CHAPTER 4 : ASSESSMENT AND APPLICATION OF THE CLASSIFICATION

STANDARDS FOR RECOGNISING CLASSES

In devising the classes of the ASIC the aim has been to have classes relate to groups of establishments mainly engaged in the same or similar kinds of activity and which represent realistic and recognisable segments of Australian industry i.e. any such group of establishments should meet certain quantitative standards relating to homogeneity of output (in terms of minimum acceptable specialisation and coverage ratios) and importance (in terms of output measures such as sales or gross receipts).

2. The extent to which this approach could be applied varies in different areas of the Classification, depending upon the amount and type of quantitative information available for those areas. In the case of classes coming within the scope of the integrated economic censuses it has been possible to estimate specialisation and coverage ratios on the basis of relatively comprehensive data. For classes in other areas this has not been practicable at the present time, and it has been necessary to rely on whatever material is available from other statistical collections.

3. The discussion below relating to calculation of homogeneity ratios[1] thus has most relevance, at the present stage of development of the integrated statistical system, to the areas of the ASIC corresponding to the scope of integrated economic censuses held to date - namely Mining, Manufacturing, Electricity and Gas Production and Distribution, Wholesale and Retail Trade, and certain services. The discussion below is also relevant to other areas of the ASIC covered by statistical collections which use units defined and classified in accordance with the ASIC and in which data is collected to enable ratios to be estimated, e.g. Subdivision 01, Agriculture.

Homogeneity Ratios

4. As an industry is normally defined in terms of its characteristic output (i.e. its primary activities), an output measure such as turnover, value added, sales or gross receipts, should ideally be used to calculate homogeneity ratios for industries, rather than measures of input, such as employment or materials used. In the broad sense in which the term output is used here it covers all production whether of goods or of services. Measurement of homogeneity of industries therefore involves selecting the most appropriate output measure available taking into account the items of data that will be collected in the integrated censuses.

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1. The term 'homogeneity ratios' is used to relate to both specialisation ratios and coverage ratios.

5. The preferred measure of output for the purpose of calculating homogeneity ratios would be value added, since this would provide a fairer indication of the relative use of resources (labour and capital equipment) by establishments in activities primary to different industries. However, as data relating to value added in individual activities within the one establishment will not usually be available, the best measure which will be available in practice is the value of sales (or gross receipts). This measure, of course, has some deficiencies, arising for example from the fact that receipts for commission or repair work are not comparable with gross receipts for goods which the establishment has produced for sale, or purchased for resale. Because of this sort of deficiency, in some circumstances activities may be given inappropriate weights if specialisation and coverage ratios are calculated on the basis of gross receipts, without any adjustment.

Methods for Calculating Specialisation and Coverage Ratios

6. The following example provides a broad illustration of methods of calculating both specialisation and coverage ratios, as well as illustrating some of the problems encountered in calculating specialisation ratios on the basis of gross receipts. The example illustrates the situation in two hypothetical classes, Class A, 'Retailing of commodity A' and Class B, 'Repair of commodity A', having the pattern of gross receipts, and value added, respectively shown in Table 1.

TABLE 1

Class	Activity			
	Retailing of commodity A ($m)	Repair of commodity A ($m)	Other activities ($m)	All activities ($m)
	Receipts			
Class A: Retailing of commodity A	92.0	3.0	5.0	100.0
Class B: Repair of commodity A	10.0	25.0	3.0	38.0
Other classes	8.0	3.0		
All classes	110.0	31.0		
	Value Added			
Class A: Retailing of commodity A	18.4	2.1	2.5	23.0
Class B: Repair of commodity A	2.0	17.5	1.5	21.0
Other classes	1.6	2.1		
All classes	22.0	21.7		

7. Table 2 illustrates the specialisation ratios obtained on the basis of receipts and value added respectively, and the coverage ratio (which will normally be of the same order for both bases).

