, statutory bodies or local aurhorities. Capital expenditure during
the year in respect of production units where production had no started before the end of the year and the value of CAPITAL GOODS PRODUCED FOR USE WITHIN THE BUSINESS by its own staff are included. The value of any assets acquired in taking over an existing business is excluded. The figures include non
deductible VAT but exclude deductible VAT. No allowance is made for depreciation, amortisation or obsolescence.
on LAND AND EXISTING BUILDING
24. This represents the value of freeholds and the value or premium payable or receivable for leaseholds acquired or disposed of. The figures for acquisitions include architects' and surveyor fees, legal fees, stamp duties, agents' commissions and Land Registry fees. The figures for disposals are net of any such professional fees payable.

## b. on NEW BUILDING WORK

25. This represents the value of new building and other con structional work such as the extension and reconstruction of old structional work such as the extension and reconstruction of old
buildings, and the value of any newly constructed buildings ac quired. The figures include architects' and surveyors' fees, legal quired. The figures include architects and surveyors fees, lega
on PLANT AND MACHINERY, VEHICLES
26. This represents the value of new and second-hand plant and machinery and vehicles acquired or disposed of. The figures fo acquisitions are net of any discounts received but include the cos of transport and installation and Customs and Excise car tax. Th figures for disposals exclude amounts written off for capital assets which are scrapped

CAPITAL GOODS PRODUCED FOR USE WITHIN THE business
27. This represents the value of all work of a capital nature carried out during the year by the staff of, and for use in, the businesses covered by the returns.

## COST OF industrial services received

28. This includes amounts payable to other organisations fo work done on materials supplied by the business completing th return, for repairs and maintenance including those in respect of rented buildings, and for contracts which have been sublet. Direct payments to outworkers and amounts charged to capital accoun are excluded

COST OF NON-INDUSTRIAL SERVICES RECEIVED
$\qquad$ This includes commercial insurance premiums, bank charges 29. plant and machinery, for the rent of industrial and commercia buildings, for the services of accountants, auditors, agents, solici
tors and surveyors other than in connection with the acquisition or disposal of capital assets, for postal and telecommunications services, for carriage by all forms of transport within the United Kingdom, for advertising, market research etc, for the right to us patents, trade marks, copyrights etc., for manufacturing and quar rying rights and technical knowledge. Interest payments and amounts payable for sea and air freight on goods exported and on materials and fuel imported are excluded.

EMPLOYERS' NATIONAL INSURANCE CONTRIBU TIONS ETC
0. This includes employers' national insurance contribution under the Social Security Pensions Act 1975, commercial insuranc premiums for policies providing pensions, superannuation or othe retirement benefis, sickiss benefs, peronal accident benefits, smployees ortheirdependants. Also included are contributionsto mploys, socil centres, children's and holiday homes etc and th cost

## EMPLOYMENT

31. This isthe averagenumber of ADMINISTRATIVE,TECH NICAL AND CLERICAL EMPLOYEES AND OPERATIVE on the payroll and the number of WORKING PROPRIETORS employed during the year of return. Full-time and part-ime employees are included but outworkers (ie people who worked in their own homes on materials supplied by the business) and casual employees such as jobbers are excluded. The average number of employees returned by individual businesses may have been calcu the payroll for the last week of each calendar month.
adMINISTRATIVE, TECHNICAL AND CLERICAL EMPLOYEES
32. This includes directors who received a definite wage, salar or commission, managers, foremen, draughtsmen, editorial and advertising staff, travellers, all office employees and research and design employees except operatives.
```
OPERATIVES
```

33. This includes all manual wage earners including operative in power stations, operatives engaged in outside work of erecting fitting etc, inspectors, maintenance workers and cleaners. Staf engaged in transport (including roundsmen) and
warehouses stores, shops and canteens are included.

## WORKING PROPRIETOR

34. These are people who are regarded as self-employed in the business withposes, members of their families wha
least half the normal working hours and directors who worked in the business but did not receive a definite wage, salary or commi sion. Part-time Directors paid by fee only and directors received a definite wage, salary or commission are excluded.

## ENTERPRISE

35. This is defined as one or more businesses under commo ownership or control.

## GROSS OUTPUT

36. This is calculated by adjusting the value of TOTAL SALES AND WORK DONE by the changes during the year of WORK ING PROGRESS and GOODS ON HAND FOR SALE.

