statistical report **20**

territorial justice in australia

a joint project of the bureau of crime statistics & research & the commonwealth commission of enquiry into poverty — commissioner for law & poverty, professor r sackville

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Territorial Justice

The geographical distribution of legal services throughout Australia

There is a long-standing suspicion in the field of Social Administration that those segments of the population who could most benefit from social services are among the last to take advantage of them. The fatalism and conditioning of depressed groups and their suspicion of 'outside' agencies are said to help explain the poor's sluggish response to new social services. The famous British authority Richard Titmuss, in a general comment on modern social services has said: 'those who have benefited most are those who have needed it least'.(1)

On the other side of the coin, many of those providing social services appear to have cultivated client groups who promise the maximum 'pay-off' for the time and energy invested in their welfare.

While there is evidence to support both these lines of reasoning, there is a danger of overlooking an equally important but somewhat more obvious, practical explanation. Attention has recently been drawn to regional inequalities in the distribution of social and medical services. A basic assumption of this research has been that policy should be directed toward distributing available resources in accordance with need.

These concerns have been matched in the legal field by the emergence of the new concept of 'Territorial Justice'. An acknowledged weakness of the research that has so far been undertaken is that the nature and extent of the legal needs of different communities have not been adequately charted.

(1) R.T. Titmuss, The Welfare State, London, Unwin University Books, 1963, p.229.

In the absence of such information, the policy assumption must be that the services of professionals in the legal field should, as far as possible, be readily available to an individual wherever he lives.

The Current Debate

A National Committee established to review legal aid services in Australia has acknowledged the relationship between poverty and inaccessibility of legal services.(2) The Committee has indicated the need not only to expand legal services but also to provide services which "in structure and administration as well as in principle render legal advice and assistance accessible to the vast number of people presently denied the service".

Many of the current proposals for extending legal services focus on the personal-social well-being of individuals and families, as well as the rights of disadvantaged groups. The new emphasis is reflected in a submission to the National Poverty Enquiry by the Australian Council of Social Services:

> "There is no doubt that the focus of Australian Law, in theory and in practice, must change from concern for propertied interests to active protection of disadvantaged persons in the community".(3)

(2) Australian Legal Aid Review Report. (Canberra: Australian Government Publishing Service, 1974)

(3) Australian Council of Social Services, Poverty - The ACOSS Evidence, Sydney, 1973.

ACOSS has provided examples of the types of services needed to 'protect' disadvantaged persons. These include the provision of legal advice to all persons in the community before they actually enter into binding transactions. ACOSS believes there is evidence that the privacy and dignity of individual social welfare recipients are threatened by administrative procedures aimed at eliminating dishonest claims. Therefore it has recommended that the legal profession do more to represent the interests of those applying for or receiving social welfare assistance.*

These proposals are already the subject of considerable debate within the legal profession and general community. The present study does not seek to join issue with either those favouring or those opposing the extension of particular services. Rather, we will be attempting to examine some structural features of the legal profession which could affect its ability to implement the types of recommendations put forward by ACOSS.

Present Study

The main aim of the present study is to assess whether inequalities exist in the distribution of legal services throughout Australia. Two major indicators of the availability of legal services are the number of solicitors practising in an area and the number of solicitors' offices located there.

Using data provided by the 1971 census, we have attempted to analyse:

(i) Variations in the number of solicitors and solicitors' offices throughout specified urban and rural areas of Australia;

(ii) The relationship between the distribution of solicitors and solicitors' offices per 100,000 of population in each area, and the following:

- (i) percentage of total population 65 years and older,
- (ii) percentage of total population foreign born,
- (iii) percentage of labour force in 'upper working' category (categories A, B, and C, of Congalton's occupational prestige scale),(1)
- (iv) percentage of labour force in 'lower working' category (category D of Congalton's scale),
- (v) percentage of labour force unemployed,
- (vi) percentage of labour force in primary industry,
- (vii) percentage of labour force in secondary industry,
- (viii) percentage of labour force in tertiary industry,
- (ix) average rent per week for State housing,
- (x) average rent per week for private housing,
- (xi) income per head of population,
- (xii) number of doctors per 100,000 of population,
- (xiii) number of dentists per 100,000 of population,
- (xiv) retail sales (1968-69) per head of population.

* Moreover, there is an opportunity for the legal profession to assist in the improvement of many areas of substantive law (for example, legislation governing consumer credit transactions) that at present work to the disadvantage of the poor. Similarly, ACOSS believes that amendments to legislation designed to improve the lot of the tenant of low rental accommodation may require institutional changes to ensure that the tenant's rights are honoured in practice as well as in theory.

(1) Congalton, A.A., Status and Prestige in Australia, Melbourne: Cheshire, 1969.

Sample

The study is based on a sample of 8,873 solicitors in private practice throughout Australia. Plotting the location of solicitors and their principal office address was more complicated than for either doctors or dentists. There is a directory of legal practitioners published for the whole of Australia but it is not a comprehensive listing. Using a comparable directory to the Australian one, Foster (1) found a discrepancy of slightly more than 2,000 names when he compared his totals with the number of practising certificates issued to solicitors in private practice in England and Wales. The totals for practising certificates were derived from the English Law Society's independent figures.

In N.S.W. all the data relating to solicitors was obtained from the New South Wales Law Almanac for 1973. In some other states it was necessary to combine information from government law calendars and almanacs with telephone listings to get the complete set of data.

In Victoria we worked directly from the files of the Law Institute. This is an accurate record of all solicitors in that state with current practising certificates.

The Medical Directory of Australia for 1972 was used to establish the numbers and distribution of doctors across the country. This directory of medical practitioners is recognised as being the most comprehensive listing available.

The Dental Board of New South Wales stated that a more reliable listing than their records could be derived from the commercial telephone directories. To standardise our approach to the distribution of dentists we used commercial telephone directories in all other states.

(1) K. Foster, "The Location of Solicitors", in The Modern Law Review, Vol. 36, March 1973.

Method

In deciding which practitioners to include in the study we adopted much the same approach as that used by Foster. We counted only those practitioners employed in private practice. Hence practitioners in government or semi-governmental service and private industry were excluded. Some entries were omitted on the basis of direct enquiry or by inference from the listed information.

In South Australia and Western Australia, unlike most other states, it is possible to practise as both a barrister and a solicitor. In these states therefore we have included barristers although we have excluded them in other states. However, we have excluded those practitioners in the two states who practise solely as barristers. In Victoria there are a small number of solicitors who also practise as barristers and they have been included in the study.

Plan of Analysis

The analysis divides naturally into two sections, namely, comparisons between indices (expressed as rates per 100,000 population) and the exploration of possible reasons for differences between regions.

Comparisons of indices

First, a number of comparisons will be made between the numbers of doctors, dentists and solicitors in specific centres and regions within each state. Essentially we will be searching for patterns in the geographical distribution of professional services. Because our comparisons involve populations of varying sizes, it is necessary in each case to express the number of medical, dental and legal practitioners as a rate per 100,000 population.

By this means we can assess whether, on a population basis, major urban areas contain more or fewer doctors, dentists and solicitors than rural areas. Using the same sets of rates for each individual municipality, shire or region, we can determine whether areas that appear to be poorly serviced in one respect (for example, doctors) are also poorly serviced in respect of dentists and solicitors. Our strategy here will be to rank the geographical units within each state according to the number of solicitors present in relation to the size of population. After repeating the same procedure for doctors and dentists it should be a relatively simple matter to identify by inspection those areas which rank consistently high or low.

We can, however, take the analysis one stage further by using a technique known as rank order correlation (see Appendix A). This method will enable us to measure the tendency for high or low concentrations of one profession in a region to be accompanied by high or low concentrations of another.

Exploration of reasons for differences between regions

The final step in the analysis will involve using our knowledge of key demographic and social characteristics of some 311 regions throughout Australia. We will use this information to explore variations in the distribution of professional services, searching in particular for social factors which wax or wane with the distribution of solicitors throughout the Commonwealth. A statistical procedure known as factor analysis will be employed. (See Appendix A for a brief technical note on this procedure).

Part I

Regional Comparisons

Our primary interest is in the accessibility of different professional services. Accordingly, our analysis must focus on the distribution of these services across regions and sub-regions of the states. Nevertheless, it may be instructive if we take a brief overview of the number of private doctors, dentists and solicitors practising in each state.

The States

One way of gauging the relative position of the states and territories is to rank them according to the number of practitioners per 100,000 population. Table I (opposite) shows that while there are exceptions, each state generally occupies a consistent position on the separate rankings. New South Wales never drops below second position and Western Australia never rises above sixth. South Australia was ranked fourth on each of the three professional indices and the Australian Capital Territory occupied positions ranging from first (doctors) to third (solicitors).

