STATISTICAL UNITS IN SERVICE STATISTICS:
AUSTRALIAN EXPERIENCE

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INTRODUCTION

1. The Expert Group on Harmonisation of Economic Classifications met in New York in April 1988. The report of the meeting (ESA/STAT/AC.32.9) noted that in considering the definition and delineation of statistical units it was agreed that:

> "the unit to be applied in practice should be that which may be considered as optimal in the conflict between the (industry) homogeneity requirement and data reporting capacity." (page 5)

The report also noted that:

> "It was recognized that (the optimum selection) may be different in different statistics, e.g. in production statistics the establishment or establishment-type unit in the most appropriate unit, while in financial statistics it is the enterprise or enterprise-type unit. It was recognized also that the best unit is not necessarily the smallest unit for which the requested data are available. In some statistics, ... it is the decision making unit which is to be observed; this (unit) is not necessarily the smallest unit for which information can be obtained (e.g. for some purposes the family of legal entities is the most appropriate unit in spite of the fact that data for legal entities would also be available)." (page 5)

2. At the Second Meeting of the Voorburg Group (Stockholm, November 1987), a paper was prepared and presented by the Australian Bureau of Statistics (ABS) which described, inter alia, the conceptual and practical bases of statistical units used in the Australian system of integrated economic

statistics. The paper noted that the conceptual framework for the definition of statistical units in the Australian system of economic statistics is based on the UN System of National Accounts, and that where departures from the conceptual standards are made they are the result of taking into account practical limitations, principally those relating to the availability of information in the accounts that businesses keep.

3.   The purpose of this paper is to summarise proposed new and revised standard units definitions and rules for recording businesses on the ABS register of businesses and for subsequent use in short-term, annual and periodic economic data collections conducted by the ABS. In essence, the changes that are being considered seek to give greater emphasis than in the past in delimiting units to the current organisation structures of individual businesses (especially large businesses or conglomerates) and to the availability of data in the accounts of businesses.

PROPOSED STATISTICAL UNITS DEFINITION AND RULES

4.   The ABS uses the UN System of National Accounts (SNA) as its general framework for economic statistics. A feature of the SNA is the use of two types of statistical unit and two ways of classifying them which serve separate analytical purposes. The first classification is by industry. It is aimed at supporting analyses of industry output and operations. To that end each industry has to be defined in terms of *producing units* of acceptable homogeneity in terms of their products and production processes. On the other hand, analyses of the financial transactions that support the operations of industries are based on classification of *financing units* by institutional sector.

5.   To meet the needs of the Australian National Accounts and
of users of industry, regional, commodity and activity
statistics the ideal producing unit would encompass the
operations at a single physical location, employing a single
production process and producing a single commodity, activity
or service.   The ideal financing unit would be a unit
classifiable to a single institutional sub-sector, and one
that undertakes all financing transactions for the business.

6.   The ABS's approach to the definition of producing units
for the last twenty years or so has been based on identifying
in general how businesses in each industry sector organise
their productive activity, and on that basis determining the
definition of the producing unit i.e. the establishment unit
applicable to that industry sector.   This approach has had the
attraction that units were defined consistently within
industries and could be described in terms of their physical
characteristics (ie a single location of combinations of
locations).   This had the advantage that the units used could
be described in relatively simple terms in statistical
tabulations.   However, the concern leading us to reassess our
approach has been that we may well have lost touch with the
underlying organisational and accounting structures in many
cases, particularly among larger businesses; and that we have
been forcing these businesses to report their data in terms of
statistical units which bear insufficient relationship to the
way they are organised, with negative consequences for
respondent load and data quality.

7.   An alternative approach is to allow the availability of
data within in each *individual* (large) business to play a
significant role in the way we create statistical units for
it.   This approach which is now strongly favoured by the ABS
along with some other national statistical agencies, has a
number of advantages.   The major one is that it can be
expected to result in more reliable reporting by businesses
(and a consequent reduction in reporting load).   This said, it

needs to be recognized that this approach carries with it, three important consequences which need to be acknowledged and addressed:

(a)   It is somewhat harder to clearly describe to users of statistics what units we are classifying and tabulating.