## GROSS VALUE ADDED AT FACTOR COST

37. This is calculated by deducting from NET OUTPUT the COST OF NON-INDUSTRIAL SERVICES RECEIVED RATES and the cost of LICENSING OF MOTOR VEHICLES This estimate of gross value added approaches more closely than NET OUTPUT the definition of net output or value added in national accounts statistics.

GRoss VALUE ADDED AT FACTOR COST PER HEAD
38. This is calculated by dividing GROSS VALUE ADDED AT FACTOR COST by total EMPLOYMENT

NET CAPITAL EXPENDITURE
39. Comprises of the values of NEW BUILDING WORK acquisitions less disposals of LAND AND EXISTING BUIID NGS, VEHICLES and PLANT AND MACHINERY. Thes individual asset types are not collected separately

## NET OUTPUT

40. This is calculated by deducting from GROSS OUTPU he cost of PURCHASES OF MATERIALS FOR USE IN PRO UF COST OF INDUSTRIAI SERVICES RECETVED justed for ner duties and levies etc where Relibe and is ad diusted for hanges during the year of STOCTS OF MATER ALS, STORES AND FUEL

## NET OUTPUT PER HEAD

This is calculated by dividing NET OUTPUT by tota EMPLOYMENT.

## NON-INDUSTRIAL SERVICES RENDERED

42. This includes amounts charged for the hire of vehicles, plant and machinery, for the rent of industrial and commercial plant and machinery, for the rent of industrial and commercial
buildings, for the right to use patents, trade marks, copyrights etc, for manufacturing and quarrying rights, for technical know-how and for the provision of transport to other organisations. It also includes revenue from staff facilities such as canteens.

## OPERATING RATIO

43. These ratios are calculated using industry totals, ie including the estimates for businesses not responding to or not selected for the Census. Respondents are able to compare the ratios for their own businesses with those for the industry as a whole.

PURCHASES OF MATERIALS FOR USE IN PRODUCTION, AND PACKAGING AND FUEL. PURCHASES OF GOODS FOR MERCHANTING OR FACTORING
44. These include the cost of raw materials, components, semimanufactured goods and workshop materials, replacement parts and consumable tools not charged to capital account, packaging materials of all types, stationery and printed matter, fuel, electricity and water, materials of all types used by the business or given out to others, for the production of machinery or other capital items used in the business, and materials used when working on goods supplied by customers. The figures exclude VAT, purchases of machinery and plant, which are included in CAPITAL EXPENDITURE, and amounts payable to transport firms or credited to the business's own transport departments for delivery of materials. The figures are net of the value of goods or packaging materials purchased duty-paid are included at heir durv-paid value less purchasbacks, rebates etc. Imported doods are included at their full delivered cost. If the transport from docks or airport of imported delivered cost. If the transport from docks or airport of imported entered at c.i.f. plus duty, if applicable. Transfers of goods from entered at c.i.f. plus duty, if applicable. Transers of goods from included at the estimated selling value recorded by the other departments.

REMUNERATION PAID TO OUTWORKERS
45. This represents amounts paid to outworkers, ie people who do work in their own homes generally on a piece-work basis, whose names appear on the payroll. Amounts paid to outworkers by subcontractors are included in the COST OF INDUSTRIAL SERVICES RECEIVED. Estimates are not made for remuneration of outworkers for businesses not completing Census returns.

SALES OF GOODS PRODUCED
46. This represents sales of goods during the year, whether or not they were produced in the year of the return. It also includes sales of goods made from materials
outworkers and sales of waste products and residues. The value of sales is the 'net selling value', ie the amount charged to customer sales is the 'net selling value, 'e the amount charged to customer
whether valued 'ex-works' or 'delivered' less VAT, trade discounts, agents' commissions etc and allowances on returned goods. Wher products attract Excise duty, the value includes duty if the goods are products atract Excise duty, the value includes duty if the goods are
sold duty-paid', but excludes it if they are sold in bond or exported. The cost of packaging materials less allowances for returnable The cost of packaging materials less allowances for returnable
containers is included. Sales of fixed assets and exceptional receipt are excluded. Transfers of goods produced by a business to departments not covered by the return (including other businesses in the same enterprise group) are treated as sales, valued as if sold to an independent purchaser.