The rank order positions occupied by Victoria and Western Australia were fairly consistent except for the ratio of doctors to population. Victoria ranked comparatively high on solicitors and dentists but low on doctors. Tasmania's equal second position on doctors contrasted with its comparatively low ranking on the dental index. This was due to a very high concentration of doctors in the state capital, Hobart:

TABLE I - STATE RANKINGS ON MEDICAL, LEGAL AND DENTAL PRACTITIONERS PER 100,000 POPULATION

SOLICITORS			DOCTORS			DENTISTS		
Rank		Rate per 100,000	Rank		Rate per 100,000	Rank		Rate per 100,000
1.	N S W	91	1.	A C T	108	1.	N S W	34
2.	VIC	76	2) eq	N S W	86	2.	A C T	33
3.	A C T	74	2)	TAS	86	3.	VIC	28
4) eq	S A	49	4.	S A	73	4) eq	QLD	27
4)	TAS	49	5.	VIC	69	4)	S A	27
6.	QLD	45	6.	QLD	65	6.	W A	26
7.	W A	31	7.	W A	61	7.	TAS	15

Regional Comparisons

To the extent that the ratio of solicitors to population is an indicator, there are marked geographic differences in the availability of legal services throughout Australia. The same variation holds true for the distribution of private medical and dental services. In some localities there may be factors which compensate for a comparative shortage of private practitioners. For example, in the medical field there are some 'fee for service' community based health centres. However, for the present, these are comparatively rare. There would appear to be few analogous services in the legal field.*

Urban/Rural differences

The capital city/rest of state comparisons highlight a fundamental contrast in the distribution of health and legal services. The concentration of doctors, dentists and solicitors in the metropolitan areas of the capital cities is between 1½ and 2½ times greater than in other regions of the six states.

An examination of Table II (opposite) shows that, with the possible exceptions of Victoria and New South Wales the capital city/rest of state ratios for the three professions were very similar. In New South Wales, solicitors and to a lesser extent dentists were concentrated in Sydney but in Victoria it was the dentists who were more prevalent in the capital.

* In addition to traditional legal aid services Australian Legal Aid offices have recently been opened in the Sydney Statistical Division and the two major urban centres of Wollongong and Newcastle. Of the other states only in Tasmania are Australian Legal Aid services available outside the capital city statistical divisions. In the Northern Territory there are offices in Darwin and Alice Springs.

TABLE II - CAPITAL CITY/REST OF STATE COMPARISONS
(RATES PER 100,000)

	SOLICITORS			DOCTORS			DENTISTS		
	Capital	'Rest'	Capital: 'Rest'	Capital	'Rest'	Capital: 'Rest'	Capital	'Rest'	Capital: 'Rest'
N S W	117	51	2.3:1	103	59	1.7:1	43	21	2.0:1
VIC	87	48	1.8:1	76	52	1.5:1	33	14	2.4:1
A C T	74	-	-	108	-	-	33	-	-
TAS	70	36	1.9:1	125	60	2.1:1	22	10	2.2:1
S A	59	24	2.5:1	87	38	2.3:1	31	15	2.1:1
QLD	55	36	1.5:1	81	50	1.6:1	32	22	1.5:1
W A	37	14	2.6:1	76	29	2.6:1	32	14	2.3:1

Another way in which we can gauge the geographic concentration of the professions is simply to compare the percentage of doctors, dentists and solicitors who practise in the capital cities and elsewhere. This approach ignores the relative sizes of the populations involved but its advantage is that it tells us to what extent practitioners are concentrated in a single location.

Simple analyses in terms of the percentage of doctors, dentists and solicitors practising in each capital show that the distribution of the three professions within each state is

quite similar (see Table III opposite). In five cases, the variation in the number of doctors, dentists and solicitors practising in the capital cities is less than 5 per cent. In the remaining state, Victoria, the variation is only slightly greater (7.5 per cent).

With reference to the variation between states, Table III shows that there were basically two patterns of distribution. Between approximately 75 - 85 per cent of doctors, dentists and solicitors in New South Wales, Victoria, Western Australia and South Australia, were located in the capital cities. In Queensland and Tasmania the figure was somewhat lower - between 55 and 60 per cent. However, it should be noted that in these two states there is a more even distribution of population between city and country.*

TABLE III - PERCENTAGE OF SOLICITORS, DOCTORS, DENTISTS LOCATED IN CAPITAL CITIES

	SOLICITORS	DOCTORS	DENTISTS
	Capital City %	Capital City %	Capital City %
South Australia	86.2	85.1	83.9
Victoria	81.9	78.4	85.9
Western Australia	81.5	85.1	83.7
N S W	78.0	73.1	76.4
Queensland	57.9	59.6	56.1
Tasmania	55.9	57.4	56.8

To some extent, the above figures are misleading, at least so far as solicitors are concerned. The high percentages of solicitors in the capital cities reflect an even more marked concentration within the central business districts of the state capitals. Out of the total of 8,873 solicitors we have studied throughout Australia, more than half (56 per cent) practise within the inner city local government areas. In other words, one out of every two solicitors can be found practising within one or two kilometres of the centres of our capital cities. An additional 22 per cent practise in the

* The Brisbane Statistical Division has a lower proportion of the state's population than that of any other capital except Hobart. (Commonwealth Bureau of Census and Statistics, Queensland Year Book, No. 32, 1971-1972, p.71.)

suburbs of the capitals, 8 per cent in urban areas outside capital cities, and the remaining 14 per cent in country areas.

Poorly serviced regions

Moving out from the major population centres we can see immediately that some regions have consistently high rates of professional services while others have consistently low numbers of doctors, dentists and solicitors in relation to their population size. Later we will use a number of statistical tools to explore these relationships. As a preliminary step it is instructive simply to rank the regions of each state according to their numbers of legal, medical and dental practitioners.

In New South Wales, for example, Woollahra ranked 2nd out of seventy-two on dentists, was 3rd on doctors, 5th on solicitors and 3rd on solicitors' offices. North Sydney was 9th on doctors, and 4th on dentists and solicitors and 2nd on solicitors' offices. At the other extreme, Kiama - Shellharbour, was 69th on doctors, 71st on dentists, 68th on solicitors, and 69th on solicitors' offices. Wollondilly was similarly placed: last on doctors, 68th on dentists, 69th on solicitors and 67th on solicitors' offices. Lake Macquarie was 66th on doctors, 70th on dentists, 70th on solicitors and solicitors' offices.

Within the Sydney Metropolitan region there were a number of areas with consistently low rankings. Among these was Blacktown - 65th on doctors, 66th on dentists, 67th on solicitors and 60th on solicitors' offices. The adjoining municipality of Holroyd was only marginally better serviced: 63rd on doctors, 60th on dentists, 71st on solicitors, and 72nd on solicitors' offices. Nearer the centre of the city, South Sydney was 71st on doctors, 58th on dentists, 55th on solicitors and 66th on solicitors' offices.

Similar examples of areas with uniformly high or low rates can be detected in the remaining states. Appendix C contains the regions of each state ranked according to the number of solicitors per head of population. It also shows each region's position on the medical and dental rankings.

Rank order correlations

There is another way of determining the similarity of rankings on the three indices of professional service. This involves the use of a technique called rank order correlation. The rank order correlation coefficient is a statistic which takes the value +1.0 whenever the rankings on two variables are in perfect agreement, -1.0 if they are in perfect disagreement and 0.0 if there is no relationship whatsoever. Thus the closer the coefficient is to unity, the greater the similarity of ranking on the indices (see Appendix A).

As might be expected from the preceding discussion, the rank order correlations between the distributions of doctors, dentists and solicitors were generally high. The rank correlation between doctors and dentists was .61, between doctors and solicitors .49, and for dentists and solicitors was somewhat lower at .39. Not surprisingly, solicitors' offices and practising solicitors were highly correlated (.80). In later tabulations involving these four indices together with the other social variables mentioned in the introduction, it will become clear that these values are comparatively high. In general, rank order correlations above .5 can be regarded as indicating a substantial degree of similarity in ranking.*

* See Appendix A for a discussion of the 'significance' of correlation coefficients in this context.

PART II

Exploring the differences between regions

The similarity of rankings of areas in terms of the three types of professional services was noted in Part I. This raises the question as to whether the pattern of their distribution reflects the operation of a common set of factors. In order to examine this possibility we will employ the fifteen social variables gathered for each region throughout Australia (see the introductory section of this report).

Of course, it must be recognised that there are countless possible influences shaping the distribution of professional services. However, standard census data and some estimates derived from census information for the 311 areas provide a comprehensive set of demographic and socio-economic indices with which to explore the patterning of services.

There are two ways in which we can examine the relationship between the fifteen indices (including professional services). The first is simply to examine the rank correlations between pairs of variables. These correlations are presented in table IV (below). But presented with such information it is difficult for the eye and mind to discern the conceptual unity of the data. The most commonly used technique in statistical analysis to deal with this problem is called principal components or factor analysis. This is a method of summarising the information conveyed by the fifteen indices in terms of a smaller number of 'factors'. This method of analysis is described in more technical detail in Appendix A.

