Role of Rural Local Government in the Provision of Roads: A Review

Occasional Paper

This Paper examines the significance of road construction and maintenance in relation to the wide role of local government. It covers the sources of funds and the decision-making processes relating to road activities. The intergovernmental relations and institutional features governing road investment are also examined.

Role of Rural Local Government in the Provision of Roads:

A Review

AUSTRALIAN GOVERNMENT PUBLISHING SERVICE, CANBERRA 1985

ISSN 0157-7085
ISBN 0 644 03928 0

Printed by Aiken Press Pty. Ltd. — Smithfield

FOREWORD

This Paper examines the significance of road construction and maintenance in relation to the wide role of local government. It covers the sources of funds and the decision-making processes relating to road activities. The intergovernmental relations and institutional features governing road investment are also examined.

The study was based on an examination of existing data sources, the results of a special survey and detailed discussions with a sample of 41 local government authorities. It provides a comprehensive assessment of how the various parties operate in relation to road matters.

Appendixes II to V of this Paper have been produced in microfiche form and are attached to the rear cover. They respectively consist of the survey questionnaire, list of local government authorities, detailed reports on the discussions with 41 councils and road price indexes.

The study was undertaken as part of the work leading up to an analysis of the present conditions and future development of the Australian road system published in BTE Report 56, *Assessment of the Australian Road System: 1984*. The material is presented in full in this Paper to provide ready access to the information. The fieldwork and data collection was carried out in 1980 to 1982. The study thus describes the situation at that time.

The study was undertaken by Mr D. Scorpecci, Mr G. Toomer, Ms A. McKnight, Ms S. Duyker and Mr N. Burton of the Special Studies Branch.

R. W. L. Wyers
Assistant Director
Special Studies Branch

Bureau of Transport Economics
Canberra
May 1985

SUMMARY

This Paper examines by what means rural local government authorities (LGAs) undertake the construction and maintenance of the roads for which they are responsible. It considers the significance of the road function in the context of the wider responsibilities of rural local government, the arrangements for funding local roadworks and the decision-making procedures and practices used in relation to road works.

In support of this study two surveys were carried out. The first was the 'Survey of the Australian Road System - Local Government Authorities 1980' (a mail-back questionnaire), followed by interviews of 41 rural LGAs.

For the purpose of the study, rural local government was divided into two categories:

- *Town* authorities encompassing urban centres with populations between 5000 and 99 999 at 30 June 1971; and
- *Rural* authorities with no centre of population with more than 5000 inhabitants at 30 June 1971.

The sources of funds available to LGAs for roadwork can be divided into:

- Specific Purpose Funds, which *must* be spent on road maintenance and construction. This category includes:
  - Commonwealth road grants and special project grants;
  - State road grants and subsidies;
  - State reimbursement for work done on behalf of State authorities; and
  - loans raised for specific roadworks.
- General Purpose Funds, which *may* be spent on roads but at the LGA's discretion. These include:
  - a share of the Federally-raised Personal Income Tax made

available by the Commonwealth Government for distribution amongst councils; and

- funds raised by LGAs through general rates, rents, charges etc.

Between 1969-70 and 1979-80, in real terms, spending on roads by *Town* LGAs increased by 20.9 per cent whilst spending on roads by *Rural* LGAs declined by 23.9 per cent. However, *Rural* LGAs continued to devote a greater proportion of ordinary service expenditure to roads than did *Town* LGAs.

The influences underlying these trends in LGA road expenditure involve many developments. The aggregate population of *Rural* LGAs declined over the study period, reducing the demand for roads and the potential revenue base.

Town LGAs in all States generally experienced increases (in real terms) to all their budgets, while *Rural* LGA budgets were stagnant or declining. The principle reasons for this were:

- falls in road grants and reimbursements were more severe for *Rural* LGAs;
- *Rural* LGAS reduced real revenue from rates and charges in all States except Tasmania. But only in Western Australia did *Town* LGAs experience similar falls; and
- the large increase in General Purpose Grants from tax sharing arrangements introduced in 1976 more than adequately covered decreases in road grants and reimbursements initially, but did not cover the falls in revenue from LGAs' own sources.

