INTEGRATED ECONOMIC CENSUSES IN AUSTRALIA AS A SOURCE OF NATIONAL ACCOUNTS DATA*

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Integrated censuses of mining, manufacturing, electricity, gas, wholesale and retail trade and certain services are being conducted in Australia for the year ended June 1969. These censuses have been conducted before, as separate inquiries. They are being integrated for many reasons, one of which is to provide consistent data for estimating parts of the national accounts. This means data consistent throughout the field of the national accounts themselves, to the extent that this field is covered by the economic censuses, and data consistent as between the national accounts and economic statistics in other forms. The sources of national accounts estimates in Australia at present are a mixture mainly of taxation returns, public accounts, and official statistics of production, capital expenditure, stocks and retail and foreign trade; and the statistical discrepancies reflect the variety of the sources. Much of the estimation involves adjusting statistics collected for another purpose to suit national accounting needs. Integration of the basic economic censuses should go far towards removing these inconsistencies and the need for these adjustments.

Apart from the advantages of being able to draw upon consistent data for estimating the annual series of national income and expenditure and the associated national accounts, there were additional benefits to national accounting work that integration was likely to bring:

(1) Census benchmarks (previously lacking) would be provided for many of the quarterly or monthly surveys on which the quarterly national income estimates are based. The surveys themselves would be integrated with the censuses, and with each other.

(2) We would be able to reconcile the detailed commodity data in production statistics with national product and expenditure data, which is a continuing problem in input-output statistics in Australia where the national product estimates are largely tax-based.

(3) Statistics derived from production censuses should improve, as each business would be given an opportunity in the census forms to reconcile the statistics reported for its various census units with the central accounts and records of the business as a whole, and thus to avoid possible duplication, gaps and inconsistencies.[1]

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[1]The statistical concepts and terms used in the forms were decided on after extensive inquiries among businesses about record-keeping and accounting practices, and some testing of forms in trial runs. No exact conformity with business terminology and practice was possible, of course, but the result is believed to be a reasonable compromise between statistical needs and the most common business usages.

(4) Comparability among the various statistical sources should improve, as we would be able to recast statistics collected and published for one level of business unit, for purposes of comparison with statistics collected and published for a higher-level unit.

(5) We would have a statistical structure which would meet future needs by enabling any new forms of national accounting estimates that might be considered (such as national balance sheets and financial accounts)—and new types of censuses and surveys that might be worth undertaking (such as construction and transport censuses)—to be integrated with the existing structure in an organic way.

The process of integration would not have been possible without a standard industrial classification, which was introduced at the same time. Another essential element was an integrated register of businesses, in which all their legal entities and all their locations were recorded in a hierarchic fashion, to provide a source of coverage and structural information for all economic censuses and surveys. The integrated register was developed as the censuses were being planned.

This paper begins with a factual description of the units being used for collection and tabulation of census data, the kind of census data being collected, and the national accounting aggregates to be derived. It concludes with an account of some of the problems of units and data encountered in the planning of the censuses, and the reasons for the solutions adopted.

Census Units

The central unit for collection of data is the *enterprise*, defined broadly as an operating legal entity. Where a number of legal entities operate as a group, owned or controlled by a single company, the enterprise is not the group as a whole, but each individual operating legal entity in the group.

In the integrated register the group of legal entities owned or controlled by a single company is recognized as a separate type of unit—the *enterprise group*. This is to be used not for collection of census returns but subsequently, for aggregation of certain census data. The enterprise group, in addition, may be appropriate as the collecting unit for certain types of survey, such as overseas investment and local capital raisings, for which the enterprise would be too narrow. The census data aggregated for enterprise groups would provide a body of statistics directly comparable (when classified by industry) with the results of surveys conducted among enterprise groups.

The central unit for which most data are to be tabulated is the *establishment*, defined in general as a unit covering all the operations carried on under the ownership of one enterprise at a single physical location—such as a factory, shop or mine. Data for establishments are reported on establishment returns, one for each establishment. Summary data for all the establishments of an enterprise, together with some additional data for the enterprise as a whole, are reported on enterprise returns. Both the establishment returns and the enterprise returns are supplied by the head office of the enterprise, or where so requested, by the head office of the enterprise group. (In the preliminary enquiries practically all businesses interviewed had stated a preference for receiving and returning all forms through the head office of the enterprise or enterprise group.) Many establishments are of course the sole operating units of the enterprises which operate them. These supply a combined establishment-enterprise return.