The Correlations

Table IV shows the degree of association between the twelve social indices and the distribution of medical, dental and legal services. In only a few instances do we find a high rank correlation. The full correlation matrix is given in Appendix B.

There was, however, a positive association between medical and dental services and income per head of population (.45 and .53 respectively). Income was in turn associated with three other indices of status, namely percentage of population in 'upper' occupations (.59), percentage of work force in tertiary occupations (.57) and the level of private rent paid (.65). It is not surprising, therefore, that two of these three indices (tertiary occupations and private rent) also correlated - although rather more weakly - with the distribution of medical and dental services. Thus one of the implied influences shaping the distribution of medical and dental services is a status/income factor. This possibility will be further pursued using principal components analysis.*

* A less obvious correlate of the three professional services was the percentage of population aged 65 and over. Difficult as this observation is to explain, it parallels the observation of Foster (1973) who made a similar study of legal services in Britain.

TABLE IV - RANK CORRELATIONS BETWEEN PROFESSIONAL SERVICES AND OTHER VARIABLES

	Doctors	Dentists	Solicitors
Population aged 65 and over	.57	.47	.30
Population foreign born	.06	.13	- .08
Upper occupations	.26	.35	- .02
Lower occupations	- .27	- .36	.02
Unemployed	.12	.00	.14
Primary industry	- .29	- .36	.03
Secondary industry	- .09	- .03	- .06
Tertiary industry	.40	.43	.09
State rent	- .08	- .07	.07
Private rent	.30	.43	.02
Income	.45	.53	.15
Retail sales	.51	.44	.61

Before we undertake the principal components analysis let us consider some additional correlations which foreshadow the results of that analysis. Unlike doctors and dentists, there were zero or near zero correlations between the distribution of solicitors on the one hand, and on the other hand, income and rent, as well as the type of industry and the occupational status predominating in an area.

With what other variables then was the distribution of solicitors correlated? The predominant correlation was with retail sales per head of population. It should also be remembered that the same index (number of solicitors practising in each area) correlated, albeit at a lower level, with the distribution of doctors and dentists.

What is implied by the above correlations? They suggest the coincidental rise and fall of retail business and legal activity. That is, where the level of retail business in a region is buoyant one finds a greater concentration of solicitors. By this we mean something more than just the fact that solicitors' offices tend to be located in shopping centres. The correlations indicate a strong association between the two types of activities on a regional basis.

Unlike the doctors and dentists whose relative concentrations appear to be partly a response to the average level of income in an area, the distribution of solicitors is only weakly correlated with the wealth and status of the residents.

Principal components analysis

As previously mentioned, principal components analysis represents an attempt to go beyond individual correlations and discover underlying patterns involving groups of variables or 'factors'.

In the present Australia wide study it was found that most of the information about the intercorrelations between the indices (Appendix C) was reproduceable by reference to five mathematical constructs (the principal components). The technically minded reader may care to note that the percentage of variance explained was 79.7 per cent.

To aid in the interpretation of the meaning of principal components it is standard practice to undertake an additional step in the analysis known as 'rotation' of components. We will refer to the rotated components as 'factors'. Thus according to our results the pattern of correlations can be explained largely by reference to an area's position on each of five factors. The first factor (Factor I) we have termed a general 'status-income' factor. The most important individual indices associated with Factor I were the percentage of population in upper status occupations, the percentage of the labour force in tertiary industry, the income per head of population and the level of private rent paid. Doctors and dentists but not solicitors were also associated with this factor, although less strongly than the abovementioned indices. Moreover, solicitors and retail sales per head of population were slightly negatively associated with this factor:

TABLE V - LOADINGS ON FACTOR I

Population aged 65 and over	.29
Population foreign born	.13
Upper occupations	.90
Lower occupations	- .91
Unemployed	- .28
Primary industry	.38
Secondary industry	.28
Tertiary industry	.89
State rent	.00
Private rent	.69
Income	.72
Doctors	.36
Dentists	.45
Solicitors	- .11
Retail sales	- .14

A second factor might best be entitled 'retail sales/ professional-business' because of its association with retail sales per head of population and the percentage of solicitors, dentists and doctors per 100,000 of population. In other words, the earlier observation that there are two distinct factors underlying the distribution of medical, dental and legal services was supported by the factor analysis. A less easily interpreted aspect of Factor II was its relatively high association with the percentage of population 65 years and older in each area:

TABLE VI - LOADINGS ON FACTOR II

Population aged 65 and over	.55
Foreign born	- .05
Upper occupations	- .02
Lower occupations	.01
Unemployed	.13
Primary industry	- .16
Secondary industry	- .05
Tertiary industry	.03
State rent	.00
Private rent	.14
Income	.37
Doctors	.73
Dentists	.65
Solicitors	.84
Retail sales	.86

The final three factors were not associated with the distribution of doctors, dentists and solicitors. The third factor we have called a 'secondary industry/migrant' factor. The percentage of the labour force in secondary industry and the percentage of the population foreign born were both highly associated with this factor.

The fourth factor we have called a 'state rent/age' factor. The two indices associated with this factor were negatively correlated. Finally, the fifth factor 'unemployment' was not associated strongly with any other index. (Factor loadings for Factors III, IV and V are presented in Appendix B).

Discussion

The present study has focused on certain structural features of the legal profession. Implicit in our analysis has been the question of whether or not the orientation and geographical distribution of the profession's private practitioners would make them appropriate agents for the delivery of services designed to 'protect' the poor.

Before reviewing the evidence which we have collected on this issue, it will help in the interpretation of the findings if we distinguish three basic social mechanisms through which legal services can be made available.

Howard (1969) has called the first of these 'marketlike transactions', meaning transactions in which the medium of exchange is primarily money.(1) Clearly, fees paid to solicitors, doctors, dentists and other professional persons fall within this category. As a mechanism for the delivery of desired goods and services the 'market' obviously enjoys both considerable utility and approval in our society. However, as Howard has observed: "For those without money, a market may be only a mockery".

For this reason, many people are now proposing that the types of professional services considered in the present study should be transformed either into a 'social utility' (like libraries, parks, police and fire services) or a 'social service'. Many of the legal services intended to 'protect' the poor fall into the latter category. In Howard's terms, they are part of a wide range of welfare services which gratuitously offer family service and many other services, including financial aid to individuals and families who do not have enough money to supply themselves with the requirements that the community considers they should have.

In terms of their professional orientation and geographic distribution, how well equipped are private solicitors to participate in the development of the proposed new category of legal-social services? Evidence provided by the present study suggests that a great many difficulties would need to be overcome.

First, there is the marked concentration of solicitors within urban areas and especially the capital cities. In four of the six states approximately 80 per cent of all the solicitors are contained within a 25 kilometer radius of the capital city centers.

In the report we have documented many instances of regions poorly serviced by 'fee-for-service' practitioners in the medical, dental and legal fields. However, with the aid of factor analysis we have been able to identify an important difference in the orientations of solicitors on the one hand and doctors and dentists on the other. We have noted the strong tendency for solicitors to concentrate their operations in areas characterised by high levels of

(1) D. Howard, Social Welfare: Values, Means, and Ends, (Los Angeles: University of California, 1969).

commercial activity. The distribution of doctors and dentists is apparently influenced more by the personal wealth and status of people living in different regions. Neither orientation, commercial activity or wealth, is a satisfactory basis for ensuring that important professional services are distributed in an equitable manner.

There is strong evidence that the pattern of distribution of lawyers which exists in Australia is not peculiar to this country. A study of English solicitors by Foster (1973) suggests that the location of solicitors there is governed principally by economic considerations very similar to those which govern the location of retail distribution outlets.(1)

Foster's study did not proceed beyond the stage of examining correlations but he observed a strong association between the distribution of solicitors on the one hand and the amount of retail sales per head and the age structure of regions on the other. The distribution of solicitors and the class structure of regions were unrelated.

Similar patterns have been observed in the United States where high agreement has been found between "lawyer population and the number of manufacturing establishments, the number of service establishments, the number of corporations, retail sales volume, the number of retail trade establishments, and the size of service and trade units."(2)

Indirect confirmation of the heavily commercial orientation of lawyers was provided recently by a study of solicitors in New South Wales.(3) This research, undertaken by the Law Foundation, was designed to investigate the need for continuing legal education. Almost 2,000 practitioners, representing 45-50 per cent of the profession, responded to the mail survey.

One of the questions in the survey listed 43 separate subjects which were presented as being the type of course which might be offered. The researchers found that those subjects with a commercial flavour were strongly favoured. The most preferred course was 'Tax planning' (requested by 61 per cent of respondents). Almost half (45 per cent) requested courses in such subjects as 'Negotiation and drafting commercial agreements', 'How to manage legal work flow', 'Representing the subdividor' and 'Setting up a New South Wales Company'. Little interest was expressed in any course dealing with representation of the individual non-commercial client.