TABLE 2

Class	Specialisation ratio, on the basis of -		Coverage ratio
	Receipts	Value Added	
Class A: Retailing of commodity A	$\frac{92.0}{100.0}$ = 92%	$\frac{18.4}{23.0}$ = 80%	$\frac{92.0}{110.0}$ = 84%
Class B: Repair of commodity A	$\frac{25.0}{38.0}$ = 66%	$\frac{17.5}{21.0}$ = 83%	$\frac{25.0}{31.0}$ = 81%

8. It will be observed that the calculation of the specialisation ratio for the 'Repair of commodity A' class on the basis of receipts yields a considerably lower ratio than on the basis of value added. Cases of this nature tend to occur where establishments mainly engaged in the activity primary to one class are also engaged to a substantial extent in activities primary to one or more other classes, with the characteristic that value added in the activities primary to the latter classes represents a significantly lower proportion of receipts in those activities, than is the case in the activity primary to the first class. In these cases, if specialisation ratios are based on receipts, a lower ratio would be more acceptable than for industries where calculation of specialisation ratios on either basis would give much the same result. In calculating specialisation ratios for ASIC classes it is therefore recommended that allowances be made for such situations. It is also possible to have the contrary situation, i.e. where specialisation based on receipts is high, but specialisation based on value added would be relatively low. To guard against this possibility potential classes where it is thought likely that such a situation may arise should be examined and, if possible, ratios should be calculated, based on approximate estimates of value added.

9. Another problem in the calculation of specialisation and coverage ratios on the basis of gross receipts relates to classes where a manufacturing or distribution activity is carried out to some extent on a commission basis. Here the establishment's receipts relate to the work it has done, not to the total sale value. This problem is illustrated in Tables 3 and 4, which consider a hypothetical 'Activity A' which is the primary activity of 'Class A'. In Table 3, the first section shows the pattern of receipts and the second section shows the pattern of the sales-value equivalent of those receipts on the assumption that commission receipts represent 25 per cent of sales-value.

TABLE 3

Class	Activity A			Other activities	All activities
	Receipts				
	Sales as Principal ($m)	Commission on Sales for Others ($m)	Total Sales and Commission ($m)	Sales ($m)	Total Sales and Commission ($m)
Class A	100	25	125	50	175
Other classes	15	15	30		
All classes	115	40	155		
	Sales-Value Equivalent				
	Sales as Principal ($m)	Sales on Commission ($m)	Total Sales Value Equivalent ($m)	Sales ($m)	Total Sales Value Equivalent ($m)
Class A	100	100	200	50	250
Other classes	15	60	75		
All classes	115	160	275		

10. Table 4 shows specialisation and coverage ratios of Class A on the basis of receipts, and sales-value equivalent, respectively.

TABLE 4

Basis of calculation	Specialisation ratio	Coverage ratio
Actual receipts	$\frac{125}{175} = 71\%$	$\frac{125}{155} = 81\%$
Sales-value equivalent	$\frac{200}{250} = 80\%$	$\frac{200}{275} = 73\%$

11. It can be seen that the existence of commission receipts as part of total receipts for an activity can result in homogeneity ratios different from those obtained if output were measured solely in terms of sales values. The effect is not very important where commission accounts for a relatively small proportion of total receipts. However, for cases where commission is a relatively large proportion of total receipts, commission receipts should be adjusted to an estimated equivalent sales-value for the purpose of calculating ratios.

Specific Problems in the Calculation of Coverage Ratios

12. In the calculation of coverage ratios there are two additional factors in particular which give rise to some difficulties. The first of these relates to captive activity, where activities primary to one class are carried out as part of a vertically integrated operation in an establishment whose final products are primary to another class. Since the output of the captive activity is not marketed, it will not be included as a separate category in statistics of sales or gross receipts, and thus if calculation of coverage ratios is based on such statistics, the coverage of the class to which the activity is primary might, on certain assumptions, be overstated - i.e. because part of the output of that activity would have been omitted from the denominator in the calculation.

13. However, because of difficulties in obtaining data on the value of captive output of individual activities and because of the conceptual complexities involved in including captive production in industry evaluations, captive output is not taken into account in calculating coverage ratios, as a general procedure.

14. The second main problem in considering coverage ratios arises in respect of overlapping classes. As explained in Chapter 2, this term relates to the situation where a particular activity is primary to two or more classes, in the sense that the activity is considered as primary to one particular class when it occurs in one defined set of circumstances, and primary to another class when it occurs in another defined set of circumstances (e.g. mens clothing retailing is primary to Class 4814 Department stores when it is carried on in a department store, and primary to Class 4843 Mens and boys wear stores, when it is carried on in any other kind of establishment). In cases where an activity is primary to more than one industry, the coverage ratio of any of those industries would be expected to be lower, on average, than the coverage ratio of industries whose primary activities are not also primary to other industries.

