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# Historical Record of the Census of Production 1907 to 1970

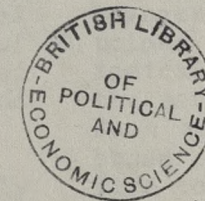


**HMSO**

A publication of the Government Statistical Service

Business Statistics Office

# Historical Record of the Census of Production, 1907 to 1970



A publication of the Government Statistical Service

## Censuses of Production, 1907 to 1970

### Introduction

In setting out to compile an historical record of the censuses of production since the first census was taken for 1907 it was appreciated that the Business Statistics Office was embarking on an ambitious undertaking. It was considered never that bringing together in one volume the census figures published over the years - corrected to give a consistency of classification, coverage etc - would be of inestimable value to users of industrial statistics both within and outside the government service.

Censuses of production have varied in their scope and coverage over the years. Full censuses, taken at intervals of roughly 5 years between 1907 and 1968, have been interspersed with the simple censuses of the 1950's, "business unit" type censuses of the 1960's and with associated between-wars inquiries conducted under the Import Duties Act (1932). The 1970 Census was the first of a new series of annual censuses of production which formed part of a restructured system for the collection of industrial statistics. Many difficulties were apparent from the outset, each affecting comparability of figures between the censuses: changes in the area covered (the whole of Ireland was included in the United Kingdom for the censuses of 1907 and 1912), changes in the exemption limit that excused the smallest firms from making full detailed returns, changes in the contents of questionnaires, and most important of all, changes in classification and definition.

It was essential to classify firms mainly engaged in the same activities consistently to the same industries throughout the years. The Standard Industrial Classification (revised 1968) (SIC) was the obvious choice for the purpose. The results of censuses for 1963, 1968 and 1970 were available on this basis, each individual return for these years

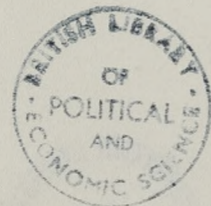
having been allocated to the appropriate industry of the SIC. For years prior to 1963, it was not possible to reclassify returns made by firms in this way. The alternative adopted was to reclassify industries or parts of industries en bloc. This was achieved by examining for each industry the latest published report in which the results of a particular census appeared, establishing its relationship with the 1968 classification and making appropriate adjustments - for example, by putting an industry which had formed part of a census out of scope if differing from the later classification, or transferring a sub-division of an industry from the industry of which it was part in the earlier census to the appropriate 1968 industry where this was different.

The resulting analysis appears in 11 tables. The most important (Table 1) shows the main variables commonly associated with the censuses of production presented for each census industry within each Order of the SIC. Notes to this table and to other tables in the analysis outline the chief changes that occurred. Where for particular years information was not available as a basis for estimation, the figures have been omitted.

Values have been shown in all tables at the current prices for the census years concerned but adjustments for price changes are possible by using indices of prices in Appendix II which give an indication of how prices have moved over the seven decades covered by the analysis. Such adjustments can only be regarded as broad estimates and should not be used for fine comparisons.

The following chapters provide a guide to the analysis. Much of the material has been freely adopted from other published sources, particularly the Guide to Official Sources: No 6, on the census of production reports, published by Her Majesty's Stationery Office in 1961.

H. Gracie  
I. Duncan



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## 1 Development of the Census of Production, 1907 to 1970

This chapter describes the development of censuses of production in the United Kingdom since the first census was taken in 1908 in respect of 1907. Inquiries held for 1933, 1934 and 1937 under the Import Duties Act (1932), the partial census held in 1946, and the "business unit" censuses of 1959 to 1962, 1964-1967 and 1969 vary widely from the censuses of other years and have only been included in the tables where it has been possible to show the information. The bulk of the Analysis therefore covers the censuses for 1907, 1924, 1930, 1935, 1948-1958, 1963, 1968 and 1970.

#### Census of Production Act, 1906

The Census of Production Act of 1906 laid upon the Board of Trade the obligation to take a census in 1908 relating to the year 1907 and subsequently at such intervals as may be determined.

The Bill first considered by Parliament contained powers as wide as those given later by the Statistics of Trade Act, 1947 but these powers were substantially reduced during the passage of the Bill through Parliament. Section 3 of the 1906 Act specified the matters about which information could be obtained as "the nature of the trade or business, and particulars relating to the output, the number of days on which work was carried on, the number of persons employed, and the power used or generated, and relating to such other matters of a like nature, except the amount of wages, as may be found to be necessary for the purpose of enabling the quantity and value of production to be ascertained". The Section provided that particulars could be sought of "the aggregate estimated value of the materials used and the total amount paid to contractors for work given out to them" and that quantitative information about output could only be obtained in the detail set out in the Import and Export List.