Conclusion

At the outset of this study we stated a major policy assumption: The services of professionals in the legal field should, as far as possible, be readily available to an individual wherever he lives. Evidence has been presented which shows marked differences in the standards of provision throughout Australia. The magnitude of these differences is unjustified and we are forced to the same conclusion as that reached by English researchers: Territorial justice demands the urgent reduction of the extremes of disadvantage.

It would be hazardous to rely on the natural growth of the profession to rectify the imbalances we have reported. We have shown that it is the commercially buoyant regions which attract solicitors. We agree with Foster when he says that the relationship between commercial and legal activity must, in some cases, "be consciously substituted by more equitable criteria of distribution before territorial injustice ceases to be one of the increasing number of criticisms directed against the legal profession."

(1) K. Foster, "The Location of Solicitors", in The Modern Law Review, Vol.36, March 1973, pp.153-166.

(2) A.P. Blaustein, C.O. Porter, The American Lawyer (Chicago: University Press, 1954).

(3) T. Purcell, "Continuing Legal Education", in Law Society Journal, Vol.12, No.2, June 1974, pp.103-106.

Epilogue

Where to put Legal Aid Services – A Research Contribution

Despite the conclusions reached in the foregoing study, the best way to provide legal aid services is likely to remain a contentious issue. Nevertheless, governments and the legal profession are under considerable pressure to extend the scope of legal aid throughout Australia.

Putting to one side the question of how the services will be provided, there remains the equally challenging issue of where they should be located. That discussion on this point has tended to be rather vague is not too surprising because it is a question which, to a large extent, is beyond the competence of lawyers to answer. It is, however, the type of question which should attract the interest of the social researcher.

The Bureau of Crime Statistics and Research has either collected or is in the process of collecting three types of information which could help guide decisions about the areas in greatest need of additional legal services. The three sets of data concern (i) the extent to which defendants are legally represented in different regions of the state, (ii) the availability of legal services and (iii) the level of social problems in each region. All three measures have in common the fact that they are based on objective data rather than general impressions.

(i) Extent of Legal Representation

Considerable effort is required to establish and maintain a system of court statistics. Once the data is available however, it can be analysed in many different ways to help throw light on a variety of practical issues. Regrettably, this point is poorly understood by lawyers and many administrators who think of 'official statistics' as the sole return on a considerable investment of clerical and professional resources.

In 1972 the Bureau of Crime Statistics and Research launched a system of data collection in over 250 Courts of Petty Sessions in New South Wales. Some of the ways in which it has been possible to analyse the information compiled annually on some 100,000 criminal or quasi-criminal cases, have been reviewed in a recent publication.* Just one type of analysis warrants discussion here.

It is a relatively simple and inexpensive matter to obtain, with the help of the computer, an answer to the following question:

> How many defendants charged with offences A, B and C, and appearing before Courts D, E, and F, were legally represented?

The real difficulty is in establishing a system of data collection which contains the ingredients needed to answer the questions we intend to 'ask' the computer. We need to work within a standard framework of regional boundaries and to be able to place our courts and where defendants live within that framework. The system used by the Bureau

* N S W Bureau of Crime Statistics and Research, Statistical Report No.18, Minor Offences - city and country, October 1974.

fulfils these requirements so that we are able to answer the question posed above concerning legal aid, and relate the information to other known features of the same region.

(ii) Availability of Legal Services

The present report has demonstrated that it is possible to use indicators, like the number of solicitors and solicitors' offices, to assess the availability of legal services within a region. We have shown that each locality can be appraised in terms of an absolute standard (for example, number of practitioners per 100,000 population), as well as its position relative to other regions throughout Australia.

(iii) Level of Social Problems

The growing interest in providing legal services to the 'poor' raises a further technical issue - how do we identify 'poor' or 'disadvantaged' areas? The Bureau of Crime Statistics and Research has developed an index of disadvantage, representing an area's weighted score on ten medico-social variables. These are:

(a) perinatal death,
(b) prematurity,
(c) notifiable disease,
(d) dependence on relief agencies,
(e) divorce/separation,
(f) mental hospital admissions,
(g) truancy,
(h) school exemption,
(i) unemployment,
(j) delinquency and crime.

The index which has been used successfully to identify areas with major problems in a large city is now being applied to 72 regions in New South Wales. This work is still incomplete but there is no reason why the same framework cannot be extended to cover the whole of Australia.

Later, it should prove possible to combine the three types of information in a single index of 'legal need' throughout Australia.

ACKNOWLEDGEMENT: The Bureau would like to thank the Hunter Valley Research Foundation for the provision of demographic data used in the study.

Appendix A

Statistical Notes

This Appendix deals with some of the methodological and statistical problems involved in the analysis of the data.

Measures of correlation

The aim of a coefficient of correlation is to express numerically the extent to which two variables simultaneously wax and wane in magnitude. Some of the problems associated with expressing such an association in a single statistic are discussed by Blalock.(1) In particular, if one or other of the variables being correlated takes a few extreme values, the correlation coefficient will be seriously affected.

This problem is encountered when we attempt to correlate the concentration of solicitors practising in one area with other indices. The number of solicitors practising in the central business district of Sydney is equivalent to a rate of 3838 per 100,000 of population, compared with a figure of 110 per 100,000 which is the next highest rate for an area in New South Wales. A similar pattern is true for doctors, dentists and retail sales.

There are several options open to the researcher in this situation:

(I) He can base his analysis on the correlation coefficients, and take less notice of their actual magnitudes than the overall pattern of variation between them. In the present study this approach yields results very similar to the results obtained from the rank correlation analysis (see IV below).

(II) He can simply exclude the extreme cases from the analysis. This approach solves the problem of the distortion in the magnitude of the correlation coefficient but, in this study at least, sacrifices vital information.

(III) He can 'transform' his data, with the aim of reducing the magnitude of the extremes while preserving the fundamental pattern involved in the data. An example of this approach would be to take the logarithm of all rates, and then calculate correlations. Once again, this approach yields results very similar to that obtained from ranked data (IV below), except that the magnitude of all correlations is reduced. A logarithmic transformation has the effect of 'blurring' the differences between values, while preserving their order.

(IV) He can rank his data on each variable, and calculate rank order correlations. A rank order correlation is calculated in the same way as the usual product moment correlation coefficient (which is discussed in (I) above), except that the rank values rather than the raw rates are used. This approach means effectively that only information about the ordering of the data is employed; the actual values are ignored. This conservative method of analysis was employed in the present study.

(1) H.M. Blalock, Social Statistics (McGraw-Hill, second edition, 1972).

Interpretation of rank order correlations in this study

It is usual to interpret coefficients of correlation by means of a 'test of significance'. This procedure rests on the assumption that the data is a sample drawn at random from some larger population. When this is the case, then the particular set of data which is being analysed is only one sample out of a very large number of possible samples each of which would yield a different coefficient of correlation. The significance test tells the analyst the extent to which the observed correlation is 'likely' in the light of some hypothesis about its 'true' value (that is, its value in the total population).

This apparatus is not available to us in this present study, since it is not possible to conceive of the data as a simple random sample from some larger population. The data itself is, in fact, the 'population', since it corresponds to regions covering the whole of Australia. This means that we have to use rather more 'intuitive' methods in interpreting the magnitudes of correlations.

As a rule of thumb a rank correlation exceeding 0.3 in absolute value (that is, ignoring the sign) can be interpreted as indicating a degree of association between the two variables. More technically, the square of the coefficient represents the proportion of variance among the ranks on one variable which is 'explained' by the other variable. Thus a coefficient of 0.3 means that roughly 10 per cent of the variance has been explained.

The choice of indices for the factor analysis

It is a truism to say that the results of a study such as this depend on the choice of indices. The reasons for choosing the particular set used in this study are explained in the body of the report. However, there is one technical problem that must be considered. The percentage of upper working, lower working and unemployed people in any area sums to 100 per cent. Similarly, the percentage of the labour force in primary, secondary and tertiary industry sums to 100 per cent. It could be argued that in both cases one category should be dropped, since it adds no information over and above that conveyed by the other two categories. So, for example, we could omit the percentage unemployed and the percentage in tertiary industry from the factor analysis.

When this is done, the results of a factor analysis exhibit the same basic pattern as was discussed in the text. However, the factors are less clearcut and easy to interpret than formerly, especially with the emergence of a new factor on which population over 65 years of age, income, doctors, dentists and retail sales load at levels above 0.30. If ease of interpretation of results is taken as a criterion, then the analysis with the full number of indices present is to be preferred.

Areas with small populations

Twenty five per cent of the 311 areas in this study have populations of less than 12,000. In many of these areas there is a complete absence of one or more of the three professions. It may be that by excluding these thinly populated areas from the calculation of correlations, the pattern underlying the distribution of professional services will be made clearer.

The effect of doing this is to increase all important correlations by a small amount. For example, the rank correlation between doctors and dentists increases from 0.61 to 0.70; the correlation between retail sales and solicitors increases from 0.61 to 0.62. However, no change at all is observed in the structure of the factors emerging from the factor analysis.