(b)   It places a heavy onus on our staff responsible for determining and documenting the organisational structure (or profile) of businesses to accurately record the organisational and consequential statistical structure of each entity and to keep this information up to date on the business frame. In this context, despite whatever rules are devised, there will be more scope for individual interpretation and judgement.

(c)   It places a responsibility on "clients" of the business surveys frame, once a set of statistical units is created for an entity, to use that structure consistently in all statistical collections and not to vary it to suit particular collections.

8.   The ABS is proposing to introduce into its hierarchical units model, an additional producing or establishment-type unit. The additional unit, to be termed the "management unit" will be the highest level producing unit. Its introduction recognizes the existence of a management/accounting unit in many (large) businesses e.g. a division, or a branch, of a business, and the availability of accounting data at this organisational level.

A diagram depicting the *logical* hierarchical relationships between unit types following the adoption of the Management Unit is shown below:
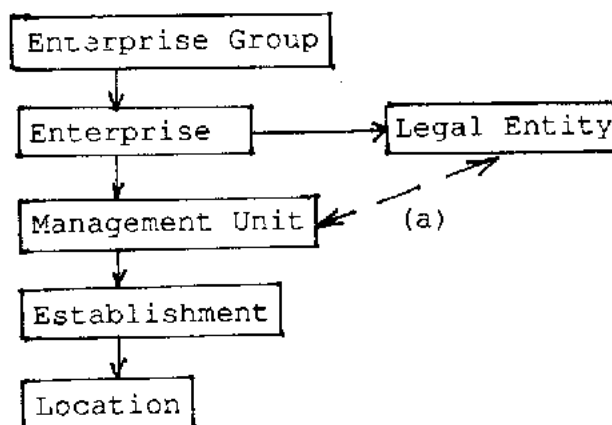
(a)   See paragraph 14 below

9.   The short definition for each of the units (including ancillary units) which follows provides an overview of the proposed new and revised standard unit definitions.

LEGAL ENTITY: This is a unit covering all the operations in Australia of an entity possessing some or all of the rights and obligations of individual persons or corporations, or which behaves as such, in respect of those matters of concern for economic statistics.   Examples of a legal entity include a company, a partnership, a trust, a sole proprietor business, a government department and a statutory authority.

ENTERPRISE GROUP: This is a unit covering a group of legal entities under common ownership and control.   In the case of companies, it covers all the operations in Australia of a group of companies which are related in terms of the uniform Companies Acts.   With a few specified exceptions, for all other types of legal entities the enterprise group is the same as the legal entity.

ENTERPRISE: This is a unit within an enterprise group consisting of a single legal entity or, in specified circumstances, a combination of legal entities within an enterprise group.

MANAGEMENT UNIT: This is a producing unit within an enterprise group for which detailed annual and quarterly revenue, expenses, stocks, capital expenditure and employment data can be supplied to the ABS which enable measures such as gross product to be derived. It is a component unit of the enterprise group and consists, in turn, of one or more establishments. Where there is more than one level of producing unit within the enterprise group, the management unit is most likely to be defined as the highest level unit at which the units are homogeneous at the industry sub-division (2-digit) level.

ESTABLISHMENT: This is the smallest type of producing unit within a management unit for which annual revenue, expenses, stocks and employment data as well as detailed commodity/activity data is available. Except in a small number of specified industries, e.g. transport, establishments cannot span State or Territory boundaries. Accounting units crossing geographical boundaries are to be split into separate establishments for each State or Territory and special procedures are to be applied for collecting or estimating establishment data. Similarly, where accounting units are not sufficiently homogeneous (at the 4-digit industry level) special procedures are to be applied for "splitting" units into separate establishments.