## stocks

47. This represents the value of goods on hand for sale, includ ing goods for merchanting or factoring and of materials, stores and fuel held by businesses, whether held in the United Kingdom or abroad. Values include any duty payable but exclude VAT

WAGES AND SALARIES
48. This represents amounts paid during the year to ADMIN ISTRATIVE, TECHNICAL AND CLERICAL EMPLOYEES and to OPERATIVES. All overtime payments, bonuses, commissions, holiday pay and redundancy payments, less any amounts reimbursed for this purpose from government sources, are in cluded. No deduction is made for income tax or employees'
national insurance contributions etc. Payments to WORKING PROPRIETORS, payments in kind, travelling expenses, lodgin allowances etc and FMPLOYERS' NATIONAI INSUR ANC CONTRIBUTIONS ETC are excluded.

## WORK DONE AND INDUSTRIAL SERVICES RENDERED

49. This includes amounts charged for work carried out includ ing that done by sub-contractors on customers' materials and amounts charged for materials supplied in the course of such work Industrial services such as repairs and maintenance, installatio work and technical research and studies rendered to other organi sations is also included. For certain industries this heading covers 2 wide variety of activities, for example, butter packed on commis sion in the food industries, making up of garments, fur dressing and typesetting block making and binding in the printing and publish ing industries. Work done is an important part of the activities of ing industries. Work done is an important part of the activities of includes erection, installation and repair and jobbing work.

WORK IN PROGRESS
50.

This represents materials which have been partially pro essed and are awaiting further processing before being sold o transferred. Progress payments made to sub-contractors are ex cluded and progress payments received from other organisations
are not deducted. are not deducted.

Output and costs, 1993

## Enterprise groups

Businesses
Sales of goods produced
Work done and industrial services
Work done
rendered
Capital goods produced for use within
Non-industrial services rendered
Goods merchanted or factored
Total sales and work done
Increase during the year, work in
progress and goods on hand for sale Gross output
Purchases of materials for use in pro-
duction, packaging and fuel
Purchases of goods for merchanting or
factoring
factoring
Increase during the year, stocks of
materials, stores and fuel
materials, stores and fuel
Cost of industrial services received
Net output
Total employment
Net output per head
Cost of non-industrial services
received
Hire of vehicles, plant and
machinery
Rents of industrial and commercial
buildings
Commercial insurance premiums Bank charges
Other non-industrial services
Licensing of motor vehicles
Rates, excluding water rates
Gross value added at factor cost
Gross value added at factor cost per head

| Unit | 1993 |
| :---: | :---: |
| Number | 412 |
| " | 442 |
| £ million | 2,654.7 |
| $"$ | 39.0 |
| " | 2.2 |
| " | 5.4 |
| " | 117.1 |
| " | 2,818.5 |
| " | -1.4 |
| " | 2,817. 2 |
| " | 1,424.7 |
| ${ }^{\prime \prime}$ | 90.1 |
| " | 6. 4 |
| " | 103.2 |
| " | 1,205.6 |
| Thousand | 25.6 |
| £ | 47, 166 |
| £ million | 19.4 |
| ${ }^{\prime \prime}$ | 11.4 |
| " | 20.7 |
| " | 1.7 |
| " | 188.7 |
| " | 0.9 |
| " | 19.4 |
| " | 943.4 |
| £ | 36,908 |

(a) Satisfactory returns accounted for 88 per cent of employment within the industry in 1993

TABLE 2
Capital expenditure, 1993(a)
All United Kingdom businesses classified to the industry

| $£$ million |  |
| :--- | :---: |
| Total acquisitions | 1993 |
| Total proceeds from disposals | 166.3 |
| Total net capital expenditure | 12.6 |

(a) See paragraph 39 of the explanatory notes for changes in collection.

TABLE 3
Stocks and work in progress, 1993
All United Kingdom businesses classified to the industry

| £ million |
| :---: |
| 1993Value at end <br> of 1993 |

increase during year

| Materials, stores and fuel | 6.4 | 150.8 |
| :--- | :--- | :--- | :--- |

Work in progress
$\begin{array}{lr}6.4 & 150.8 \\ 1.5 & 47.9\end{array}$
Goods on hand for sale
$\begin{array}{ll}-2.9 & 132.9\end{array}$
Total
5. $0 \quad 331.6$