Principal components or factor analysis

The term 'factor analysis' is a generic name which covers those statistical techniques which attempt to summarise the information conveyed by a set of indices, in terms of a smaller number of 'factors'. 'Principal components analysis' may be regarded as a particular form of factor analysis, although it stands in its own right as a method of data reduction. The method employed in this study has been to undertake a principal components analysis and then rotate a selected number of components according to the 'varimax' criterion.

Principal components analysis is a mathematical method of constructing weighted sums of the indices, each weighted sum being called a 'principal component'. The weights are determined automatically on the basis of the magnitude of the correlations between indices. The number of principal components is equal to the number of indices, and they may be ordered according to the size of their variance. The first few principal components generally account for a disproportionate percentage of the total variance, thus allowing the later components to be discarded with little loss of information.

Because principal components are a weighted sum of indices, they may be interpreted as 'factors'. However it should be remembered that no model relating indices to factors has been assumed (in fact no assumptions at all have been made about the indices). Since principal component weights are usually difficult to interpret, a further transformation (called 'rotation') is often made. There are many different methods of rotation, but the varimax criterion employed in this study yields factors which are statistically uncorrelated and relatively easy to interpret. Varimax weights, or 'factor loadings' are simply the correlations of the indices with each factor.

It should be emphasized that the results of a factor analysis depend on many subjective decisions made by the researcher at each stage of the analysis. Apart from the choice of indices, there are a number of other choices to be made, such as computational method, method of rotation and the number of factors to be rotated. Variation in the decisions at each stage will yield final results which differ to some extent, although if there is a basic structure in the data it should be revealed despite minor differences. Nevertheless, it should be borne in mind that the results of a factor analysis are the outcome of interaction between the researcher and the machine, and have no claim to absolute authority.

Appendix B

RANK CORRELATIONS OF INDICES

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Population 65+	-.03	.14	-.15	.16	-.29	-.10	.39	-.24	.16	.43	.57	.47	.30	.29	.42
2.	Foreign born		.05	-.06	.18	-.50	.52	.10	.09	.44	.26	.06	.13	-.08	-.08	.00
3.	Upper working			-.99	-.43	-.30	-.15	.70	-.04	.59	.59	.26	.35	-.02	.09	-.16
4.	Lower working				.39	.30	.16	-.71	.04	-.59	-.59	-.27	.36	.02	-.09	.16
5.	Unemployed					.13	-.04	-.07	.00	-.23	-.23	.12	.00	.14	.04	.22
6.	Primary industry						-.56	-.43	.16	-.71	-.46	-.29	-.36	.03	.05	-.15
7.	Secondary industry							-.26	-.03	.23	-.16	-.09	-.03	-.06	-.07	-.03
8.	Tertiary industry								-.06	.60	.57	.40	.43	-.09	.00	-.06
9.	State rent									.03	-.11	-.08	-.07	.07	.14	-.06
10.	Private rent										.65	.30	.43	.02	.03	.09
11.	Income/head											.45	.53	.15	.19	.28
12.	Doctors												.61	.49	.44	.51
13.	Dentists													.39	.41	.44
14.	Solicitors														.80	.61
15.	Solicitors' offices															.47
16.	Retail sales/head															

Appendix B (cont)

PRINCIPAL COMPONENTS ANALYSIS BASED ON RANK CORRELATIONS
LOADINGS ON FIRST FIVE PRINCIPAL COMPONENTS

		1	2	3	4	5
1.	Population 65+	.52	.52	.10	-.37	.08
2.	Foreign born	.27	-.11	-.76	.11	.31
3.	Upper working	.76	-.47	.31	.09	-.05
4.	Lower working	-.77	.45	-.31	-.08	.02
5.	Unemployed	-.21	.52	-.18	-.17	.70
6.	Primary industry	-.64	.09	.62	.16	.11
7.	Secondary industry	-.01	-.10	-.87	.00	-.28
8.	Tertiary industry	.78	-.22	.22	-.15	.37
9.	State rent	-.12	-.08	-.02	.85	.33
10.	Private rent	.80	-.25	-.31	.14	.02
11.	Income/head	.83	.01	.06	.01	-.02
12.	Doctors	.63	.55	.09	.03	.04
13.	Dentists	.70	.38	.01	.08	-.04
14.	Solicitors	.22	.70	.09	.40	-.25
15.	Retail sales/head	.27	.80	-.07	.13	-.20

VARIMAX ROTATION OF FIRST FIVE PRINCIPAL COMPONENTS

		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1.	Population 65+	.29	.55	-.02	.45	.31
2.	Foreign born	.13	-.05	.80	-.20	.29
3.	Upper working	.90	-.02	-.02	-.02	-.29
4.	Lower working	-.91	.01	.02	.02	.25
5.	Unemployed	-.28	.13	.00	-.03	.88
6.	Primary industry	-.38	-.16	-.79	-.24	.04
7.	Secondary industry	-.28	-.05	.86	.05	-.19
8.	Tertiary industry	.89	.03	.01	.11	.24
9.	State rent	.00	.00	-.01	-.92	.05
10.	Private rent	.69	.14	.55	-.07	-.09
11.	Income/head	.72	.37	.17	.11	-.05
12.	Doctors	.36	.73	.02	.10	.19
13.	Dentists	.45	.65	.14	.07	.05
14.	Solicitors	-.11	.84	-.09	-.19	-.10
15.	Retail sales/head	-.14	.86	.06	.07	.07

Appendix C Availability of Professional Services

NEW SOUTH WALES

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
36	SYDNEY	62470	711	1138	1	208	332	1	2398	3838	1	529	846	1
67	SOUTHERN TABLELANDS	77037	40	51	47	13	16	56	85	110	2	30	38	6
70	UPPER MURRAY SUBD	49567	36	72	23	18	36	18	48	96	3	20	40	5
27	NORTH SYDNEY	53338	76	142	9	45	84	4	49	91	4	31	58	2
41	WOOLLARHA	59964	133	221	3	66	110	2	52	86	5	31	51	3
55	RICHMOND TWEED SUBD	96908	61	62	36	22	22	42	70	72	6	29	29	10
43	GOSFORD	56373	31	54	43	20	35	19	39	69	7	11	19	35
71	CENTRAL MURRAY SUBD	27459	9	32	63	0	0	72	19	69	8	7	25	22
58	NORTHERN TABLELANDS	60989	42	68	29	16	26	33	39	63	9	11	18	38
59	NORTHERN SLOPES SUBD	72694	54	74	21	14	19	51	45	61	10	15	20	32
28	PARRAMATTA	111043	96	86	18	45	40	16	68	61	11	28	25	18
39	WILLOUGHBY	53952	75	139	10	29	53	9	33	61	12	19	35	7
61	CENTRAL MACQUARIE	64547	38	58	38	13	20	46	40	61	13	20	30	9
65	LOWER SOUTH COAST	23175	9	38	59	7	30	26	14	60	14	10	43	4
57	HASTINGS SUBDIVISION	60649	40	65	34	17	28	31	36	59	15	13	21	28
51	NEWCASTLE	146009	140	95	15	43	29	30	87	59	16	34	23	25
24	MANLY	39260	57	145	6	28	71	6	23	58	17	10	25	17
54	BALANCE ILLAWARRA	48231	33	68	28	15	31	24	28	58	18	12	24	24
56	CLARENCE SUBDIVISION	64251	42	65	33	15	23	36	36	56	19	16	24	23
21	LANE COVE	26676	103	359	2	14	48	12	15	52	20	8	27	14
53	BALANCE HUNTER VALLEY	54037	26	48	50	8	14	62	28	51	21	15	27	15
20	KU RING GAI	93589	141	143	8	101	102	3	50	50	22	27	27	13
16	HURSTVILLE	87143	81	120	11	28	41	15	33	49	23	22	32	8
47	WOLLONGONG	161143	115	71	25	35	21	43	76	47	24	26	16	47
16	HORNSBY	96863	87	89	16	42	43	14	45	46	25	25	25	21
63	CENTRAL TABLELANDS	83926	64	76	20	20	23	38	38	45	26	15	17	41
40	WINDSOR	15485	6	38	61	3	19	49	7	45	27	4	25	19
60	NORTH CENTRAL PLAINS	30445	15	49	48	5	16	57	14	45	28	6	19	33
69	LOWER MURRUMBIDGEE	40222	19	47	52	6	14	60	18	44	29	6	14	52
64	LACHLAN SUBDIVISION	66259	29	43	54	14	21	44	29	43	30	19	28	12
68	CENTRAL MURRUMBIDGEE	91314	57	62	35	19	20	45	40	43	31	20	21	29
50	MAITLAND	31051	22	70	27	5	16	54	13	41	32	3	9	60
26	MOSMAN	29379	46	156	5	24	81	5	12	40	33	8	27	16
52	PORT STEPHENS	17734	6	33	62	2	11	64	7	39	34	5	28	11