The share of the budget going to roads has declined as LGAs have become more involved in the provision of other services. In part this resulted from the increasing expectations of the population and the provision of capital grants to councils in the 1970s to assist in the construction of facilities such as community centres, libraries, sports facilities etc. This has tended to leave local government with the upkeep and operation of these facilities although urban centres have found it easier to adapt to the changed conditions.

In 1979-80, $459 million was spent on roadworks by rural local government. This represented 38.6 per cent of total ordinary service expenditure and used 59 per cent of the time of full-time council staff.

The size and nature of roadworks make it a suitable item for budget balancing and often an incrementalist approach to fund balancing is adopted that is detrimental to road funding in times of financial stringency.

CONTENTS

TABLES

FIGURES

CHAPTER 1-INTRODUCTION

BACKGROUND

This Paper examines the function of road construction and maintenance undertaken by rural local government authorities (LGAs). Traditionally, the provision of roads and their upkeep has been the major undertaking of rural LGAs, inherited from the local road boards and road trusts from which present day rural local government descended. Due to the high priority placed on roads by local communities, and consequently their elected councils, road functions continue to be a major undertaking of rural LGAs.

Rural roads account for some 700 650 kilometres (90 per cent) of the 782 000 kilometres of road networks in the six Australian States[1]. Primary responsibilities for the construction and maintenance of these roads is divided among State governments and LGAs. The State Road Authority (SRA) in each State assumes responsibility for the whole or part of the costs of works on various classes of roads declared under the relevant Main Roads legislation, as well as for works on all roads in the unincorporated parts of the State. In their own areas local authorities bear responsibility for works on undeclared roads (accounting for about 80 per cent of the rural road network) in addition to parts of the declared road systems.

It is difficult to relate precisely local goverment's legal and financial responsibilities for the various classes of roads to the roads' functional purpose. A very broad (and imprecise) generalisation is that SRAs are mainly concerned with the more

---

1. The comments in this Paper relate to those roads which are normally open to the public for general traffic. Roads within private property or owned by public sector authorities, such as Forestry Commissions, and normally reserved for use by those authorities are excluded. Such roads comprise only a small proportion of all roads in Australia. Similarly, works on particular roads to cater for specific industry developments and paid for by industry contributions are excluded due to the relatively small scale of such payments and the short lengths of road involved.

important roads carrying the greatest traffic volumes between major centres, whilst LGAs care for the less heavily trafficked through roads and roads providing access to local properties.

The focus of this study is the local government involvement in the total rural road system, with particular attention to those parts of the system for which local government has full or partial care and control. However, some comment is also made on the operations of SRAs and on Commonwealth involvement where appropriate. Accordingly, reference is made to 'Arterial' and 'Local' roads. These terms are derived from Commonwealth legislation for road assistance. They are broadly (but again imprecisely) related to the dominant functional purpose of roads but do not relate well to State declared road classifications, nor to the legal or administrative responsibilities of State and local governments.

The understanding of the exact scope of rural local government involvement in providing roads is further complicated by the variations that exist among States, and the classification of these roads within each State, in:

- divisions between SRAs and LGAs of financial responsibilities for the declared road network;
- arrangements for the undertaking of day-to-day administration (care and control) of declared roads, the actual conduct of works and methods of passing financial contributions between SRAs and LGAs;
- the extent to which agencies carry out works on behalf of, or in association with, other agencies on a reimbursement basis;
- the provision, purpose and distribution of financial assistance for various classes of roadworks by way of grants or subsidies from Commonwealth and State governments; and
- imprecise matching of a road's declared legal status with its physical condition and the functions it performs for the traffic using it, particularly in view of the dynamic aspects of traffic composition, growth and movement patterns.

As a result, confusion exists even among the parties directly involved, as to why and how priorities for particular road works are established and the methods and sources of financing these works.