ANCILLARY UNIT: This is an establishment unit which is mainly engaged in providing administrative, including accounting and management services to other establishments of the enterprise group.

LOCATION: This is a site, occupied by an establishment, at which, or from which the establishment engages in productive activity on a relatively permanent basis. A location can be occupied by only one establishment or ancillary unit. An establishment or ancillary unit can operate from one or more locations.

10. The proposed hierarchical set of statistical units recognises:

. the complex organisational structures existing in the real world, particularly for large horizontally and/or vertically integrated businesses;

. that the ABS also uses data obtained by various administrative agencies, particularly the Australian Taxation Office: the unit for which information is supplied to the administrative authority is commonly the legal entity, which may not have a straightforward relationship with the real world units of an organisation undertaking its financing and producing activities.

. different levels of management within a complex business have a role in financing, marketing and production decisions;

. differences in data availability (in terms of type, detail and frequency) among the various levels of management;

. a single production process is not necessarily confined to one physical location.

11. The main changes to existing definition for standard statistical units, in addition to the introduction of the Management Unit are as follows:

8

(a) ENTERPRISE GROUPS (or the "family of enterprises") are no longer defined as only a "family of companies", but are being broadened to allow for other forms of legal entities under common control to be grouped together (partnerships, sole proprietorships and trusts as well as companies). As such, enterprise groups comprise a controlling entity and one or more controlled entities operating together to achieve objectives consistent with those of the controlling entity.

(b) ENTERPRISES are no longer defined as a single operating legal entity, but as the smallest grouping of legal entities which can be equated with one or more management units.

(c) ESTABLISHMENTS are defined as the smallest accounting unit within a management unit. This means that establishments will generally be delimited on the basis of the availability of annual accounting data, rather than on a locational basis. However there are quite specific rules proposed for delimiting establishments in individual industry divisions or sub-divisions. These rules seek a balance between the availability of data in business accounts and the requirement of users for detailed (4-digit) industry statistics on a geographical basis.