Administrative offices and *ancillary units* (which are units such as head offices, storage premises, transport garages and laboratories administering or serving establishments within the same enterprise and located away from them) do not supply separate returns. If they administer or serve only one establishment their figures are included in the total for that establishment. If they administer or serve more than one establishment their figures are included in the enterprise return. Any figures required for individual administrative offices or ancillary units, to enable geographical details to be published, are separately specified in the establishment and enterprise returns; these figures are confined to employment, wages and salaries and capital expenditure.

Manufacturers' sales branches are included among the ancillary units, but only if they are of the kind which do not distribute goods to customers from stocks held by themselves. Any which do distribute from stocks in this way are treated as establishments, to be included in the wholesale census.

Census Data

The general approach to the design of establishment and enterprise returns was to recognize that the different levels of business unit would provide statistics appropriate for different types of uses, both in the national accounts, and in more general applications. (See the table on p. 90.)

The table on p. 92 shows in outline the content of the establishment and enterprise returns, for the industries within the scope of the integrated censuses to be held for 1968–1969. In subsequent years the censuses of mining, factories, electricity and gas will continue to be held annually, and those for wholesale and retail trade and other services will be held about every five years. The "services" included in the present integrated censuses are hotels, licensed clubs, cafes and restaurants, motion picture theatres, hairdressers, laundries and dry cleaners. Most of the tables to be published in census publications will be based on the establishment as the unit, and these will include the data for administrative offices and ancillary units, including those reported on enterprise returns. These units will be classified to the main industry of the establishments they serve; if head offices, to the main industry of the enterprise. Additional tables however will be based on the enterprise as the unit.

Summary data for all establishments owned by the enterprise are asked for on the enterprise return in order to provide a reconciliation between establishment returns and the central accounts and records of the enterprise. The same summary data are asked for on the enterprise return for parts of the enterprise not reported on establishment returns, that is, administrative offices or ancillary units administering or serving more than one establishment included in the censuses (totals for all such units only), and any establishments or ancillary units in industries outside the scope of the censuses (totals for all such units only). There are eight of these summary items: total sales and selected income items, opening and closing stocks, purchases and selected expenses, rent and leasing charges, wages and salaries, capital expenditure, and employment.[2]

USES OF STATISTICS DERIVED FROM ESTABLISHMENT AND ENTERPRISE RETURNS

Type of Return	Level of Statistics	Uses for National Accounts	General Uses
Establishment	Commodity (e.g., leather, cigarettes)	Input–output; estimates of personal consumption expenditure; constant-price estimates.	Production and consumption statistics, by commodities. Market research. Comparisons with exports and imports. Benchmarks for monthly production surveys.
	Establishment (e.g., XYZ tannery at Blanktown, N.S.W., XYZ branch retail store at Blankville, Q.)	Input–output and industry production accounts (wages and salaries, operating surplus and gross product by industry). Gross product by State and region. Capital expenditure and stocks in industry and State detail.	Structure of operating locations in various industries, States and regions, including types of retail store and wholesale unit. Benchmarks for monthly and quarterly retail surveys.
Enterprise	Enterprise (e.g., XYZ Co. Ltd.)	Institutional sector accounts (i.e., for companies, unincorporated enterprises, public enterprises), including wages and salaries, operating surplus and gross product by broad industry of enterprise, and components of sector income and outlay accounts. Capital expenditure and stocks by broad industry of enterprise.	Structure of operating legal entities in various industry groupings. Comparison with income tax statistics. Benchmarks for quarterly surveys of capital expenditure, stocks, etc.
	Enterprise group (by aggregation of enterprise statistics) (e.g., XYZ group of companies)	Capital expenditure and stocks for tables of sources and uses of funds.	Structure of owning and controlling legal entities within Australia, in various broad industry groupings. Comparison with statistics of overseas investment and local capital raisings, and general stock market analysis.

[2]The table on p. 92 shows also depreciation and taxes on sales, but these are asked for on the enterprise return as a single total only, not distinguishing between the parts of the enterprise reported on establishment returns and the rest of the enterprise.

In addition, the enterprise return has items (shown at the foot of the third column on page 93) which are not asked for on establishment returns. In the case of single-establishment enterprises these are included in a combined establishment-enterprise return. Small enterprises supply an abridged version of this return. Enterprise returns are collected only from enterprises operating mainly in industries within the scope of the integrated censuses. Other enterprises supply establishment returns for any establishments they may have in industries within the scope of the censuses, but not enterprise returns.