15. A possible approach to meet this problem would be to accept lower standard minimum coverage ratios for overlapping industries. However, it is considered that a more effective device is to calculate an adjusted coverage ratio (referred to as a ratio having an 'overlap adjustment') in which the denominator excludes the output of the primary activities which have been produced in the other overlapping industries. This device is illustrated in Tables 5 and 6, relating to three hypothetical classes, 'Sheep and wheat farming', 'Sheep farming' and 'Wheat farming'. Table 5 shows the pattern of receipts of these classes and Table 6 illustrates the coverage ratios, on the normal basis and with overlap adjustment.

TABLE 5

Class	Receipts from			
	Sheep farming activity ($m)	Wheat farming activity ($m)	Other activities ($m)	All activities ($m)
Sheep and wheat farming	100	140	38	278
Sheep farming	710	5	75	790
Wheat farming	5	73	10	88
Other classes	38	5		
All classes	853	223		

TABLE 6

Class	Specialisation ratio	Coverage ratio	
		Without overlap adjustment	With overlap adjustment
Sheep and wheat farming	$\frac{100+140}{278} = 86\%$	$\frac{100+140}{853+223} = 22\%$	$\frac{100+140}{(853+223)-(710+73)} = 82\%$
Sheep farming	$\frac{710}{790} = 90\%$	$\frac{710}{853} = 83\%$	$\frac{710}{853 - 100} = 94\%$
Wheat farming	$\frac{73}{88} = 83\%$	$\frac{73}{223} = 33\%$	$\frac{73}{223 - 140} = 88\%$

Standards for Recognising ASIC Classes

16. The minimum level of specialisation adopted for an ASIC class is generally 70 per cent. In applying this standard, allowance should be made for cases (e.g. in the case of some repair activities) where low specialisation ratios calculated on the basis of gross receipts are known to correspond to high specialisation in terms of value added. Also, in the case of commission receipts, the sales value equivalent is taken into account, where appropriate (and possible), in the calculation of the specialisation ratio to be measured against this standard.

17. As a general rule the minimum level of coverage adopted for an ASIC industry is 70 per cent; subject to the following conditions:

(a) the sales value of commission receipts is taken into account, where appropriate; and

(b) the overlap adjustment is made in the case of overlapping industries.

18. It has been difficult to set hard and fast minimum levels of importance, to be applied in recognising ASIC classes. In developing the original 1969 edition of the ASIC, the view was taken that a potential industry with gross receipts of less than $10,000,000 annually would not be recognised as a separate class unless there were good reasons other than size (e.g. user interest), and that a potential industry with gross receipts of less than $5,000,000 annually should not be recognised as a separate class. These limits, adjusted in accordance with changes in prices, have generally been applied during the last review of the Classification where data were available.

Application of the Standards

19. The standards for recognising ASIC classes have been applied during the last review of the Classification generally as follows:

(a) Coverage and specialisation ratios were estimated for those industries for which data were available. This meant that ratios were estimated for most industries in the following areas of the Classification:

- Subdivision 01, Agriculture
- Division B, Mining
- Division C, Manufacturing
- Subdivision 36, Electricity and gas
- Division F, Wholesale and retail trade

(b) The reasons for any low ratios were examined and the causes remedied, where possible (or to the extent possible). E.g. on the basis of the estimated ratios and absolute size, industry Class 2114, Casings of animal origin, in the 1969 edition of the ASIC proved to be not acceptable. The main cause of that situation was that a significant proportion of the "primary" activities of that industry were in fact carried out as secondary activities of establishments in Class 2111 Fresh, preserved and canned meat (including tallow, meal and fertilisers of animal origin). Accordingly the only practical remedy was to amalgamate these two classes. This was done. (The most frequently used remedy, however, was not to amalgamate classes but to transfer primary activities from one class to another.)

(c) Where no or only partial data were available to calculate actual ratios, largely subjective judgements had to be made concerning the homogeneity of industries. However, in the case of the new industry classes in Subdivision 41, General construction, coverage and specialisation ratios were estimated based on data collected in a special units survey of general construction establishments.