(d) The definition of ANCILLARY UNITS has changed as a consequence of the changes to the establishment definition. In the future, ancillary units will only be delimited where accounting units exist which provide designated services within the enterprise group.
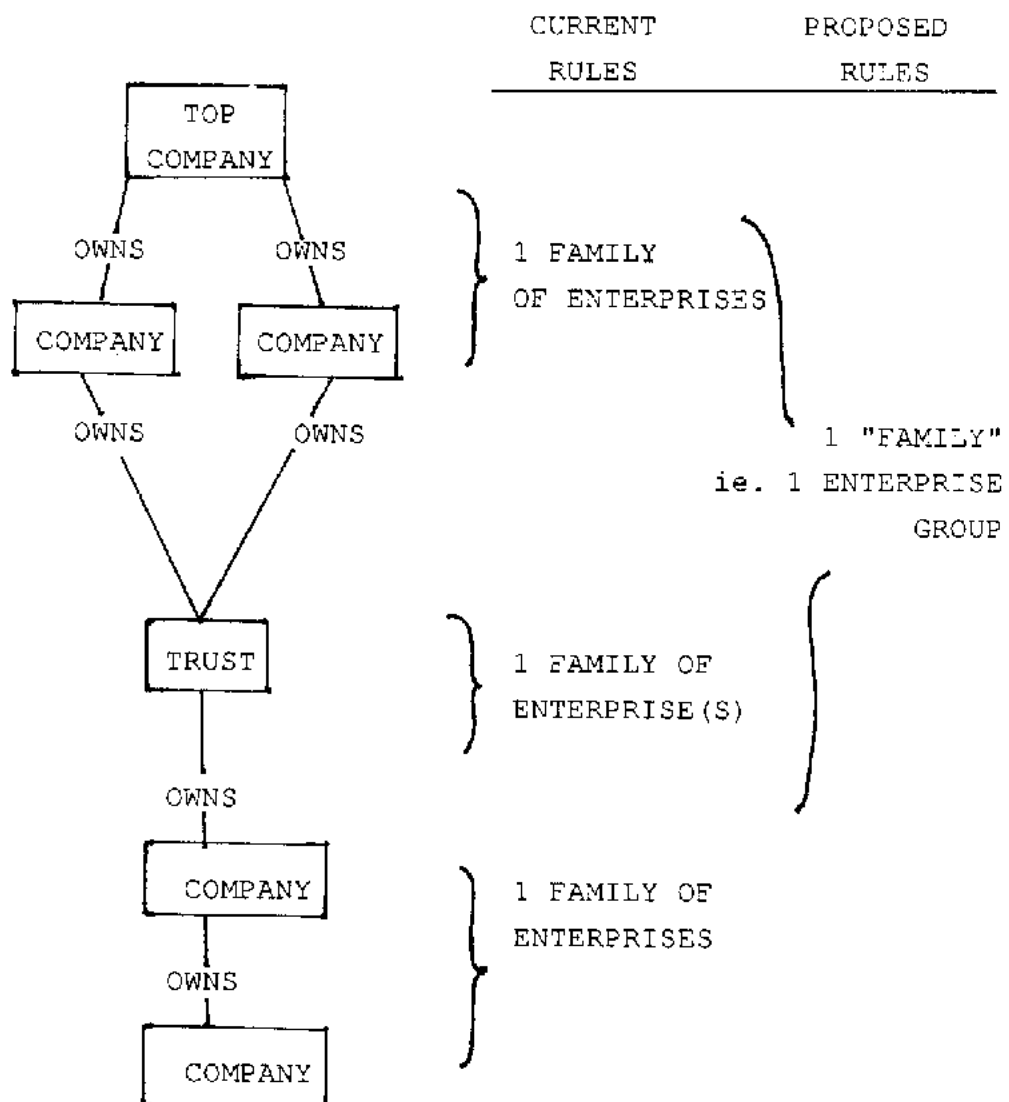
DISCUSSION

12. The changes outlined above to the way we propose to
define and delimit statistical units in the future are at this
stage best described as preliminary and subject to further
examination and refinement. We are still examining closely
the impact of the changes proposed, especially the effect they
will have on the Australian National Accounts, and the
resource costs and output impacts on the program of financial
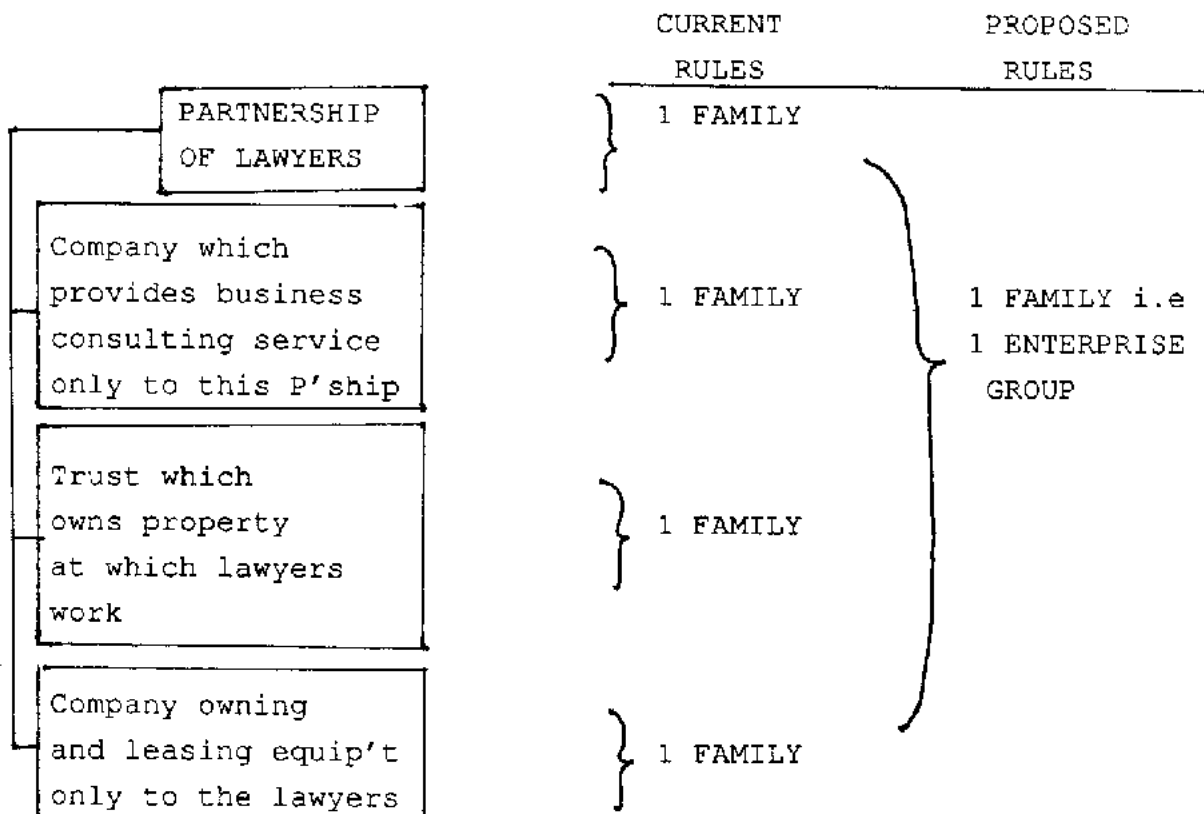and industrial statistics.