Derivation of National Accounts Aggregates

As pointed out earlier, the national accounts aggregates derived for establishments will serve different purposes to those derived for enterprises, including the provision of State and regional detail and finer industrial detail. They will also yield industry statistics that can be compared with other economic series based on the establishment unit, such as employment. Because of the conventions needed to distribute "enterprise-only" expenses over establishments, gross product for establishments is inevitably less accurate than that derived more directly for enterprises.

(1) *For Enterprises*

The following national accounts aggregates will be derivable (by industry and form of organization) from census tabulations for enterprises:

> Gross product at factor cost, capital expenditure,[3] opening and closing stocks, wages and salaries, employer contributions to superannuation schemes, interest payments and receipts, rent and leasing charges and revenue, royalty charges and revenue, depreciation, operating surplus, and profit (before tax).

Gross product at factor cost can be derived from enterprise tabulations as follows: sales etc. *plus* increase in stocks *less* purchases and selected expenses, all other expenses, and taxes on real estate and payrolls[4] *equals* gross product at factor cost.

This is the concept of gross product at factor cost at present in use in the Bureau, in which rent is treated as an appropriation of gross product and not a cost. Adoption of the treatment recommended in the revised SNA, however, is being considered. This would result in the addition of revenue from rent and leasing to the above concept, and the deduction of rent and leasing charges.

Gross product (that is, at market prices) cannot be derived directly from the censuses because the indirect taxes asked for are incomplete. It can be estimated as follows: gross product at factor cost (above) *plus* taxes on real estate and payrolls, taxes on sales and estimates for other indirect taxes not specified in the

[3]Less disposals of fixed tangible assets. (See p. 101 below.)

[4]Some indirect taxes are not specified in the returns because they are not readily available in business accounts, such as stamp duties and motor vehicle registration charges. These, however, would have been deducted as part of "all other expenses".

MAIN ITEMS ON INTEGRATED ECONOMIC CENSUS RETURNS[a]

(For enterprises with more than one establishment)

Establishment Returns		
Factories, Mines, Electricity, Gas	Retail, Wholesale, Selected Services	Enterprise Return
SALES, ETC. Sales of goods produced by this establishment (ex-tax)[b] Sales of goods not produced by this establishment (ex-tax) Subsidies All other income from outside the enterprise *except* rents, leasing revenue, interest and dividends Capital work on own account	SALES, ETC. Sales of goods (owned by the enterprise) (ex-tax)[b] (Sales of goods produced in this establishment, included above) Commission received on sales of goods for other enterprises (wholesale only) All other income from outside the enterprise *except* rents, leasing revenue, interest and dividends Capital goods withdrawn from stock on own account	
Total sales, etc.	Total sales, etc.	Sales, etc.[c]
STOCKS At June 30, 1968 At June 30, 1969	STOCKS At June 30, 1968 At June 30, 1969	Stocks at June 30, 1968[c] Stocks at June 30, 1969[c]
PURCHASES AND SELECTED EXPENSES Purchases of materials, fuel, etc.[d] Purchases of goods for resale Repair and maintenance expenses Charges for sub-contract and commission work Outward freight and cartage Motor vehicle running expenses Sales commission payments	PURCHASES AND SELECTED EXPENSES Purchases of goods for resale Purchases of materials for manufacturing Purchases of wrapping and packaging materials and electricity and gas; repair and maintenance Charges for sub-contract and commission work Outward freight and cartage Motor vehicle running expenses Sales commission payments	
Total above purchases and expenses	Total above purchases and expenses	Purchases and selected expenses[c]
TRANSFERS Transfers of goods out (to other establishments of the enterprise) Transfers of goods in (from other establishments of the enterprise)	TRANSFERS Transfers of goods out (to other establishments of the enterprise) (wholesale only) Transfers of goods in (from other establishments of the enterprise)	

MAIN ITEMS ON INTEGRATED ECONOMIC CENSUS RETURNS[a]
(For enterprises with more than one establishment—*continued*)