(d) The minimum requirement aimed at for retaining classes in the ASIC or accepting new classes (obtained by splitting old classes) was that an ASIC class should meet at least two of the three standards, provided there was some demand for separate industry statistics for that class.

20. For industries in the 1969 edition of the ASIC for which estimates of coverage and specialisation ratios could be prepared and for which data on their size were available, the minimum requirements for recognising them as separate industries were met, in the great majority of cases. As a result of the review it is estimated that industry coverage and specialisation ratios have generally been improved and that the minimum requirements for recognising industries are now being met in almost all instances (where estimation has been possible) and, indeed, are being decidedly exceeded in the vast majority of cases.

21. In the relatively few instances of ASIC classes where the minimum requirements are probably not being fully met, the industry classes are generally of a type for which there is a strong demand (e.g. Class 0182 Meat cattle) or which are needed but for which high homogeneity ratios cannot be achieved, i.e. industry classes such as Class 0196 Agriculture n.e.c. or Class 4897 Retailing n.e.c.

22. Another consideration which has had a bearing on standards for recognising classes concerns the possible confidentiality of data relating to a class, due to the low number of establishments in that class. In general, a constraint of this nature has not been applied in the ASIC, since growth in the number of establishments can change the situation for an individual class over a period of time, and since some industry information is needed for internal analytical purposes in the ABS, even if it cannot be made available for publication outside the ABS. However, in some cases where data for a class would be confidential even at the level of broad Australian totals, and they would appear likely to remain so for many years, a separate class has not been established or retained.

PRINCIPLES FOR CLASSIFYING UNITS

Principles for Classifying Establishments

23. There are three basic principles for classifying establishments to the cells of the ASIC:

(a) At each level (i.e. division, subdivision, group or class) an establishment can be classified to only one cell (e.g. an establishment may be classified to only one of the divisions).

(b) The cells of the different levels to which an establishment is classified must be related by aggregation or disaggregation (e.g. an establishment classified to the Manufacturing Division may only be classified to a subdivision within the Manufacturing Division).

(c) Each establishment is to be classified to cells according to its major activity.

24. There are no problems in classifying establishments which are engaged in only one kind of activity (i.e. in activities primary to only one class). However, many establishments are engaged in activities which are primary to two or more classes, and for these 'mixed activity' establishments it is necessary to lay down criteria and methods for classifying them according to their major activity.

25. The types of information available for use in classifying establishments are as follows:

(a) The respondent's own description of the activities of the establishment and his evaluation of the relative importance of the activities of the establishment.

(b) Quantitative information (e.g. value data), relating to the kinds of goods produced or handled or the kinds of services provided, from which the relative importance of individual activities can be deduced.

26. Each of these types of information has some advantages and disadvantages. In the case of the respondent's own assessment, whilst he will undoubtedly have a more intimate knowledge of his business than the ABS could attain, it is inevitable that different respondents will have different criteria in mind in assessing importance, and the weight which they give to each activity will differ from respondent to respondent. In classifying on the basis of quantitative data it is possible to avoid such inconsistencies in approach. However, experience has shown that strict application of quantitative methods can sometimes lead to assessments of major activity which would be different from what might be expected to be a consensus of qualitative assessments of major activity, and in some cases this can reduce the usefulness of assessments based solely on quantitative methods. In the light of these considerations the procedures to be adopted in using the ASIC for classifying establishments should be based primarily on quantitative methods, but with provision for reference to the respondent's assessment in some cases. In situations where quantitative data is not available classification of establishments will have to depend, of course, on the respondent's description.

27. A number of alternative measures for assessing major activity can be considered for use in classifying on the basis of quantitative methods. The measure which generally would be considered first is 'value added'. Value added represents sales, less purchases (after

allowing for movements in stocks) less certain specified expenses. Value added is generally accepted as the most suitable criterion for determining the major activity of establishments where data are available on value added for individual activities within the establishment. This is because value added provides a measure, in one figure, of the contribution made by resources of labour and capital equipment in producing the output of an activity. However, it is generally not possible to obtain data on value added in individual activities within establishments, and this imposes a considerable limitation on the extent to which value added can be used in practice.

28. Other measures which can be used are value of sales or gross receipts, wages and salaries, and average number of persons working.