Nonetheless, the extensive involvement of rural local government in undertaking works on both declared and undeclared roads means that a large proportion of public funds provided for rural roads passes

through local government. In 1979-80 about $885 million was provided by Commonwealth, State and local governments for expenditure on rural roads in the States, of which $459 million (52 per cent) was ultimately expended by or through rural LGAs[1]. This represented 39 per cent of total rural local government outlays on ordinary services in 1979-80 and was their largest budget item, despite increasing demands for a greater range of community and welfare services.

Funds from Commonwealth and State government sources reach local government in the form of grants and subsidies or as reimbursements for work done on behalf of State agencies. Commonwealth grants for roads are made to the States; none are passed directly to local government[2]. SRAs may pass on all or part of the Commonwealth arterial and local road grants to local government for general programs of works on council roads or for specific projects on SRA controlled roads. These payments may be made either as grants or, where a council acts as an agent for the SRA, as reimbursements for work done. State governments may also provide their own funds to local governments for road works, either as grants, subsidies or reimbursements, and much of this assistance is also channelled through SRAs. Rural LGAs carry out a substantial amount of work on State controlled roads in some States, and reimbursements can form an important source of additional funds to these councils. The Commonwealth and State governments also contribute to local government's financial capacity to fund roadworks by providing general revenue assistance and a range of special purpose funds, such as unemployment relief, natural disaster relief and specific project grants.

Consequently, there is a close, interactive relationship between SRAs and LGAs. This has developed not only from the shared administrative arrangements for declared roads and the substantial works carried out by LGAs on behalf of SRAs, but also because SRAs exert considerable influence over a large part of rural local government finances. Many rural councils, particularly those in the more remote areas, receive substantial financial support from road grants and reimbursements, and roadworks are virtually the sole service provided by these councils. This has led to a questioning of the efficiency of this organisational

---

1. This excludes $254.3 million provided by the Commonwealth Government and $23.1 million by State governments for expenditure on national roads in the States.
2. Under Commonwealth roads legislation there are formulae in each State, agreed to by the Commonwealth and State. The formulae described in Chapter 3 provides for the distribution of Commonwealth Grants for local roads among LGAs.

approach to road provision and of the role of local government when revenues are raised mainly from non-local sources and only a single service is provided[1].

The annual public sector expenditure on rural roads represents substantial program outlays by all three levels of government. These outlays are not (or should not be) intended merely to provide roads in themselves, because the provision of roads and their upkeep permit *accessibility* for a multiplicity of commercial and personal activities of rural communities and businesses.

In rural areas of Australia, there is a marked dependence on roads for both personal travel and freight movements. Road quality can significantly affect the ease and cost of travel for trade and for large sectors of the rural population. As a result, all levels of government continue to receive numerous demands for rural road improvements. These submissions have offered a wide range of arguments in support of more funds or increased priorities for rural roads. These arguments may be based on the (real or imagined) benefits resulting from improvements or on the rising costs of providing roads, but rarely are there attempts to relate the two.

Roadworks are expensive undertakings, both in relation to the resources available to the responsible authorities and to the expected (assessable) benefits, particularly on lightly trafficked rural roads. All governments have a range of functions to perform, and limited funds to allocate among their program areas. Governments therefore try to ensure that funds are efficiently distributed as well as being effectively applied towards achieving desired levels of service from the road system. The procedures adopted by each level of government for allocating funds, and the assessment of subsequent program performance, are important determinants of whether or not

---

1. The introduction of Commonwealth general revenue assistance grants (GRA) for local government has provided many such councils with an important, and sizeable, alternative source of revenue which they may spend as they wish. However, the little research that has been done in Australia into the actual uses of GRA funds indicates that councils' own expenditures largely follow traditional priorities. Additionally, the distribution of GRA funds by Grants Commissions are guided by councils' relative expenditure histories and 'disabilities' (in rural areas, dominated by roads) as well as a number of other factors that are mirrored in the distribution methodologies for road grants used by SRAs. Thus the comments made above could equally apply to GRA grants, with the addition of concern about any existing or likely overlap in these two major grants programs to local government.

particular programs are effective and efficient in meeting community requirements.