Establishment Returns		
Factories, Mines Electricity, Gas	Retail, Wholesale, Selected Services	Enterprise Return
Rent and leasing charges Depreciation Wages and salaries[e]	Rent and leasing charges Depreciation Wages and salaries[e]	Rent and leasing charges[c] Depreciation Wages and salaries[c,e]
Taxes on sales	Taxes on sales	Taxes on sales
Capital expenditure less disposals of fixed tangible assets[e]	Capital expenditure less disposals of fixed tangible assets[e]	Capital expenditure less disposals of fixed tangible assets[c,e]
Employment[e]	Employment[e]	Employment[c,e]
		Taxes on real estate and payrolls Interest payments Royalty payments Employer contributions to superannuation schemes All other expenses[f]
		Rent and leasing revenue Interest receipts Revenue from royalties
		Value of fixed tangible assets

[a]The outline omits some details. For example stocks are shown by stage of processing in the enterprise return and in the establishment returns for factories, mines, electricity and gas; capital expenditure is shown in all returns by type of asset and distinguishing new and secondhand assets, and purchases and disposals; employment and salaries and wages are broken down by type in establishment returns. However, the reconciliation between establishment and enterprise returns makes use only of the summary totals shown in the last column of the table.

[b]To agree with total of sales in detailed commodity part of return.

[c]Separate totals for these items are shown in enterprise return for:

all establishments in the integrated censuses combined,
all administrative offices and ancillary units reported on enterprise returns,
all units of the enterprise in industries not covered by the integrated censuses.

These three totals add up to the enterprise total.

[d]To be compatible with total value of materials, etc., used in detailed commodity part of return (along with transfers in).

[e]The return has an additional figure for this item for each separately located administrative office or ancillary unit reported in the return; this is to permit tabulation in fine geographical detail.

[f]A single total, including travelling expenses, insurance premiums, accounting and legal costs, postage and telephone charges, office supplies, advertising, bank charges and the like, but not "provisions".

returns,[5] *less* subsidies (from establishment returns) *equals* gross product (i.e. at market prices). If the adjustment referred to above for rent and leasing charges were made, this would be broadly equivalent to the contribution of the industry to gross domestic product, in SNA terminology.

Depreciation is not defined in the forms, and research will be needed to adapt the depreciation figures supplied, and the residual profit figures, to national accounts concepts. Deriving profit as a residual, instead of by a direct question, was thought desirable, to avoid problems both of response and of distortion through the introduction of subjective "provisions". The latter are specifically excluded from the item "all other expenses".

(2) *For Establishments*

The following national accounts aggregates will be derivable (by industry and region) from census tabulations for establishments:

> Gross product at factor cost, wages and salaries, rent and leasing charges paid, opening and closing stocks, capital expenditure.[6]

Gross product of establishments cannot be derived without some conventional distribution of expenses reported only by enterprises. The starting-point is value-added, one of the standard series derived from economic censuses. In the integrated economic censuses, the basis of value-added is as follows: sales etc. *plus* transfers of goods out to other establishments of the same enterprise and increase in stocks, *less* purchases and selected expenses, and transfers of goods in from other establishments of the same enterprise *equals* value-added.

Gross product at factor cost and at market prices for establishments can be derived from value-added by means of the following adjustments. Apart from adding or deducting indirect taxes or subsidies to get the required market-price or factor-cost concept, as already described, it is necessary to deduct from value-added:

(a) "all other expenses" and "taxes on real estate and payrolls", which are reported for enterprises but not for establishments. These are charged to establishments by the Bureau in proportion to value-added.

(b) A "charge" for administrative offices and ancillary units.[7] This charge is made equal to the wages and salaries of these administrative offices and ancillary units. It is divided among the establishments served by them (if there is more than one) in proportion to their value-added. Unlike "all other expenses" and "taxes on real estate and payrolls" this is not, of course, a net deduction from value-added; it is a redistribution of gross product. In effect gross product is being imputed to the

[5]Such as stamp duties and motor vehicle registration charges. Import duties, however, according to the proposed new SNA treatment, would not need to be added to gross product at factor cost to give the market-price aggregate; under the new approach these would not be distributed to industries, but added as a single total. They would not, of course, have to be deducted with real estate and payroll taxes to give gross product at factor cost, as they are already in the value of purchases.

[6]Less disposals of fixed tangible assets. (See p. 101 below.)

[7]All such units, not merely those reported on enterprise forms. An ancillary unit serving only one establishment may be in a different statistical region from that establishment.

administrative offices and ancillary units, the amount being equal to their wages and salaries. It becomes part of the gross product of the industry of the enterprise (in the case of head offices and ancillary units serving the whole enterprise)—or of the establishments served (if the units are not serving the whole enterprise). It becomes part of the gross product of the State or region where the units are located, which may be different from that of the establishments they serve. The rationale of these charges is discussed later.