29. The choice between the various alternative quantitative measures depends largely on the practical question of what information is available for individual activities within all (or most) establishments in a particular collection. Generally, this consideration has led to the adoption of value of gross receipts as the measure for assessing the major activity of establishments in the integrated economic censuses. However, value added has also been adopted in certain circumstances in determining the major division of establishments. In other collections other measures or respondent's description may need to be used.

30. Ideally only one measure should generally be used to assess the major activity (industry) of establishments at each level (i.e. the division level, the subdivision level, etc) of the classification in all collections in order to ensure consistent classification of all establishments. Otherwise a mixed activity establishment may be classified to one industry in one collection and to another industry in another collection depending on the data collected and, hence, measures used to assess major activity in the different collections. However, in practice such inconsistencies are unlikely to pose significant problems in an integrated statistical system because of the unduplicated recording of establishments on an integrated register of business units which is an essential feature of an integrated statistical system. Use of an integrated register would normally ensure that no establishment is included in two or more statistical collections whose scope is mutually exclusive, in which establishments are classified by industry and which are a source for updating establishment industry codes on the integrated register of business units.

31. There may be particular instances, however, of establishments having primary activities in two or more ASIC divisions where value of gross receipts may not be thought to be an appropriate measure (apart from its generally recognised and accepted deficiencies) for assessing the size of certain activities of a mixed activity establishment. In

such circumstances estimates of value added should preferably be used, if possible, to determine the major division of the establishment or, failing that, average employment or wages and salaries.

32. When the respondent's description is relied on (as, for example, in the case of small establishments from which detailed quantitative activity information is not collected) the technique generally preferred by the ABS is to request the respondent to indicate firstly the broad sector of activity in which the establishment is engaged (e.g. manufacturing, wholesaling, etc.), and then to state in order of importance the main types of commodities produced or sold, or the main types of services rendered. Experience has indicated that this approach gives results which are generally more in line with results of applying quantitative criteria than an approach which simply uses the respondent's own description of the main activity of the establishment.

Methods of Classification

33. In classifying economic units there are basically two alternative methods:

(a) Classification to a cell at the broadest level of the Classification in the first instance and subsequently to cells at successively lower levels (e.g. classification to a division of the ASIC, then to a subdivision within the division, and so on until the establishment is finally classified to a class). For convenience this method is referred to as the "step-by-step" method.

(b) Classification directly to a cell at the lowest level of the Classification (e.g. direct to a class of the ASIC).

34. The step-by-step method of classification has been generally adopted for use in the ASIC, especially where quantitative measures are used to assess major activity.

35. However, somewhat different methods are applicable in certain defined cases. For example, establishments of licensed clubs are classified in accordance with the special conditions specified in the relevant class definitions, and locations not yet in operation which are determined to be establishments are to be classified according to their intended main activity, as reported by respondents.

Principles for Classifying Administrative Offices and Ancillary Units

36. Administrative offices and ancillary units are to be assigned a 'reflected' industry code, corresponding to the industry which represents the predominant industry of the establishments administered or served by the ancillary unit. Accordingly the ideal method of classifying ancillary units is to determine which establishments are served by the ancillary unit and then, by using the total value added of each establishment as a 'weight' of the class of that establishment, to determine the predominant class of the establishments served using the step-by-step method. In practice, it may not always be possible, however, to use the ideal method in a statistical collection. In such circumstances administrative offices and ancillary units should be assigned the ASIC code of the largest establishment served (assessed in terms of some uniformly available employment measure).

Principles for Classifying Enterprises and Enterprise Groups

37. Enterprises and enterprise groups are to be assigned a 'reflected' industry code, corresponding to the industry which represents the predominant industry of the establishments owned and operated by the enterprise or enterprise group. The method to be used in classifying enterprises and enterprise groups should involve the following:

(a) Weighting each establishment (in the enterprise or enterprise group as the case may be) by the establishment's total value added or some substitute weight such as total employment.

(b) Application of the step-by-step method of classification to determine the predominant industry of the establishments owned and operated. This is done as follows:
STEP 1: The establishments are grouped according to their ASIC division and the weights are added to division totals. The enterprise (or enterprise group) should then be classified to the division with the greatest weight.
STEP 2: Within that division only, the establishments should be grouped according to their ASIC subdivision and their weights added to subdivision totals. The enterprise (or enterprise group) should then be classified to the subdivision with the greatest weight (within the division determined in the first step). STEP 3: Within that subdivision only, the establishments should be grouped according to their ASIC groups and their weights added to ASIC group totals. The enterprise (or enterprise group) should then be classified to the ASIC group with the greatest weight (within the subdivision determined in the previous step). STEP 4: Within that group only, the establishments should be grouped according to their ASIC class codes and their weights added to class totals. The enterprise (or enterprise group) should then be classified to the ASIC class with the greatest weight (within the ASIC group determined in the previous step).