The first census included all the questions specified, with the addition for some industries of optional questions on output, machinery employed and coal consumed. The census covered almost all manufacturing industries, public utility services and the extractive industries. Certain activities, commonly associated with the distributive trades e.g. tea blending, coffee roasting, bottle washing and "sorting and breaking of old metal" were exempted. Smaller establishments were included as well as larger ones, although certain classes of persons were excluded largely because of the difficulty of obtaining a complete register. Most persons working on their own account, occupiers of domestic workshops, workshops employing only adult males (excluded from the Home Office list of workshops) and certain givers out of work were not obliged to make returns.

The report made on this census by Sir Henry Fountain and Sir Alfred Flux has left its mark in form and content on all subsequent census of production reporting in this country.

In 1911 an Order was made determining that a census should be taken in 1913 (for 1912) and "thereafter in every successive fifth year". The examination of the results of the 1912 census was still in progress at the outbreak of the 1914-18 war and no

separate report was published; the available results were included for comparison in the report on the next census, taken in 1925 (for 1924). The fourth census related to 1930. The censuses for 1912, 1924 and 1930 ranged substantially over the same field of industry as the 1907 census, but there were changes in the area covered and in the treatment of small firms (see Chapter 2 — Coverage of the census).

#### Import Duties Act, 1932

The revival of interest in tariff problems in the early thirties resulted in the first extension of the powers to collect information. The Import Duties Act of 1932 included provisions for collecting statistics about industries affected by duties imposed under the Act; in particular it removed existing restrictions on getting details about materials and output and it allowed information about the quantity and value of materials used and goods produced to be obtained in whatever detail was considered necessary. These provisions were extended in the Finance Act of 1933 to relate also to goods covered by the Silk Duties and the McKenna Duties. Inquiries under the Import Duties Act were made for the years 1933, 1934 and 1937; for 1938 there was a limited inquiry covering six industries excluded from the 1937 inquiry. The census of production for 1935 invoked both the Census of Production and Import Duties Acts in order to avoid the limitations of the former. The outbreak of the 1939-1945 war interrupted work on the 1937 and 1938 inquiries, with the result that preliminary reports for the iron and steel and textile groups of industries only were completed and published for 1937. Results of the 1937 inquiry for other industries were published for the first time in the 1948 census report. The results of the 1938 inquiry were never compiled.

#### Census of Production Act, 1939

The Census of Production Act of 1939 extended the powers of the Import Duties Act to the whole census of production field but, because of the war, no census was taken under this Act.

A partial census of production was taken for 1946 under Defence Regulations 55AA (under the continuing powers granted by Section 1(1) of the Supplies and Services (Transitional Powers) Act, 1945), with the object of getting information about certain important industries (e.g. chemicals, engineering and building). A secondary objective of the 1946 partial census was to frame questions designed to elicit the additional information recommended by the Nelson Committee (see below) and the replies were considered with a view to seeing how best to provide for obtaining this information at future censuses.

#### Statistics of Trade Act, 1947

Following the White Paper on Employment Policy (Cmd 6527, viii, 119) the Census of Production Committee was set up in 1945 under the chairmanship of Sir George Nelson to consider what additional information should be collected at future censuses of production and to recommend what amendments might be made to the Census of Production Act. The recommendations of

this committee (Cmd 6687, x, 481), together with those of the Hopkins Committee (Cmd 6764, x, 507) on the census of distribution, were reflected in the Statistics of Trade Act, 1947.

Section 1 of the Act provides power to obtain "information necessary for the appreciation of economic trends and the provision of a statistical service for industry, and for the discharge by government departments of their functions". Section 2 of the Act requires the Board of Trade (now the Department of Industry), for the purpose of providing at intervals general surveys of the state of trade and business, to take a census of production for 1948 and every subsequent year, and a census of distribution and other services in any year that may be prescribed by the Board. The subjects on which information may be collected are laid down in the Schedule to the Act.

#### Censuses from 1948 to 1953

The first census of production for Great Britain taken under the new Act was in respect of 1948 and covered all firms engaged in production, and sought a wide range of information. Businesses making returns were classified in accordance with the Standard Industrial Classification 1948, which for the first time introduced a system of classification of business activity to promote uniformity and comparability of statistics generally within the United Kingdom.