To arrive at the SNA concept of gross product, a further deduction from value-added has to be made: rent and leasing charges—and an addition for rent and leasing revenue. The charges paid by establishments are reported on their returns, and can be deducted directly; those paid by administrative offices and ancillary units reported on the enterprise return need to be distributed among establishments. This is done in proportion to value-added, as with "all other expenses". The corresponding addition to value-added for rent and leasing revenue, however, is credited wholly to the head office of the enterprise, and thus gets into the gross product of the industry of the enterprise, instead of being distributed among the industries of the establishments.

All these charges and additions are to be made during the editing of the returns, and included in the tape records for individual establishments. Thus the tabulations both of value-added and gross product emerge from the computer tabulations for establishments.

The method used for recording stocks and capital expenditure for establishments is discussed below.

It is expected that the statistics derived from establishments may need some adjustment before they are suitable for input-output needs. For some input–output purposes the establishment may be too broad a unit, and data based on it may need further dissection.

Rationale of the Census Plans and Some Problems of Units and Data Encountered

This account of problems met must be taken as an interim one; it deals with the problems encountered in the planning of the integrated censuses. The problems met in the execution of them are another story, which must wait the completion of the census operations at present under way.

(1) *Enterprises and Enterprise Groups*

The reasons for basing the enterprise concept on the operating legal entity, which is a unit narrower than the unit of ownership and control, were partly conceptual and partly practical. The information required for enterprises, it was found, was generally recorded for operating legal entities. On the other hand, in many cases it was not recorded for enterprise groups—where the ownership and control were exercised in a loose manner. In addition, the use of the operating legal entity enabled greater industry detail to be obtained for enterprise statistics than would have been possible with the broader unit. As explained earlier, it will be possible for us to recast the enterprise statistics to provide statistics based on enterprise groups as units, by use of the integrated register. This will not of course permit consolidated figures of turnover or purchases to be derived for enterprise groups, but this limitation appears to be acceptable at the moment.

The word "operating" rules out the numerous "paper companies" which exist as subsidiaries or associates of operating companies for various reasons. In general such non-operating companies are attached in the integrated register to individual related operating companies in the enterprise group, for purposes of identifying the enterprise unit. Holding companies without employees are attached to the principal operating company in the group.

However, subsidiary companies performing financial services for other companies within the group, such as instalment credit companies or companies operating superannuation funds, are recognized as separate enterprises, even though they might have no separate employees of their own. These belong to a different sector of the national accounts to that of trading companies. They are not in the integrated censuses but are covered in separate inquiries.

Some "pure" holding companies perform administrative services for some or all of their subsidiary companies and have staff of their own for this purpose. These companies receive a special abridged enterprise return for "ancillary enterprises". This abridged return is used also for property-owning companies in an enterprise group which own and receive rent from (and/or incur capital expenditure on) property used by more than one other enterprise in the group.

Some operating companies are found to have the accounts they use for management purposes inextricably mixed with those of another operating company; in such cases the two companies are amalgamated for statistical purposes to form one enterprise.

The question of valuing sales of goods by one company to another in an enterprise group, and the treatment of intra-group services, are discussed below under the headings of "transfer values" and "head office and other overheads" respectively. The treatment of capital expenditure and disposals of fixed tangible assets in enterprise groups and enterprises is discussed under the heading "capital expenditure".

In general, the identification of enterprise groups has given little trouble. In accordance with company law, and in practice, companies seem to be clearly regarded as subsidiaries if more than 50 percent-owned by another company, and otherwise not as subsidiaries. Those owned equally by two other companies seem not to be regarded as subsidiaries by either company. Both the enterprise group and the enterprise, of course, are defined to exclude operations outside Australia. In general this exclusion seems to be feasible.

(2) *Establishments and Ancillary Units*

The general rule that an establishment covers all the operations carried on by an enterprise at a single physical location has some exceptions, but not many. If the operations are in more than one industry of the standard industrial classification the location may be treated as more than one establishment but only if certain conditions about minimum sales are met. Head offices located at operating establishments are separate units in principle, but in practice are not separated unless large in relation to the establishment, or unless the enterprise is mainly operating in a different industry to the establishment where the head office is located.