38. In choosing the weight to be applied to establishments for the purpose of classifying enterprises or enterprise groups, only one kind of weight should be chosen. This choice will have to depend, of course, on the general availability of the weight for establishments.

39. In integrated economic censuses, for example, data for the calculation of value added are collected for each in-scope establishment of a multi establishment enterprise (as well as for most single establishment enterprises). Accordingly, value added can be used in these censuses for weighting establishments in the process of classifying enterprises (and enterprise groups) within the scope of these censuses.

40. However, in other statistical collections value added will not generally be available for establishments, nor will value added be generally available for the component establishments of all enterprises recorded on the ABS's Integrated Register. Accordingly value added cannot be used as a universal weight in the process of classifying enterprises and enterprise groups. The only universally available weight would be total establishment employment. Accordingly, employment will generally have to be used as the establishment weight in classifying enterprises and enterprise groups outside the scope of integrated economic censuses.

41. A short circuit occurs in applying the step-by-step method described above to single establishment enterprises and enterprise groups because each single establishment enterprise and the enterprise group is assigned the industry code of its establishment.

42. The method described above has not, however, been judged to be appropriate to certain kinds of enterprise type units. For example, strict application of the above method to Local Government Authorities would in some instances have led to them being classified to industries in Divison E, Construction, because in quantitative terms (e.g. employment) some of them are, in fact, mainly engaged in construction activities. However, such a result seems to be inconsistent with the generally accepted view of the nature of local government. Further, since the ASIC already contains the industry "Local government administration", users of statistics might reasonably expect all Local Government Authorities (undertaking legislative type functions) to be classified to that industry.

43. In view of the foregoing, enterprise type units have been divided into two categories as follows:

CATEGORY I: PUBLIC SECTOR GENERAL GOVERNMENT ENTERPRISE TYPE UNITS, which:

(a) in respect of each of the three tiers of government (i.e. federal, state, local) have a significant legislative function, e.g. the Houses of Parliament of the Commonwealth and the States, and Local Government Authorities (including enterprise type units, such as Parliamentary Departments, which provide supporting office services to the legislative enterprise type units),

(b) in respect of the Commonwealth and the individual States, have significant functions in the fields of taxation and financial management (except banking), and

(c) in respect of the Commonwealth, have significant functions concerning defence, and foreign policy formulation and representation.

CATEGORY II: ALL OTHER ENTERPRISE TYPE UNITS

44. All CATEGORY I enterprise type units are to be classified as a convention, to the appropriate industries in Division J, Public administration and defence.

45. All CATEGORY II enterprise type units are to be classified in accordance with the general method of classifying enterprises and enterprise groups described above.

46. Because CATEGORY I enterprise type units are to be classified to the appropriate classes in Division J without reference to their component establishments, problems of reconciling establishment statistics with enterprise statistics will arise in those instances where, after following normal procedures for classifying establishments, no establishment in the enterprise set is given the same ASIC code as the CATEGORY I enterprise type unit.

47. The steps that will be taken to overcome problems of this kind include the following:

(a) The composition of CATEGORY I enterprise type units is to be kept as small as possible.

(b) In each case of a CATEGORY I enterprise set in which there is no establishment with the same ASIC code as that of the enterprise type unit, an establishment is to be created, classifiable to the same industry class as the CATEGORY I enterprise type unit, by splitting one of the existing establishments in the set, i.e. the one at which the head office of the enterprise type unit is located.

Resistance Factors

48. Cases sometimes occur where combinations of activities are seemingly engaged in by units in proportions such as would make it likely that the units would change from one class to another and back again in successive years, with only minor shifts in activities.

49. It is sometimes argued that such temporary fluctuations, based on only very minor shifts in activity, should not be represented in statistics, and that resistance factors or tests should be incorporated in processing systems which would prevent establishments changing industry on the basis of such minor activity shifts.