Enterprise Groups

13. The extension of the enterprise group definition we are
contemplating will enable us to get closer to the theoretical
ideal of having all entities under common ownership and
control formed into a single group. There are two main forms
of business organisation where the proposed extended
definition will have an impact. The first relates to so
called "interposed unit trusts"; the second relates to so-
called "service entities" that are frequently established
within legal, medical, accounting and certain other
professional and business practices in Australia. These are
discussed in the following paragraphs:

(a)   Interposed unit trusts are cases where families of companies establish a trust *within* their family, basically to avoid the legal requirement for consolidation of companies within a family and the consequential preparation and publication of consolidated financial statements. The new rules will extend our enterprise group definition to include the "family of companies" *above* the unit trust (ie those which "own" the trust), the trust itself, and the "family of companies" *below* the trust (ie those owned by the trust).

	CURRENT RULES	PROPOSED RULES
TOP COMPANY → OWNS → COMPANY, COMPANY → OWNS →	1 FAMILY OF ENTERPRISES	
TRUST	1 FAMILY OF ENTERPRISE(S)	1 "FAMILY" ie. 1 ENTERPRISE GROUP
TRUST → OWNS → COMPANY → OWNS → COMPANY	1 FAMILY OF ENTERPRISES	

(b)   It is quite common in a number of industry sectors for what is a single business to be conducted using several legal entities. Our current enterprise group definition treats all legal entities other than companies as falling into separate enterprise groups (families) even though several may make up one business. Our new rules will bring them into the one family. The situation is most common in industries where professional practices dominate (legal, medical, accounting, dental etc). In these situations several legal entities operate within the confines of the "business" because of the legal requirement that the principals of the business e.g. the lawyers, doctors etc. cannot limit their personal liability or share their liability with non-professionals. Consequently, several legal entities are often created within individual practices. These are seen as artificial constructs where without these operational constraints a single legal entity would exist.