In all other cases the establishment embraces all the activities at the location, including selling and delivery activities at factories, which were previously excluded.

Some establishments will be unable to report the full range of data asked for on the establishment return, being branches of wider record-keeping units. It is expected that in these cases the wider unit, without absorbing the establishment, will be asked to report combined data for itself and limited data for the branch, and estimates will be made in the Bureau for any data missing from the branch establishment's return whose absence would affect any tabulated totals. (The special problem of reporting transfer values for goods moving from one establishment of an enterprise to another is referred to in the next section.)

This appeared to be a better solution than the alternative of allowing the establishment unit to embrace a number of operating locations if they formed a single record-keeping unit. However, special arrangements are being made to enable some types of multiple-unit enterprises (such as chain stores and petroleum wholesalers), to report the figures for several branch establishments on a single multi-column schedule tailored for the purpose.

A similar rationale lay behind the decision to put manufacturers' sales branches at separate locations into the wholesale census only if they distributed goods to customers from stocks held by themselves. Other types of manufacturers' sales branches not distributing goods in this way would be those mainly taking orders or acting as sales representatives of the manufacturer, and these are to be treated as ancillary units in the manufacturing industry. Like the treatment of establishments, this bases the distinction on physical function instead of record-keeping practices.

(3) *Transfer Values*

Industrial censuses based on the establishment commonly ask for goods transferred to other establishments of the enterprise (for distribution or further processing) to be valued as though sold independently. This is not always possible, and the new integrated censuses follow a different approach. Commercial transfer values are still asked for, where these can be given or estimated, and in large important cases where the goods cross State or industry boundaries estimates of commercial transfer values are negotiated with the enterprises concerned. But otherwise actual book values are asked for, with the basis to be indicated (factory costs, cost plus a margin, wholesale selling value etc.). If no commercial transfer values can be estimated, either by the manufacturer or the Bureau, from market information, these book values will be adjusted within the Bureau by a conventional method which gives all the establishments concerned a share of any surplus earned and which provides values consistent for transfers out and the corresponding transfers in. Some factories keep no book value for transfers (for example, a factory distributing its products through sales branches but keeping only one set of sales and stocks accounts, or a clothing factory supplying cut-out materials to be made up by outlying branch factories). In these cases no transfer value is estimated; the work done by the receiving establishment (whether sales branch or factory) is to be treated as done on commission for the supplying establishment, and a commission is imputed to it, while the sales and the stocks remain on the supplying establishment's return.

The method employed in both cases (that is for adjusting transfer values and imputing commission) uses the convention that value-added is distributed between the supplying and the receiving establishments in proportion to their share in the sum of those elements of value-added that are reported by establishments in the censuses: that is, wages and salaries, rent and leasing charges, and depreciation. For transfers that lack a market basis for valuation, some such convention is unavoidable; this one seemed to have the merit of simplicity.

Transfers are restricted to physical transfers of goods, and do not include transfers existing in books of account only. This is consistent with the distinction made between manufacturers' sales branches handling stocks, which are treated as wholesale establishments, and manufacturers' sales branches not handling stocks (such as order-takers, or sales representatives' offices), which are treated as ancillary units.

Sales between enterprises of an enterprise group are not treated as transfers. These may not, of course, be at commercial values, and there is a case for adjusting them if they are not. No general provision for adjustment, however, has been made in the censuses, and any such adjustment will be confined to special cases.

(4) *Head Office and Other Overheads*

Information on transfers in establishment returns is confined to goods; no service provided by one establishment to another in the same enterprise is to be reported,[8] even though it may be similar in nature to services provided by establishments outside the enterprise, such as repair and maintenance work, or transport services. This treatment was decided on after examination of the variety of ways in which intra-enterprise services tend to be treated in enterprise accounts, and the variety of such services that may be exchanged, either formally or informally. Head office services, therefore, are not listed among the expenses in establishment returns. Like "all other expenses" (such as travelling expenses, advertising and postage and telephone charges), these are part of the *enterprise's* expenses which require distribution among establishments by the Bureau, in the estimation of gross product by industry on an establishment basis.

For similar reasons it was decided not to include administrative service fees charged by one company in a group to another among either the income or the expense items in the enterprise return. A variety of charging procedures may be adopted by businesses, and the problem of designing forms to cover them has not been solved. However, the derivation of gross product for establishments involves some imputation by the Bureau which is in effect a distribution of head office and other enterprise expenses.