50. However, experience has shown that it is an extremely complicated and costly matter to develop and apply resistance factors or tests during industry classification processing. Such tests require the measurement of change of each of the activities which have contributed to the unit's change of industry class, involving the making of detailed comparisons of the units' 'last' year's outputs with 'this' year's outputs, and assessing the significance of the changes which have occurred. Furthermore, while it may be possible to say after the event that a particular establishment has fluctuated between two industries over the years, it is simply not possible to forecast such behaviour or distinguish such fluctuations from more permanent changes in activity as would be required at the time for the application of resistance factors.

51. Accordingly the application of resistance factors or tests to industry classification is not generally recommended by the ABS.

USE OF ASIC IN PUBLICATION OF STATISTICS

Censuses

52. In both population censuses and economic censuses it is recommended that the full detail of the ASIC be used in publication of detailed statistics (in the economic censuses, of course, this will relate only to those areas of ASIC for which censuses are conducted). Further the detailed statistics for ASIC classes should be presented within the hierarchic structure of groups, subdivisions and divisions. In population censuses it is intended that as far as practicable data will be classified by industry on the basis of the class appropriate to the establishment at which each person is employed, rather than on the industry description supplied by the person.

Other Statistics

53. In many other types of statistics it is not practicable or necessary to classify data by industry in the full detail of the ASIC. For example, in many current statistical series the interest is in having data available quickly for relatively broad industry categories, and the time and effort involved in obtaining detailed tabulations for the full detail of the ASIC would defeat the main purpose - apart from the question of sampling reliability in the case of sample surveys. Further, the degree of industry detail appropriate for some statistical series may correspond more to the broad levels of ASIC than to the most detailed level. However, it is not practicable to lay down that the industry classification used should comprise one or more of the broad levels of ASIC - e.g. the whole of the division level, or the whole of the division and subdivision levels, because the degree of industry detail required in individual series differs for different areas of the classification (for example in capital expenditure statistics interest naturally is greatest in those industries where there normally are substantial amounts of capital expenditure). Therefore, some flexibility is necessary in applying the ASIC to statistical series which are to be classified on the basis of the broader levels of ASIC. At the same time, if each series were classified solely on the basis of providing detail in those areas of the classification which are of particular interest in that series, much of the benefit of having a standard classification would be lost, in that much of the data compiled for one series could not be compared with the data compiled for others.

54. To meet this situation, in general, the following rule should be applied in publishing statistical series which are classified by industry:

Any industry category for which separate particulars are published in any statistical table should be one of the following:

(a) a division, subdivision, group or class of ASIC;

(b) a combination of subdivisions within the one division of ASIC;

(c) a combination of groups within the one subdivision of ASIC;

(d) a combination of classes within the one group of ASIC.

55. This rule provides a reasonable amount of flexibility in classifying individual series in more detail for some parts of ASIC than for others. At the same time it requires that whenever a dissection is shown at one level of the ASIC, for a particular area of the Classification, a total must be shown for the corresponding categories at the next broader level. Data for those categories at that broader level can then be compared with data for that level in other statistical series even though those other series do not provide a breakdown of

those categories at the lower level. Thus this approach will not permit individual series to be classified according to headings selected from different levels of the Classification, with other industries being grouped together in a residual category without regard to the hierarchic structure of the Classification.

56. It is intended that this rule will be utilised to the fullest practicable extent, although it is recognised that circumstances might arise where it would be particularly difficult to apply this rule to a specific series (e.g. because of confidentiality problems, or sampling considerations). In general it is proposed to apply the rule to statistics utilising enterprise-type units, as well as to establishment statistics.

57. Some special considerations also have to be taken into account in the use of ASIC in compilation of input-output tables. For the most part, these relate to Division C Manufacturing. It is intended that manufacturing industries in input-output tables, to be compiled on the basis of data collected in the integrated economic censuses, will be classes of Division C of ASIC, or combinations of such classes where some consolidation is necessary to keep the size of the tables within limits. The situation may arise in a few instances, however, where for purposes of input-output analysis it is desired to utilise data for a group of more homogeneous units than the establishments comprising the relevant ASIC class. In such a situation the specific class concerned would be 're-defined' for the purposes of the input-output tables. It is expected that only a limited amount of such re-definition will be utilised.