In this context, the sharing among Commonwealth, State and local governments of responsibilities for the provision and financing of rural roads presents some problems. Issues that appear to be of major significance at a local level may have little or no influence when viewed from a State or national perspective, and vice versa. Commonwealth, State and local governments may differ considerably in their perceptions of:

- the proper and appropriate role of each level of government, in terms of the amount, the means of raising and the distribution of finance for road works each year;
- the objectives for road provision and the financing of strategies to achieve these;
- priorities and standards for particular works, works on particular classes of roads or works in certain geographical areas;
- the scale of benefits flowing from a given road expenditure program and their evaluation against costs; and
- the best means of executing works to achieve the most efficient use of available resources.

The activities of any level of government, and variations in those activities, (in terms of the amount of funds contributed towards roadworks, their distribution, the conditions attached and the actual usage of the funds) will almost certainly affect the activities of the other levels. Where marked differences of opinion exist, there is the potential for leakage of funds away from original program objectives towards other ends, which may result in the inefficient use of scarce funds.

In order to minimise this potentially inefficient use of road funds, there is a need for each level of government to develop a clear understanding of each other's intent and the constraints they operate under, as well as defining their own objectives. Development of a system of providing roads that is explicit in its aims, and which accommodates the various needs of all participants, requires consideration of:

- why three levels of government continue to be involved in road provision;
- what each level level of government is attempting to achieve;

- what amount of funding by each level of government is appropriate to its own objectives;
- whether or not the system of passing funds and sharing works is *effective* in meeting the program objectives of the donating government, and the effect of this system on the recipient agency;
- whether or not the system is *efficient* in the application of funds and/or the extent of leakage away from meeting program objectives; and
- what other methods might achieve the same objectives at lower cost, and their effects on other levels of government.

AIMS OF THE PAPER

The aims of this paper are to:

- examine the significance of the road function in the operations of rural local governments in the context of their wider responsibilities;
- examine the institutional arrangement for funding rural local government road works; and
- report on rural local government decision-making procedures and practices in relation to roadworks.

STRUCTURE OF THE PAPER

Chapter 2 defines rural local government and describes the general characteristics of rural LGAs. Chapter 3 examines the present arrangements for sharing road financing responsibility and disbursing road funds in the context of their historical development. Chapter 4 provides a description of the physical characteristics of the rural road network and the extent of significant roadworks undertaken by LGAs. This description is largely based on data derived by the BTE *Survey of the Australian Road System - Local Government Authorities* (BTE 1982d). Chapter 5 identifies the level of commitment by rural local government to the provision of roads, both in absolute terms and relative to other functions. It examines the change in commitment over time and the sources of councils' funds.

The decision-making procedures of rural local government are then discussed (Chapter 6). This encompasses the manner in which total budgets and allocations for roadworks are arrived at, the influences on levels of financing and priority setting for roadworks, the choice of roadwork standards, the difficulties experienced by councils in

undertaking roadworks and their overall aims and objectives for the road function.

Chapter 7 attempts to identify the reasons why Commonwealth and State governments provide financial assistance for rural local government roadworks or use rural local government as a roadwork agent. A discussion of the effects of the present and alternative systems of financing roadworks, for the rural road system and for rural local government, concludes the Paper.