		CURRENT RULES	PROPOSED RULES
PARTNERSHIP OF LAWYERS		1 FAMILY	
Company which provides business consulting service only to this P'ship		1 FAMILY	1 FAMILY i.e 1 ENTERPRISE GROUP
Trust which owns property at which lawyers work		1 FAMILY	
Company owning and leasing equip't only to the lawyers		1 FAMILY	

Enterprises

14. Further consideration of the new definition of the statistical enterprise, as proposed, has raised the issue of whether or not this unit level is required. The proposed definition is based on the configuration of management units within the enterprise group — the top level financing unit — and, as such, does not necessarily reflect either data availability or statistical requirements. The conclusion we are moving towards appears to be that in terms of units to be stored on the business register at least, we can vary the logical hierarchical model depicted in paragraph 8 by removing the enterprise unit as a statistical unit, using the legal entity in its place. However, we will need to maintain a link between financing and producing units e.g. to enable tabulations of producing unit data classified by characteristics of the financing units that own and finance them.

Management Units (MU's)

15. An issue requiring further consideration regarding is the treatment of management units which only (or mainly) provide services to other management units within the enterprise group, ie management units of an ancillary nature e.g. head offices, computer services divisions. Alternatives being considered include:

(i)   Merging with another (dominant) MU

(ii)   allocating its activities across the MU's it services

(iii)   treating as a separate MU, classified to the industry category of dominant MU served

(iv)   treating as a separate MU and classifying to
        industry on the basis of its predominant activity
        (eg to a business services industry such as
        management consulting, computer services,
        accounting services, financial services etc).

16. In larger sized businesses it is becoming increasingly
common for services previously provided solely within the
enterprise group to be marketed. In these circumstances it is
likely that the entity concerned will establish a
management/accounting unit (and a cost recovery system) which
places these services provided internally on the same basis as
those sold to other entities. The unit would be treated as a
separate management unit where the marketed output is greater
than 50 per cent.

17. The issue of how to treat management units of an
ancillary nature is most likely to be confined to larger
businesses. Concerning smaller businesses, we are unlikely to
be able to get heavily involved, at least initially, in
forming MU's or in profiling business structures generally
because of the considerable cost of addressing each case
individually. In this situation the present procedures would
apply, where generally a single legal entity would represent a
MU. An exception would be made in the case of the smaller
sized professional practices and businesses described in
paragraph 13b above. In these cases we propose to include all
the legal entities in the "family" in a single management
unit/enterprise group.

Establishments

18. At least for management units within the largest
enterprise groups, it is now planned to form establishments on
the basis of the availability of basic accounting data but
subject to industry homogeneity and geographical criteria on

an industry sector basis. This will mean that some
establishments will be formed which only (or mainly) provide
services to other establishments within a management unit.
These, if separately located, would previously have been
defined as ancillary units and would have been classified to
the industry of the establishments served rather than to the
industry of their major activity. An example of this is where
an establishment will be recognised for a unit providing
transport services to a manufacturing establishment within the
same management unit. This establishment will be classified
to the transport industry whereas previously it would have
been classified to the manufacturing industry. This will have
implications for industry statistics - in this case transport
and manufacturing statistics - and raises the issue of the
extent to which transfers of services should be measured and
the valuation which should be placed upon them. Until now
only transfers of goods have been measured in Australia's
economic statistics. These issues have not yet been resolved.

Ancillary Units

19. Changes to the rules and procedures for recognizing
establishment units will mean that there are likely to be few
cases where ancillary units will need to be recognized. In
effect, it is expected that only units which provide
administration services to other establishments of the
enterprise group will be categorised as ancillary units.
These will differ from establishments only in that they will
be industry classified to the major industry of the
establishments served.

CONCLUSION

20. The purpose of this paper has been to outline, in general
term, changes that are being considered by the ABS to the way
in which it defines and delimits statistical units. More
specifically it has attempted to describe how the ABS is

setting about seeking an acceptable solution to the often conflicting requirements of consistency and comparability of statistics (the homogeneity requirement) and the need to take increasing cognizance of the organisational structures and the availability of data in the accounts that individual businesses keep.

21.   In this context, it is important that debate and the exchange of experiences, ideas etc between national statistical agencies and within international organisations is encouraged and extended.

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