The 1948 census forms included questions on the following subjects:

- Working proprietors
- Employment
- Wages and salaries
- Capital expenditure on plant, machinery, vehicles, and buildings and land
- Materials and fuel purchased, analysed under detailed commodity headings by quantity and value
- Work given out
- Payments for services rendered (e.g. advertising, research, etc.) by other firms
- Stocks of finished products, materials and fuel and work in progress
- Goods sold, analysed under detailed commodity headings by quantity and value, and the total production of certain intermediate products
- Analysis of sales by channels of distribution.

The report on the 1948 census consisted of 156 parts containing detailed figures for the separate industries, together with a set of introductory notes; the main results were brought together in a supplementary volume of summary tables. The results of the latter detailed censuses for 1951, 1954, 1958, 1963 and 1968 were published in a similar form, but in addition for each of these years from 1954 onwards separate indexes of products were published to enable the sales of different items of output to be easily found. In the census report for 1968 a directory of businesses was included consisting of thirteen separate volumes.

The censuses for 1949 and 1950 were conducted on a different basis. The information obtained was of a summary character covering the important aggregates for the national income and expenditure accounts with minor differences between the censuses for the two years. However, so that establishments would not have to make returns to both the census of production and the 1950 census of distribution particulars were collected

of sales and stocks held of merchantable or factored goods (i.e. goods purchased and sold or held for re-sale in the same condition without undergoing any intervening manufacturing process), and firms were also required to analyse their total sales during the year (including sales of merchantable goods) according to the channels of distribution. In certain industries with a high proportion of merchanting activity, firms were required to make a simple census of production return only if, not being engaged in merchanting, they made no return in the census of distribution; other firms in these trades made returns in the census of distribution.

For 1951 a major census was again taken; but fewer detailed output headings were provided than in the 1948 census and detailed figures of purchases of materials and fuel were not sought. Statistics of the consumption of certain important materials were, however, obtained from firms in a number of industries. For the first time since 1930, information was collected about the quantity of power equipment installed and in use, and about the amount of fuel used during the year for power and other purposes. Information was also collected on shift working.

In the census for 1952 sampling methods were used for the first time. All firms with more than ten employees and a sample of the remaining firms in each trade were required to make returns. The information required was, as in the census for 1949, restricted to the more important aggregates — total persons employed, total wages and salaries, total value of output and of materials and fuel purchased, capital expenditure and stocks.

The census for 1953 was also a simple, sample census on lines similar to the census for 1952. In Great Britain returns were obtained from about one in six of all establishments in the field of the census for 1952 and from one in seven for 1953.

#### Verdon Smith Committee

In May 1953, Mr. Peter Thorneycroft, the then President of the Board of Trade, appointed a Committee under the chairmanship of Sir Reginald Verdon Smith to advise him about future policy on censuses of production and distribution. The Committee included representatives of large and small businesses engaged in production and distribution, of the trade unions and of universities, and officials from the Board of Trade and the Central Statistical Office. In the course of its inquiry it received, besides official evidence, evidence from more than 500 organisations representing industry and trade, from a number of universities, economic research and other national organisations, from the Trades Union Congress, and from trade and financial journals.

The Report of the Committee on the Censuses of Production and Distribution was published in October 1954 (Cmd 9276, x, 173). The Committee concluded that censuses of production and distribution serve a useful purpose and should be continued. This broad conclusion was accompanied by a number of specific recommendations designed to make the censuses more effective and to reduce the burden they impose on the business community. Among the more important recommendations were the extension of the use of sampling methods and the exemption of a wider range of small firms from the obligation to complete detailed census of production returns. The Committee also recommended that when-

ever possible advance notice should be given of the information required at each census. This meant that the planning of each census had to start earlier than it had done previously.

#### Censuses from 1954 to 1957

Plans for the full, detailed census of production for 1954 were settled before the report of the Verdon Smith Committee was published. To overcome some of the difficulties encountered by firms in completing forms for earlier censuses the questions asking for details of employment according to age and about capital expenditure on second-hand equipment were dropped. In most other respects the 1954 census was similar to the full, detailed census for 1948 except that the analysis of sales by channels of distribution was not required.