| Size <br> group(b) | $\begin{aligned} & \text { Busin- } \\ & \text { esses } \end{aligned}$ | Enterprise groups(c) | Employment |  |  | Wages and salaries(d) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Including working proprietors | Operatives | Administr ative,technical and clerical | Operatives |  | Administrative, technical and clerical |  |
|  |  |  |  |  |  | Total | per head | Total | per head |
|  | Number | Number | Thousand | Thousand | Thousand | £million | £ | £million | £ |
| 1-9 | 306 | 305 | 0.8) |  |  |  |  |  |  |
| 10-19 | 25 | 25 | 0.4) | 2.5 | 1.1 | 34.1 | 13, 885 | 23.8 | 22,359 |
| 20-49 | 24 | 24 | 0.9) |  |  |  |  |  |  |
| 50-99 | 20 | 18 | 1.5) |  |  |  |  |  |  |
| 100-199 | 23 | 18 | 3. 5 | 2.5 | 1.0 | 35. 2 | 14.048 | 19.3 | 19,845 |
| 200-299 | 18 | 15 | 4.3 | 3.0 | 1.3 | 51. 6 | 17, 185 | 24.5 | 19,043 |
| 300-399 | 11 | 10 | 3. 7 | 2. 6 | 1. 1 | 35. 4 | 13, 585 | 21.1 | 19,442 |
| 400-499 | 4 | 4 | 1. 8 | 1. 3 | 0.4 | 26.4 | 19,647 | 9.4 | 21,465 |
| 500-749 | 6 | 5 | 3. 4 | 2.5 | 0.9 | 41.9 | 17, 100 | 19.1 | 20,931 |
| 750-Plus | 5 | 5 | 5.3 | 4.0 | 1. 2 | 64.5 | 16, 021 | 27.6 | 22,417 |


| Total | 442 | 412 | 25.6 | 18.4 | 7.0 | 289.3 | 15,721 | 144.7 | 20,712 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(a) Businesses employing fewer than 10 persons are not required to complete census returns. Because of this, data for these businesses should be regarded merely as best estimates available and used with caution.
(b) The size groups above are based on the recorded employment of businesses at the time of their selection. The employment column is however based upon that returned to the census, which may differ in some cases The employment column is how
from employment at selection.
(c) The count of enterprises groups shown in each row represents the number of enterprise groups, irrespective of size, owning the businesses shown in each size group. Because an enterprise group may own businesses in more than one size owning the businesses shown in each size group. Because an enterprise group may own busins
group the sum of the individual enterprise group counts may exceed the total for the industry.
(d) The cost of employers' contributions to the national insurance pensions and welfare schemes and the running costs of canteens are excluded from the table but were estimated for the industry at $£ 58.7$ million.
(e) Gross value added data relate to businesses employing 1-199.

| Total sales <br> and work <br> done | Gross <br> output | Net <br> output |  |  | Gross value <br> added at <br> factor cost |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

TABLE 5
Percentage analysis of twelve-month periods covered by returns received for the 1993 Census
by number of returns and total employment
Percentage analysis of twelve-month period
by number of returns and total employment

| Accounting year ended | Percentage of total returns <br> received | Percentage of total <br> employment |  |
| :--- | :--- | :---: | :---: |
| 1993 |  |  |  |
|  | April 6-30 | 3.7 | 11.8 |
|  | May | - | - |
|  | June | 3.7 | 3.0 |
|  | July | - | - |
|  | August | - | - |
|  | September | 3.7 | 1.0 |
|  | October | 6.1 | 2.5 |
|  | November | - | - |
|  | December | 43.9 | 43.5 |
|  |  |  |  |
|  |  | 15.9 | 19.9 |
|  | January | 6.1 | 4.1 |
|  | February | 17.1 | 14.3 |

## TABLE 6

Operating ratios, 1993
All United Kingdom businesses classified to the industry

| Unit | 1993 |
| :--- | ---: |
| $£$ | 110,217 |
| $£$ | 47,166 |
| $£$ | 36,908 |
| $\%$ | 33 |
|  | 8.5 |
| $\%$ | 46 |
| $£$ | 2.6 |
| $£$ | 15,721 |
| $£$ | 20,712 |
| $\%$ | 6,013 |

TABLE 7
Regional distribution of employment, net capital expenditure, net output and gross value added at factor cost, 199 Regional distribution of employment, net capital expend
All United Kingdom businesses classified to the industry