NEW SOUTH WALES

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
45	WYONG	32967	17	51	46	6	18	52	13	39	35	7	21	27
37	WARRINGAH	156873	112	71	24	58	36	17	60	38	36	34	21	26
66	SNOWY SUBDIVISION	18072	8	44	53	5	27	32	7	38	37	2	11	56
42	BLUE MOUNTAINS COLO	26099	17	65	32	8	30	25	10	38	38	4	15	48
19	KOGARAH	47197	40	84	19	14	29	27	17	36	39	8	16	44
9	CAMDEN	11155	8	71	26	2	17	53	4	35	40	2	17	42
13	DRUMMOYNE	31251	21	67	30	15	47	13	11	35	41	6	19	36
8	BURWOOD	31888	56	175	4	18	56	8	11	34	42	5	15	49
7	BOTANY	38236	15	39	58	12	31	23	13	33	43	2	5	68
62	MACQ BARWON DARLING	35207	10	28	66	7	19	48	11	31	44	7	19	34
22	LEICHHARDT	71338	42	58	39	18	25	35	22	30	45	12	16	43
2	AUBURN	48683	36	73	22	8	16	55	15	30	46	9	18	37
35	SUTHERLAND	151574	65	42	56	52	34	20	46	30	47	20	13	54
29	PENRITH	60316	31	51	45	12	19	50	18	29	48	11	18	39
72	FAR WEST MURRAY DARL	43488	12	27	68	3	6	69	13	29	49	5	11	57
23	LIVERPOOL	82447	35	42	55	11	13	63	23	27	50	8	9	61
38	WAVERLEY	65539	65	99	14	41	62	7	18	27	51	17	25	20
34	STRATHFIELD	27167	39	143	7	14	51	10	7	25	52	4	14	53
32	RYDE	88806	79	88	17	31	34	22	23	25	53	16	18	40
3	BANKSTOWN	162730	94	57	40	37	22	40	41	25	54	27	16	45
33	SOUTH SYDNEY	38916	10	25	71	6	15	58	9	23	55	3	7	66
4	BAULKHAM HILLS	57373	31	54	41	13	22	39	13	22	56	12	20	31
14	FAIRFIELD	113053	56	49	49	22	19	47	25	22	57	11	9	58
17	HUNTERS HILL	14100	17	120	12	7	49	11	3	21	58	3	21	30
6	BLUE MOUNTAINS	18289	10	54	42	2	10	65	4	21	59	3	16	46
11	CANTERBURY	130446	62	47	51	31	23	37	25	19	60	13	9	59
30	RANDWICK	123865	133	107	13	43	34	21	24	19	61	15	12	55
48	CESSNOCK	34321	18	52	44	3	8	67	6	17	62	5	14	51
1	ASHFIELD	44910	30	66	31	12	26	34	7	15	63	4	8	65
10	CAMPBELLTOWN	34235	9	26	69	10	29	28	5	14	64	5	14	50
31	ROCKDALE	84232	33	39	57	25	29	29	12	14	65	8	9	63
25	MARRICKVILLE	96796	59	60	37	22	22	41	14	14	66	9	9	64
5	BLACKTOWN	156830	49	31	65	14	8	66	21	13	67	15	9	62
46	KIAMA SHELLHARBOUR	37905	10	26	70	2	5	71	4	10	68	2	5	69
44	WOLLONDILLY	12670	2	15	72	1	7	68	1	7	69	1	7	67
15	HOLROYD	77317	25	32	64	11	14	61	5	6	70	3	3	71
49	LAKE MACQUARIE	122421	35	28	67	8	6	70	8	6	71	6	4	70
12	CONCORD	26104	10	38	60	4	15	59	1	3	72	1	3	72

VICTORIA

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
33	MELBOURNE	75830	650	857	1	156	205	1	1348	1777	1	444	585	1
15	DANDENONG	40883	29	70	15	10	24	24	44	107	2	17	41	14
49	SOUTH MELBOURNE	26995	33	122	4	8	29	18	27	100	3	15	55	5
37	MORNINGTON	14289	12	83	10	2	13	46	13	90	4	4	27	30
42	PRAHRAN	56766	74	130	3	36	63	4	48	84	5	26	45	10
44	RICHMOND	28341	26	91	8	10	35	12	23	81	6	13	45	9
32	MALVERN	50560	52	102	7	31	61	5	35	69	7	18	35	21
25	HAWTHORN	37571	2	5	62	21	55	8	25	66	8	15	39	16
20	FITZROY	25708	21	81	11	7	27	21	17	66	9	8	31	22
12	COLLINGWOOD	21022	12	57	21	2	9	55	13	61	10	9	42	13
62	NORTH EASTERN STAT DIV	86134	42	48	27	12	13	47	51	59	11	39	45	11
59	WIMMERA STAT DIV	55587	27	48	29	8	14	41	33	59	12	26	46	7
45	RINGWOOD	34751	25	71	14	15	43	10	20	57	13	10	28	28
58	WESTERN STAT DIV	199505	114	57	20	30	15	40	108	54	14	50	25	35
56	WEST CENTRAL STAT DIV	161530	105	65	19	31	19	31	86	53	15	49	30	24
19	ESSENDON	57583	40	69	16	18	31	17	30	52	16	17	29	26
29	KEW	32564	51	156	2	27	82	2	16	49	17	12	36	19
23	FRANKSTON	59410	45	75	13	16	26	22	29	48	18	22	37	18
11	COBURG	65662	26	39	38	9	13	48	32	48	19	16	24	40
9	CAULFIELD	81865	56	68	17	39	47	9	40	48	20	18	21	45
61	NORTHERN STAT DIV	171815	90	52	23	25	14	42	84	48	21	62	36	20
47	SANDRINGHAM	35460	32	90	9	12	33	15	17	47	22	16	45	8
41	PORT MELBOURNE	11705	4	34	45	1	8	57	5	42	23	2	17	51
40	OAKLEIGH	57284	22	38	41	15	26	23	23	40	24	14	24	37
46	ST KILDA	61203	41	66	18	20	32	16	25	40	25	15	24	36
60	MALLEE STAT DIV	63816	33	51	24	10	15	38	26	40	26	29	45	12
22	FOOTSCRAY	57810	28	48	28	10	17	33	23	39	27	15	25	33
21	FLINDERS	15481	6	38	40	0	0	62	6	38	28	9	58	3
57	NORTH CENTRAL STAT DIV	63039	27	42	36	7	11	51	24	38	29	16	25	34
63	GIPPSLAND STAT DIV	158142	68	42	35	6	3	60	60	37	30	48	30	23
8	CAMBERWELL	98302	113	114	5	60	61	6	36	36	31	29	29	27
4	BRIGHTON	39109	40	102	6	23	58	7	14	35	32	8	20	47
6	BRUNSWICK	51560	23	44	32	8	15	36	18	34	33	14	27	29
48	SHERBROOKE	20484	6	29	50	3	14	43	7	34	34	6	29	25
24	HASTINGS	8927	5	56	22	0	0	61	3	33	35	5	56	4
3	BOX HILL	54635	28	51	25	20	36	11	18	32	36	12	21	44
16	DIAMOND VALLEY	36245	12	33	46	8	22	26	11	30	37	9	24	39
35	MOORABBIN	109588	51	46	30	31	28	19	32	29	38	19	17	53
55	WILLIAMSTOWN	30055	13	43	34	7	23	25	9	29	39	5	16	54
27	HEIDELBERG	68013	21	30	48	19	27	20	18	26	40	14	20	48
17	DONCASTER TEMPLESTOWE	64286	29	45	31	22	34	13	16	24	41	17	26	32
7	BULLA	8243	1	12	59	1	12	50	2	24	42	4	48	6
2	BERWICK	23460	2	8	61	2	8	58	5	21	43	5	21	46
64	EAST CENTRAL STAT DIV	37030	14	37	42	6	16	34	8	21	44	15	40	15

VICTORIA

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
14	CROYDON	28708	11	38	39	6	20	27	6	20	45	6	20	49
51	SUNSHINE	76427	19	24	51	7	9	56	16	20	46	7	9	62
38	NORTHCOTE	59303	21	35	43	8	13	45	12	20	47	8	13	59
31	LILLYDALE	36162	9	24	52	7	19	32	7	19	48	8	22	43
43	PRESTON	91584	32	34	44	19	20	28	17	18	49	14	15	55
30	KNOX	56786	17	29	49	9	15	39	10	17	50	9	15	56
28	KEILOR	55616	2	3	63	6	10	53	10	17	51	7	12	60
36	MORDIALLOC	29753	15	50	26	22	73	3	5	16	52	8	26	31
18	ELTHAM	24140	10	41	37	3	12	49	4	16	53	6	24	38
39	NUNAWADING	90702	40	44	33	18	19	30	14	15	54	12	13	58
52	WAVERLEY	97033	32	32	47	20	20	29	13	13	55	14	14	57
54	WHITTLESEA	30327	3	9	60	2	6	59	4	13	56	6	19	50
53	WERRIBEE	25116	4	15	58	3	11	52	3	11	57	6	23	42
50	SPRINGVALE	58374	11	18	54	8	13	44	7	11	58	10	17	52
5	BROADMEADOWS	101100	19	18	53	11	10	54	5	4	59	8	7	63
10	CHELSEA	26372	4	15	56	4	15	37	0	0	60	2	7	64
1	ALTONA	30589	5	16	55	5	16	35	0	0	61	3	9	61
13	CRANBOURNE	12511	2	15	57	0	0	63	0	0	62	3	23	41
34	MELTON	5974	0	0	64	2	33	14	0	0	63	7	117	2
26	HEALESVILLE	5223	4	76	12	0	0	64	0	0	64	2	38	17