The recommendations of the Verdon Smith Committee applicable to sample censuses were implemented in the censuses for 1955, 1956 and 1957. The questions asked related only to the more important aggregates. The forms were reduced to a single page and so far as was possible the questions were framed so that the figures required could be readily derived from firms' financial accounts. The proportion of establishments selected in the sample each year was slightly less than in the previous sample censuses (for 1952 and 1953). The combined report for 1955, 1956 and 1957 contained estimates for all establishments in the United Kingdom, including those belonging to the small firms employing on average ten or fewer persons which were not required to make returns. In this respect the report differed from previous census reports in which a distinction between large and small firms had been made. Although the report containing the results for 1955, 1956 and 1957 was not published until 1959, preliminary estimates of the main items based on the returns first received were published in the Board of Trade Journal within a year of each census.

#### Censuses from 1958 to 1962

A number of changes were introduced in the census for 1958. A revised Standard Industrial Classification (published in 1958) was used in place of the original (1948) edition and hence there were some changes in the definition of industries compared with definitions in earlier censuses. One of the most important changes in the 1958 census was the raising of the exemption limit below which firms were not required to make detailed returns, from 11 to 25 employees. For some industries where the proportion of employment and output accounted for by small firms was relatively high, a sample of small firms below the exemption limit was asked to complete a simplified version of the full census form. This was the first time that sampling methods had been used in connection with a detailed census of production. In manufacturing industry, firms exempted from making full returns for 1958 accounted for about 6 per cent of total employment, roughly half of which was due to the raising of the exemption limit.

Changes made for 1958 in the instructions governing the making of returns for two or more establishments operated by the same firm permitted combined returns to be made more freely than in previous censuses. Combined returns were accepted for establishments in the same census industry situated in the same country (i.e. England, Scotland or Wales); the number of operatives employed had to be given for each establishment. Separate returns were required as

previously for establishments situated in England, Scotland and Wales (Section 7 of the Statistics of Trade Act 1947, provides that the report on any census taken under the Act shall contain separate statements relating to Scotland and Wales). Estimates were accepted where necessary. Separate returns were also required from separate departments of single works, in each of which twenty-five or more persons were employed, engaged in different census industries. Particulars relating to "common service" departments such as head offices or research departments were either to be included on the return for the firm's main establishment, or an appropriate proportion was to be included on the return for each establishment. For the head offices of large enterprises with very diverse activities a separate heading is provided in the revised Standard Industrial Classification among business services, and particulars for head offices of this kind were not required to be included in the census returns.

Another change introduced for the 1958 census related to those firms wholly or mainly engaged in activities within the scope of the census that also had a merchanting or factoring side to their business, or were engaged in the operation of a canteen, for which separate accounts were not kept: these activities, outside the scope of the census of production, were allowed to be included in census returns, whereas in previous years, estimates had to be made to exclude such activities.

For the 1958 census the questions on sales were curtailed in a number of industries for which detailed monthly or quarterly statistics were available. In a few industries, where little detail of output was obtained in the census, a summary of the short period statistics was included in the census report.

The census of production for 1959 was the first of a series of simple annual censuses for the years between the detailed census for 1958 and the next full, detailed census for 1963. Returns were required from all firms in the industrial field employing twenty-five or more persons except those contributing voluntarily to the Board of Trade's quarterly inquiries into stocks and capital expenditure which had begun about this time. The questions, fewer than in any previous census, covered only three items, the total value of goods sold and work done (except in the construction industry where employment was asked for), stocks and work in progress, and capital expenditure. In the capital expenditure section questions were asked, for the first time since 1948, about the cost of land and existing buildings acquired, about the proceeds of land and buildings disposed of in the year and about new building work. It was decided, after a careful review of the information available from other sources, that particulars of employment, wages and salaries, materials and fuel purchased, work given out, and payments for transport need not be obtained. Arrangements were made for information about salaries, hitherto obtained in the census, to be collected by the then Ministry of Labour.

For 1959 and subsequent censuses of the simple type the statistical unit was broadened from the "establishment" to the "business unit". In the great majority of cases, the return for 1959 covered the entire business of the undertaking, including any activities which were ancillary to the main business, even when they were carried on by a separate company (e.g. a wholesaling company mainly engaged in selling the

products of the undertaking, or a company making containers for packing them). Where, however, a holding company or group of companies included units engaged in diverse activities for which separate sets of accounts were kept, separate returns were required.

It was not possible to allocate returns from "business units" to the more finely defined industries listed in the Standard Industrial Classification and for 1959 only 31 broad industry groups were distinguished, compared with 130 detailed industries for 1958, and approximately 60 for the previous sample censuses.