[8]But note the imputed commission on sales branch distribution services or factory "making-up" services referred to in (3) above.

(5) *Estimating Gross Product for Establishments*

The gross product (at factor cost) of establishments is partly estimated; as explained earlier, "all other expenses" of the whole enterprise, taxes on real estate and payrolls and the wages and salaries of administrative offices and ancillary units are spread among the establishments served, by means of a charge made proportional to value-added. Similarly it was pointed out that in arriving at gross product at factor cost according to the SNA concept, there is a further charge for the rent and leasing expenses of administrative offices and ancillary units reported on enterprise returns (these also are distributed proportionally to value-added), and a crediting to the head office of rent and leasing revenue earned by the enterprise. Three points may require explaining. Why is gross product attributed to administrative offices and ancillary units? Why is it attributed only on the basis of wages and salaries—together with (in the case of the head office) any rent and leasing revenue the enterprise may have earned? Why are the non-establishment expenses of enterprises charged to the establishments in such a "blanket" fashion, given the fact that enterprises themselves often go to some trouble to charge such overhead expenses by more subtle methods?

The answer to the first question lies in the desirability of treating units like head offices as statistical units in their own right. Companies may make them "disappear" in their accounts by charging out all their expenses to the operating units, but for statistical purposes we find it necessary to keep them as units having such statistical data as employment, wages and salaries and gross product, in certain particular geographical areas and particular industries: the area where the unit is located and the principal industry of the establishments it serves. Thus an element of asymmetry is involved. The wages and salaries charged to the establishments by the head office, for example, being a transfer of part of the gross product of the establishments to the head office (and not, like "all other expenses", a net deduction from the total value-added of the enterprise), are credited wholly to the industry of the enterprise—although charged to the industries of the individual establishments served in proportion to their value-added. In effect we are saying that the industry of the enterprise is charging the industries of the establishments for the services of its head office employees.

The reason for confining the gross product transferred in this way to wages and salaries is simplicity of operations. A case could be made for including depreciation in the charge, but this would have meant collecting more information for individual administrative offices and ancillary units with little gain. To have included a share of profit, also, would have increased the amount of imputation needed, without necessarily making the results more meaningful.

We credit rent and leasing revenue to the head office alone because this revenue is usually unconnected with the ordinary operations of any of the establishments. Much of it, of course, is likely to come from the letting of space in head office buildings.

The blanket treatment of the charges for non-establishment expenses of the enterprise admittedly entails dispensing with some information potentially available in certain individual cases that would help to provide more accurate estimates of gross product by industry and region. If it were known, for example, how much of the head office advertising bill was spent on each factory's products, or how much of the central design staff's work went into each product, the estimates of establishment gross product could be more refined than those resulting from distributing charges proportionally to value-added. It is difficult to see, however, how this kind of information can be elicited by a general system of forms. The approximation involved in using the convention was acceptable, as it would enable statistics of gross product for regions and in fine industry detail to be compiled. For such purposes a conventional adjustment of establishment-based data seems inevitable, and the convention adopted appeared easy for the users of the data to understand.

It should be added that where administrative services are provided to a group of companies by a holding company (which would therefore complete an "ancillary enterprise" return) the expenses of the holding company are to be charged to the establishments of the group, for purposes of estimating gross product, just as if it were the head office of a single enterprise.

(6) *Materials Used or Materials Purchased?*

The forms used in factory censuses in most countries appear to ask for the value of materials used instead of the value of materials purchased. This is the kind of information likely to be kept by factories employing costing systems, and it seems likely to be generally available from such factories both for individual commodities and for materials as a whole. It has a disadvantage however in that the figures given in returns may be based on standard costs, making them inconsistent with the corresponding figures of sales reported by establishments supplying the materials. Another drawback is that deriving value-added when only materials used are reported makes the result depend on the establishments' ability to distinguish consistently between stocks of materials used and other stocks. (This follows from the fact that value-added would have be derived from the identity: value-added= sales etc. *plus* increase in stocks of finished goods and work in progress *less* materials used and other selected expenses.)

As it was found that most factories investigated could report total value of purchases as well as total value of materials used, it was decided to ask for total purchases in the return, with value of materials used in the commodity detail. The two are reconciled to some extent by a consistency check provided for in the return, in which purchases of materials and net withdrawals of materials from stock are compared with the total value of the materials used, with the reasons for any differences indicated.