QUEENSLAND

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
1	BRISBANE CITY	9550	302	3162	1	80	837	1	383	4010	1	153	1602	1
37	TOOWONG	9569	14	146	4	5	52	5	6	62	2	7	73	2
51	GREENSLOPES	13063	9	68	18	3	22	32	8	61	3	5	38	6
79	MORETON STAT DIV	164944	96	58	22	53	32	12	96	58	4	75	45	4
89	CAIRNS STAT DIV	112177	54	48	28	25	22	33	46	41	5	25	22	22
88	TOWNSVILLE STAT DIV	112167	56	49	26	24	21	36	43	38	6	17	15	35
63	SANDGATE	22655	14	61	21	3	13	52	8	35	7	5	22	20
83	SOUTH WESTERN STAT DIV	11623	8	68	19	1	8	65	4	34	8	3	25	14
81	DOWNS STAT DIV	145301	96	66	20	33	22	34	49	33	9	32	22	21
80	MARYBOROUGH STAT DIV	132805	63	47	32	30	22	30	41	30	10	35	26	13
84	ROCKHAMPTON STAT DIV	114769	51	44	34	19	16	47	34	29	11	27	23	19
72	BEAUDESERT	3503	0	0	79	0	0	78	1	28	12	1	28	12
87	MACKAY STAT DIV	59100	28	47	30	13	21	35	16	27	13	12	20	23
74	IPSWICH	61582	30	48	29	10	16	46	17	27	14	12	19	24
82	ROMA STAT DIV	18997	5	26	47	3	15	49	5	26	15	6	31	8
77	REDCLIFFE	34561	7	20	56	7	20	38	8	23	16	5	14	36
3	SOUTH CITY	24527	13	53	24	5	20	37	5	20	17	4	16	29
91	NORTH WESTERN STAT DIV	41408	10	24	49	6	14	51	8	19	18	4	9	45
34	INDOOROOPILLY	16267	14	86	13	5	30	17	3	18	19	2	12	40
45	CAMP HILL	11984	22	183	2	8	66	3	2	16	20	3	25	15
54	MOUNT GRAVATT	18373	2	10	67	11	59	4	3	16	21	6	32	7
64	WYNNUM	24064	11	45	33	7	29	19	4	16	22	4	16	30
49	EKIBIN	12560	14	111	6	5	39	8	2	15	23	3	23	16
26	STAFFORD	20834	10	47	31	8	38	9	3	14	24	5	23	18
36	ST LUCIA	7406	6	81	15	2	27	24	1	13	25	1	13	37
78	REDLAND	14928	1	6	69	2	13	53	2	13	26	6	40	5
22	KALINGA	7645	10	130	5	0	0	75	1	13	27	0	0	69
5	ASCOT	16566	27	162	3	8	48	6	2	12	28	5	30	10
14	ASHGROVE	8893	5	56	23	6	67	2	1	11	29	1	11	41
71	ALBERT	19195	3	15	63	2	10	60	2	10	30	3	15	34
41	EAST BRISBANE	9611	10	104	8	1	10	61	1	10	31	1	10	43
48	COOPERS PLAINS	21337	6	28	44	6	28	22	2	9	32	4	18	27
23	KEDRON	12125	2	16	61	2	16	45	1	8	33	2	16	32
52	HOLLAND PARK	22948	5	21	54	2	8	64	2	8	34	3	13	39
30	CORINDA	12907	10	77	16	4	30	15	1	7	35	3	23	17
85	CENTRAL WESTERN DIV	26270	10	38	41	5	19	42	2	7	36	4	15	33
76	PINE RIVERS	25121	1	3	71	4	15	48	2	7	37	5	19	26
18	CHERMSIDE	29542	13	44	36	9	30	16	2	6	38	5	16	31
20	GEEBUNG	19934	8	40	39	3	15	50	1	5	39	2	10	42
53	MOOROOKA	17246	19	110	7	4	23	29	1	5	40	3	17	28
24	MITCHELTON	15221	1	6	68	5	32	13	0	0	41	2	13	38
8	MEEANDAH	1432	0	0	72	0	0	70	0	0	42	0	0	55
42	MORNINGSIDE	11187	2	17	60	4	35	10	0	0	43	0	0	56
75	MORETON	1592	0	0	73	0	0	71	0	0	44	1	62	3

QUEENSLAND

RATES PER 100•000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
62	NUDGEE	2517	0	0	74	0	0	67	0	0	45	0	0	54
90	PENINSULAR STAT DIV	11738	2	17	59	0	0	68	0	0	46	0	0	53
25	NUNDAH	15427	16	103	9	4	25	25	0	0	47	1	6	49
2	NORTH CITY	20436	8	39	40	5	24	28	0	0	48	1	4	50
10	NORMANBY	10617	9	84	14	3	28	21	0	0	49	0	0	51
9	NEWMARKET	12289	11	89	12	4	32	14	0	0	50	1	8	47
55	MURARRIE	4109	1	24	48	0	0	69	0	0	51	0	0	52
68	SOUTH EASTERN	9043	2	22	52	1	11	57	0	0	52	0	0	59
67	SOUTH WESTERN	8954	3	33	42	2	22	31	0	0	53	0	0	58
27	THE GAP	9162	2	21	53	1	10	59	0	0	54	1	10	44
56	TARRAGINDI	14037	2	14	65	1	7	66	0	0	55	0	0	57
57	WYNNUM WEST	8842	3	33	43	1	11	58	0	0	56	0	0	61
11	WINDSOR	13468	7	51	25	4	29	20	0	0	57	1	7	48
66	WESTERN	5279	0	0	75	0	0	72	0	0	58	0	0	60
58	YERONGA	11795	5	42	37	3	25	26	0	0	59	0	0	62
50	FRUITGROVE	4997	0	0	77	0	0	74	0	0	60	0	0	64
6	FERNBERG	10476	2	19	57	2	19	40	0	0	61	1	9	46
86	FAR WESTERN STAT DIV	4317	0	0	76	2	46	7	0	0	62	0	0	63
21	HENDRA	7026	1	14	64	0	0	73	0	0	63	0	0	65
32	GRACEVILLE	7812	1	12	66	2	25	27	0	0	64	0	0	66
35	KENMORE	9980	9	90	11	2	20	39	0	0	65	3	30	9
33	INALA	21940	1	4	70	2	9	63	0	0	66	0	0	67
7	ITHACA	9987	4	40	38	1	10	62	0	0	67	0	0	68
47	CHATSWORTH	14501	3	20	55	4	27	23	0	0	68	0	0	73
46	CARINA	8200	2	24	50	1	12	55	0	0	69	0	0	72
73	CABOOLTURE	6682	3	44	35	2	29	18	0	0	70	2	29	11
31	DARRA	5058	5	98	10	1	19	41	0	0	71	1	19	25
69	EASTERN	6102	1	16	62	0	0	76	0	0	72	0	0	70
19	ENOGGERA	10543	3	28	45	2	18	43	0	0	73	0	0	71
44	ARCHERFIELD	3000	0	0	78	0	0	77	0	0	74	0	0	79
16	BALD HILLS	6030	3	49	27	0	0	79	0	0	75	0	0	74
15	ASPLEY	2822	2	70	17	1	35	11	0	0	76	0	0	75
61	BOONDALL	5321	1	18	58	1	18	44	0	0	77	0	0	76
17	BANYO	8366	2	23	51	1	11	56	0	0	78	0	0	77
40	BALMORAL	15128	4	26	46	2	13	54	0	0	79	0	0	78