The censuses taken for the years 1960, 1961 and 1962 were similar to the 1959 census except that they were confined to a sample of the businesses that did not make returns to the short term stocks and capital expenditure enquiries. For 1961, in addition to the three questions about stocks, capital expenditure and total sales firms were asked to give their total value of the sales of goods and work done direct to the public. The full results of the four censuses (i.e. combined results of the voluntary contributors to the short term enquiries and the statutory contributors to the census), 1959, 1960, 1961 and 1962 were published together in one volume in 1964 but preliminary results for each census were published at the end of the year in which the census was taken.

#### **Censuses from 1963 to 1967**

The census of production for 1963 was a full, detailed census similar to the 1948 and 1954 censuses, though there were some differences in the subsidiary questions. Firms were asked to provide information on employers' contributions to National Insurance, private pension schemes, etc. and on the costs of running their own transport. For the first time in 1963 questions were included about the value of 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). Additional information about payments for advertising, market research, royalties etc. and commercial insurance premiums was obtained from a sample of enterprises in a supplementary inquiry into business expenses and receipts. The information collected made a closer approximation to net output possible.

The censuses taken for the years 1964, 1965, 1966 and 1967 were simple censuses of business units similar to those taken in the years 1959 to 1962 except that they were confined to stocks and work in progress and capital expenditure on a "business unit" basis and excluded information on total sales.

#### **Censuses from 1968 to 1970**

The census of production for 1968 was the last of the full, detailed type of census which had been held at intervals of roughly five years since 1907.

A new system of industrial statistics was then introduced in which annual censuses of production would provide information about total purchases and sales, capital expenditure and stocks, employment and wages and salaries and some subsidiary information which could vary from year to year. Detailed information about commodity purchases and product sales are obtained in other inquiries.

The census of production for 1968 was conducted under the revised Standard Industrial Classification for 1968. Apart from changes in the definition of industries, the revised classification widened the definition of an establishment as the smallest unit which can provide the

information normally required for an economic census, for example, employment, expenses, turnover, capital formation. Hitherto, the establishment had been defined as premises at a particular address (e.g. a factory or a mine). In the censuses from 1968 onwards, many returns from an increasing number of establishments have covered two or more addresses which between them are engaged in an integrated production activity; there is therefore some incomparability in the numbers of establishments shown in the different censuses. Establishments in all industries except construction and water supply were asked to state the estimated total amount of their total sales and work done (excluding canteen takings) sold direct to, or done direct for, the public. In industries producing capital goods the question about stocks was extended to include details of progress payments received by manufacturers. Except in the construction industry and in industries where the employment of small firms formed a substantial proportion of the total employment, establishments employing less than 25 persons were asked only to give employment details and to state their main type of business. A sample of small construction firms was asked to complete a detailed questionnaire including particulars of commodity purchases and sales. Information about employers' contributions to National Insurance, pension schemes, etc., was collected by the Department of Employment in its survey of employers' labour costs in 1968. Estimates based on their results was included with census data in a summary table.

Respondents were asked to agree to the publication of their business name and address in the classified list of businesses. About 4 out of 5 gave their agreement, and the report of the census included a Directory of Businesses, showing the industry to which each establishment was classified and other industries to whose total sales of principal products it contributed.

The results of the 1968 census were published in 153 industry reports with separate parts providing a description of the census, an index of products, three summary volumes covering industry, area and enterprise analyses and thirteen parts of the Directory of Businesses.

The 1969 census of production was again an inquiry of a simple character on a "business unit" basis confined to stocks and capital expenditure.

The 1970 census of production, the first of the new annual series covered substantially the same subjects as in 1968, the last of the quinquennial censuses, except that no details of commodities purchased and products sold was sought.

#### **Advisory Committees**

The Census of Production Act, 1906 and the Statistics of Trade Act, 1947 provided for the appointment of advisory committees for the censuses of production. The 1947 Act provides that the committees should advise the Board on the preparation of the forms and instructions necessary for the taking of the census, the making of Orders by the Board under the Act, and such other matters as may be referred to them.

The early meetings of the 1906 Committee were under the chairmanship of Mr. Lloyd George, the then President of the Board of Trade and subsequently under the Director of Statistics, Board of Trade. The membership of the Committees varied but latterly included representatives of industry, commerce, the accountancy profession, the trade unions and the universities and Civil Servants with responsibility for official statistics.