| Area | Total employment(a) |  | Net capital expenditure(b) |  | Net output(c) |  | Gross value added at factor cost(c) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Thousand | per cent <br> of <br> United <br> Kingdom | $\stackrel{\text { fillion }}{ }$ | $\begin{aligned} & \text { per cent } \\ & \text { of } \\ & \text { United } \\ & \text { Kingdom } \end{aligned}$ | $\stackrel{\text { fillion }}{ }$ | per cent of United Kingdom | $\stackrel{£}{\text { million }}$ | per cent <br> of <br> United <br> Kingdom |
| Standard regions of England |  |  |  |  |  |  |  |  |
| North | 1. 0 | 3. 8 | 3.7 | 2. 4 | 57.2 | 4. 7 | 47.8 | 5. 1 |
| Yorkshire and <br> Humberside |  |  |  |  |  |  |  |  |
| East Midlands | 0.9 | 3. 6 | 3.9 | 2. 5 | 40.3 | 3. 3 | 29.1 | 3.1 |
| East Anglia | 0.2 | 0.8 | 0.6 | 0.4 | 9. 9 | 0.8 | 7.2 | 0.8 |
| South East | 7.5 | 29.5 | 71.5 | 46.5 | 342.6 | 28.4 | 258.9 | 27.4 |
| South West | 2.1 | 8.3 | 10.9 | 7.1 | 90.9 | 7.5 | 72.2 | 7.7 |
| West Midlands | 1. 1 | 4.1 | 2.8 | 1. 8 | 50.1 | 4. 2 | 36.4 | 3. 9 |
| North West | 4.4 | 17.1 | 14.5 | 9. 5 | 168.9 | 14.0 | 133.4 | 14.1 |
| England | 18.2 | 71.2 | 110.6 | 72.0 | 795. 1 | 66.0 | 611.0 | 64.8 |
| Wales | * | * | * | * | * | * | * | * |
| Scotland | 5.1 | 20.1 | 30.0 | 19.5 | 251. 9 | 20.9 | 198.7 | 21.1 |
| Great Britain | * | * | * | * | * | * | * | * |
| Northern Ireland | * | * | * | * | * | * | * | * |
| United Kingdom | 25.6 | 100.0 | 153.7 | 100.0 | 1205. 6 | 100.0 | 943.4 | 100.0 |

(a) Average number employed during the year, including full and part-time employees and working proprietors.
(b) Total acquisitions less total proceeds from disposals.
(c) Where a census return covered addresses in two or more regions, an estimate of the net output attributable to each address was made by assuming that net output was proportionate to employment. An estimate for each region was obtained by aggregating estimates of net output for addresses located in that region. Gross value
added at factor cost was treated similarly.

All United Kingdom businesses classified to each Sub-Class within the industry(a)

Capital expenditure, 1993(a)
All United Kingdom business
All United Kingdom businesses classified to each Sub-Class within the industry

|  | 21120 |
| :--- | ---: |
| Total acquisitions | 166.3 |
| Total proceeds from disposals | 12.6 |
| Total net capital expenditure | 153.7 |

(a) See paragraph 39 of the explanatory notes for changes in collection.

TABLE 10
Stocks and work in progress 1993
All United Kingdom businesses classified to each Sub-Class within the industry

|  | 21120 |
| :--- | ---: |
| 10a increase during year |  |
| Materials, stores and fuel | 6.4 |
| Work in progress | 1.5 |
| Goods on hand for sale | -2.9 |
| Total | 5.0 |

Total
5. 0

| 1ob Value at end of year |  |
| :--- | ---: |
| Materials, stores and fuel | 150.8 |
| Work in progress | 47.9 |
| Goods on hand for sale | 132.9 |
| Total | $\mathbf{3 3 1 . 6}$ |

Materials, stores and fuel

Rents of industrial and commercia
buildings buildings
Commercial insurance premiums Bank charges
Other non-industrial services Licensing of motor vehicles
Rates, excluding water rates
Gross value added at factor cost
Gross value added at factor cost per head

[^0]Operating ratios, 1993
All United Kingdom businesses classified to each Sub-Class within the industry

|  | Unit | 21120 |
| :---: | :---: | :---: |
| Gross output per head | £ | 110,217 |
| Net output per head | £ | 47, 166 |
| Gross value added per head | £ | 36,908 |
| Gross value added as a percentage of gross output | \% | 33 |
| Ratio of gross output to stocks |  | 8. 5 |
| Wages and salaries as a percentage of gross value added | \% | 46 |
| Ratio of operatives to administrative, technical and clerical employees |  | 2.6 |
| Wages and salaries per operative | £ | 15,721 |
| Wages and salaries per administrative, technical and clerical employees | £ | 20,712 |
| Net capital expenditure per head | £ | 6,013 |
| Net capital expenditure as a percentage of gross value added | \% | 16 |


[^0]:    (a) The count of enterprise groups shown in each column represents the number of enterprise groups owning the
    businesses shown for each sub-class. Because an enterprise group may own businesses in more than one sub-class the businesses shown for each sub-class. Because an enterprise group
    sum of the enterprise group may exceed the total in the industry.