SOUTH AUSTRALIA

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
1	ADELAIDE	16313	275	1685	1	80	490	1	414	2537	1	125	766	1
9	GAWLER	5495	5	90	12	3	54	7	4	72	2	2	36	5
28	UNLEY	39928	37	92	10	13	32	11	17	42	3	19	47	2
15	MEADOWS	5128	1	19	33	0	0	38	2	39	4	2	39	4
23	ST PETERS	10675	15	140	5	7	65	3	4	37	5	2	18	10
35	MT LOFTY RANGES DIV	51831	30	57	15	11	21	20	19	36	6	13	25	7
38	EYRE STAT DIV	29811	14	46	22	5	16	22	11	36	7	5	16	11
33	CENTRAL STAT DIV	31195	11	35	25	8	25	17	10	32	8	4	12	15
34	KANGAROO ISLAND STAT DIV	3156	0	0	38	1	31	12	1	31	9	1	31	6
37	SOUTH EAST STAT DIV	57981	27	46	21	9	15	23	17	29	10	8	13	13
3	BURNSIDE	39339	46	116	7	15	38	9	9	22	11	9	22	8
7	ELIZABETH	33389	19	56	17	5	14	29	7	20	12	2	5	23
21	PORT ADELAIDE	38968	22	56	16	6	15	25	8	20	13	3	7	21
19	NOARLUNGA	28464	4	14	34	2	7	32	5	17	14	1	3	25
2	BRIGHTON	22583	11	48	19	6	26	16	4	17	15	3	13	14
26	TEA TREE GULLY	36708	12	32	27	8	21	19	6	16	16	1	2	28
39	NORTHERN STAT DIV	84219	29	34	26	12	14	28	13	15	17	6	7	20
36	MURRAY STAT DIV	56954	17	29	30	3	5	36	8	14	18	5	8	19
29	WALKERVILLE	7208	18	249	2	7	97	2	1	13	19	3	41	3
24	SALISBURY	56279	16	28	31	9	15	24	7	12	20	1	1	31
25	STIRLING	8359	16	191	3	4	47	8	1	11	21	1	11	16
22	PROSPECT	20934	22	105	8	5	23	18	2	9	22	3	14	12
20	PAYNEHAM	17543	16	91	11	5	28	15	1	5	23	1	5	22
14	MARION	67572	26	38	24	9	13	30	4	5	24	2	2	27
13	KENSINGTON AND NORWOOD	11081	17	153	4	7	63	5	0	0	25	1	9	18
12	HINDMARSH	10306	10	97	9	3	29	14	0	0	26	1	9	17
40	FAR NORTH STAT DIV	13977	0	0	39	1	7	33	0	0	27	0	0	36
11	HENLEY AND GRANGE	16128	8	49	18	1	6	34	0	0	28	0	0	35
10	GLENELG	15237	19	124	6	10	65	4	0	0	29	3	19	9
18	MUNNO PARA	20179	0	0	36	2	9	31	0	0	30	0	0	38
17	MUDLA WIRRA GAWLER	186	0	0	37	0	0	37	0	0	31	0	0	37
16	MITCHAM	54377	41	75	13	17	31	13	0	0	32	2	3	26
30	WEST TORRENS	50097	24	47	20	8	15	26	0	0	33	2	3	24
27	THEBARTON	11831	5	42	23	4	33	10	0	0	34	0	0	34
32	WOODVILLE	72806	22	30	29	11	15	27	0	0	35	1	1	32
31	WILLUNGA	2614	0	0	40	0	0	39	0	0	36	0	0	33
6	EAST TORRENS	4202	1	23	32	0	0	40	0	0	37	0	0	39
8	ENFIELD	77435	10	12	35	5	6	35	0	0	38	1	1	30
4	CAMPBELLTOWN	37942	12	31	28	7	18	21	0	0	39	1	2	29
5	COLONEL LIGHT GARDENS	3369	2	59	14	2	59	6	0	0	40	0	0	40

WESTERN AUSTRALIA

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
20	PERTH	97546	242	248	1	97	99	1	213	218	1	90	92	1
10	FREMANTLE	26036	30	115	6	14	53	3	14	53	2	8	30	2
28	SOUTH WEST STAT DIV	77347	33	42	13	16	20	11	23	29	3	18	23	3
29	SOUTH AGRIC STAT DIV	45281	18	39	15	9	19	14	11	24	4	9	19	4
30	CENTRAL AGRIC DIV	53661	21	39	16	8	14	20	10	18	5	5	9	13
18	NEDLANDS	22878	38	166	3	5	21	10	4	17	6	4	17	5
12	KALAMUNDA	18362	4	21	22	3	16	18	3	16	7	3	16	6
32	EAST GOLDFIELDS DIV	42769	5	11	27	5	11	21	6	14	8	5	11	10
31	NORTH AGRIC STAT DIV	42804	10	23	21	5	11	22	6	14	9	3	7	15
16	MOSMAN PARK	7199	0	0	33	2	27	8	1	13	10	1	13	7
8	COTTESLOE	7997	4	50	11	3	37	6	1	12	11	1	12	8
14	MELVILLE	52976	26	49	12	19	35	7	6	11	12	6	11	9
26	SWAN GUILDFORD	25682	14	54	10	5	19	13	3	11	13	3	11	11
25	SUBIACO	17119	15	87	8	8	46	5	2	11	14	2	11	12
34	NORTH WEST STAT DIV	11784	1	8	30	1	8	24	1	8	15	1	8	14
36	KIMBERLEY STAT DIV	14602	1	6	32	0	0	33	1	6	16	1	6	16
24	SOUTH PERTH	31702	20	63	9	5	15	19	2	6	17	2	6	17
4	BELMONT	32656	4	12	26	0	0	28	2	6	18	2	6	18
21	STIRLING	154882	61	39	14	30	19	12	5	3	19	5	3	19
5	CANNING	35382	9	25	20	7	19	15	1	2	20	1	2	20
3	BAYSWATER	34261	10	29	19	9	26	9	0	0	21	0	0	21
7	COCKBURN	25011	2	7	31	1	3	26	0	0	22	0	0	22
6	CLAREMONT	9179	17	185	2	6	65	2	0	0	23	0	0	23
33	CENTRAL STAT DIV	7420	1	13	25	0	0	27	0	0	24	0	0	24
2	BASSENDEAN	11360	10	88	7	1	8	25	0	0	25	0	0	25
1	ARMADALE KELMSCOTT	15644	5	31	18	3	19	16	0	0	26	0	0	26
23	SERPENTINE JARRAHDALE	1981	0	0	34	0	0	34	0	0	27	0	0	27
22	ROCKINGHAM	11608	2	17	23	0	0	35	0	0	28	0	0	28
27	WANNEROO	8620	0	0	35	4	46	4	0	0	29	0	0	29
13	KWINANA	12224	2	16	24	2	16	17	0	0	30	0	0	30
9	EAST FREMANTLE	7325	10	136	4	0	0	32	0	0	31	0	0	31
11	GOSNELLS	22040	2	9	29	2	9	23	0	0	32	0	0	32
19	PEPPERMINT GROVE	1511	2	132	5	0	0	29	0	0	33	0	0	34
35	PILBARA STAT DIV	28985	3	10	28	0	0	30	0	0	34	0	0	35
17	MUNDARING	12018	4	33	17	0	0	31	0	0	35	0	0	33

TASMANIA

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

	LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
			NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
4	HOBART	52426	142	270	1	22	41	1	89	169	1	73	139	1
8	NORTH CENTRAL STAT DIV	35107	75	213	2	10	28	3	38	108	2	24	68	3
5	KINGBOROUGH	9781	9	92	4	0	0	12	8	81	3	7	71	2
9	NORTH WEST STAT DIV	92220	40	43	8	11	11	7	33	35	4	23	24	4
12	MIDLAND STAT DIV	9187	3	32	10	0	0	11	3	32	5	2	21	5
10	NORTH EAST STAT DIV	37302	4	10	14	1	2	9	6	16	6	4	10	9
13	SOUTH EAST STAT DIV	7051	7	99	3	0	0	14	1	14	7	0	0	12
6	NEW NORFOLK	7343	4	54	6	1	13	6	1	13	8	1	13	6
2	CLARENCE	37104	17	45	7	2	5	8	5	13	9	5	13	7
3	GLENORCHY	42651	18	42	9	7	16	5	5	11	10	5	11	8
11	NORTH MIDLAND STAT DIV	27563	5	18	13	0	0	10	3	10	11	2	7	10
14	SOUTHERN STAT DIV	15984	5	31	11	3	18	4	1	6	12	1	6	11
7	SORELL	2575	2	77	5	1	38	2	0	0	13	0	0	13
15	WESTERN STAT DIV	12368	3	24	12	0	0	15	0	0	14	0	0	14
1	BRIGHTON	1336	0	0	15	0	0	13	0	0	15	0	0	15

AUSTRALIAN CAPITAL TERRITORY

RATES PER 100,000 OF POPULATION IN LOCAL GOVERNMENT AREAS

RANKED ON SOLICITORS

LOCAL GOVERNMENT AREA	POPULATION	DOCTORS			DENTISTS			SOLICITORS			SOLICITORS OFFICES		
		NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK	NO.	RATE	RANK
1 NORTH CANBERRA	52093	83	159	1	25	47	2	105	201	1	27	51	1
2 SOUTH CANBERRA	27687	36	130	2	15	54	1	1	3	2	1	3	2
3 WODEN	33783	24	71	3	5	14	3	0	0	3	0	0	3
4 WESTON CREEK	8724	3	34	6	1	11	4	0	0	4	0	0	4
5 BELCONNEN	19508	9	46	4	1	5	5	0	0	5	0	0	5
6 BALANCE ACT	2268	1	44	5	0	0	6	0	0	6	0	0	6