(7) *Stocks*

Stocks are to be reported in establishment returns on the basis: owned by the enterprise and controlled by the establishment, whether located at the establishment or not. This basis was necessary for consistent reporting of sales and stocks. It will be seen that it is consistent with the treatment of manufacturers' sales branches. If the factory controls the stocks located at the sales branch (in the sense that they remain on its books and there is no transfer value), the sales by the sales branch are reported in the factory's return and the stock as well. As explained earlier, the sales branch in this case receives an imputed sales commission.

Stocks are asked for on both establishment and enterprise returns. The distinction between raw materials, work in progress and finished goods may of course be different in the two returns.

(8) *Capital Expenditure*

Strictly speaking, only a legal entity can incur capital expenditure, and it need not record it for its component establishments. But, to enable the censuses to yield as much detail for industry and geographical area as possible, capital expenditure was made an establishment as well as an enterprise item. Both purchases and disposals of fixed tangible assets are asked for, disposals in the case of establishments including transfers to other establishments of the enterprise as well as sales.[9] Capital expenditure for an industry can thus be shown free of the duplication that would otherwise be caused by transactions in secondhand assets. "Capital expenditure less disposals of fixed tangible assets" is the basis for the industry totals.

Just as disposals include equipment transferred out, capital expenditure by an establishment includes equipment transferred in, from another establishment of the same enterprise. However, it does not include premises and equipment rented from another enterprise, even if the enterprise from which the establishment is renting is an associated or parent company. This capital expenditure is reported on the enterprise return of the company owning the assets and is not distributed among the enterprises using them. However, there is an important exception: if the company owning the equipment is a special property-owning company in a group of companies, (that is, a company which exists to own the property of other companies in the group), the information is collected on the "ancillary enterprise" return mentioned earlier, which provides sufficient detail to enable the expenditure to be allocated to the establishments which will be using the assets.

Capital expenditure by an operating enterprise therefore includes assets acquired for purposes of renting out, as well as assets used in its own operations. However, in establishment returns, a distinction is made between buildings and equipment. Expenditure on buildings for renting out is to be omitted from capital expenditure in the establishment returns. Expenditure on equipment for renting out remains in the establishment returns; much of this may be capitalization of the establishment's own output or trading stocks (for example, machinery leased out to customers by a machinery manufacturer or wholesaler). As these transactions are regarded as part of the operations of the establishment, this capital expenditure is to be reported in the establishment's return.

(9) *Value of Fixed Tangible Assets*

The establishment returns used in the annual censuses of factories and mines in Australia have long included among the items the value of fixed tangible assets. In the integrated censuses this item has been extended to the retail and wholesale censuses, but it appears now in all industries on the enterprise returns and not on the establishment returns. It is not proposed at present to use the

[9]Similarly, purchases include inward transfers.

statistics tabulated for this item for any national accounting purposes. It is difficult to interpret statistics of this kind, as they are the sum of all the depreciated (and/or revalued) book values reported and reflect the great diversity that exists in the ages of the assets and the methods and the rates of depreciation used. However, the item has been retained for its potential value for research.

(10) *Accounting-year Problems*

All "flow" items in the integrated censuses are asked for in respect of the year ended June 30, the official fiscal year in Australia and the accounting year of most businesses. Most "stock" items are asked for as at June 30. However, many companies, especially some large subsidiaries of foreign companies, have a different accounting year, and some have informed us that reporting of June-year figures would be difficult for them, even on an estimated basis. Where such difficulties are reported, accounting-year figures will be accepted, provided that they are supplemented by June-year figures for some key items which can be used to adjust the return within the Bureau before tabulation. The key items for this purpose are sales, stocks, capital expenditure, wages and salaries, and employment.

CONCLUSION

Much remains to be done to digest the results of the first integrated censuses before it can be determined exactly how they will be used to modify the substance or form of the national accounts. They will need to be compared extensively with estimates derived from existing sources before it can be said whether any of them will replace these sources. It is premature, therefore, to speak of alternative systems of production-based national accounts estimates coming into use. However, the integrated censuses will have made possible much that has had to be omitted in the past in the reconciliation of the elements of the accounting system that are by their nature commodity-based, such as input-output estimates and the price and quantum indexes underlying constant-price estimates, with those based on income flows. They will bring much closer the day when expenditure, production and income flows will match each other in the national accounts and supporting data-collection systems as closely as they do in life.