INFORMATION SOURCES

Information on rural local government expenditures, receipts and general characteristics was derived mainly from the Australian Bureau of Statistics (ABS) data series *Australian Municipal Information System* (AMIS), supplemented by the recent series *Standardised Local Government Finance Statistics* (SLGFS). These sources provide the only reasonably consistent series of local government data covering the past 10 years, but have a number of limitations:

- There is a considerable time lag before accurate data for a particular year become available.
- Comparability of data over time is affected by the need to make adjustments for local authority boundary changes and to reconcile the listing of local authorities with the definition of rural areas used in this study.
- Differences exist in the definitions and scope of AMIS and SLGFS data items, which result in some significant differences in aggregate statistics for the same year in some States. Care should be exercised with comparisons of these data.
- Despite the attempt to provide standardised financial information for all local authorities, definitional differences exist among States due to differences in responsibilities, accounting practices and accounting periods. These are detailed in ABS (1980a and 1982b).
- AMIS data are only available as broad aggregates. Roadworks are included with other works in some items. Further, it is not possible to distinguish expenditures between construction and maintenance or between arterial and local roads. Additionally, transfers from road grants, reimbursements and private contributions to street construction have to be netted out from road expenditures to determine road expenditures from local governments' own-source revenues. Due to irregular payments, time lags between receipts and expenditures from transfer sources and

discrepancies in local authority reporting, the derived 'own-source' outlays cannot be regarded as highly accurate measures of the local government road financing effort.

Due to these limitations, more detailed information was sought from local authorities directly by the Bureau. The BTE *Survey of the Australian Road System - Local Government Authorities 1980* was used to provide physical data on roads for which rural local government has some responsibility and to supplement the financial data obtained from AMIS and SLGFS. A description of this survey is contained in BTE (1982d). The BTE *Survey of Rural Local Government 1980* was conducted to obtain statistical information on rural local government services, procedures, practices and objectives. This survey is outlined in Appendix I. It was sent to all rural LGAs in Australia and achieved a response rate of 54 per cent. There are no statistically significant differences between the sample and the total number of rural LGAs in their distributions among States, Statistical Divisions within States or Harris classifications[1]. Coefficients of concordance indicate statistically significant levels of agreement of a high order among respondents in their ordering of priorities and objectives.

Interviews were held with a structured sample of 41 councils to clarify issues raised in the surveys and to provide more detailed examples of local government decision-making procedures. These councils were selected on the basis of a factor analysis of local government physical and financial characteristics, which defined broad 'groups' of LGAs. While those councils selected for interview have certain similarities to many others, their approaches to their particular road tasks are not necessarily representative of local government in general, of local government in the same State system, or even of other LGAs in the same 'group'. Rather, the interviews should be regarded as examples of how a range of councils have responded to particular combinations of circumstances. Records of interview with each council are presented in Appendix IV. SRAs were kept informed at all stages of data gathering and were invited to comment on draft material.

Other statistical information was obtained from various BTE travel and transport industry surveys and financial analyses. Details of the scope and accuracy of this information can be found in the source documents as noted.

---

1. For definition of Harris classification see Chapter 2.

CHAPTER 2-DEFINITION AND CHARACTERISTICS OF RURAL LOCAL GOVERNMENT AUTHORITIES

DEFINITION OF RURAL LOCAL GOVERNMENT AUTHORITIES

Rural LGAs are defined as those LGAs corresponding to the rural areas specified in the Commonwealth *Roads Grants Act 1980,* with some exclusions. The Act identifies rural areas as those which for the purposes of the 1971 Census were designated as rural and are in effect those areas outside:

- the Statistical Divisions of Sydney, Melbourne, Brisbane, Adelaide, Perth, Hobart and Proposed Greater Darwin;
- the Statistical Districts of Newcastle, Wollongong and Geelong; and
- the provincial cities of Ballarat, Bendigo, Townsville, Toowoomba, Rockhampton, Gold Coast and Launceston.

However, the Northern Territory, although mentioned in the Act, is completely excluded from the study because the bulk of the Territory is unincorporated and the four established LGAs are completely urban in nature. The Australian Capital Territory is also excluded as it does not contain any incorporated areas and is not included in the Act. Also excluded are those areas within States which are unincorporated. The definition therefore covers those LGAs in the six States which are eligible to receive, under Commonwealth Government legisation, financial assistance for rural arterial or rural local roads.

For analytical purposes this definition is too broad. Rural areas, so defined, contain a number of large provincial city and town LGAs which are completely urban in nature. The physical characteristics of these LGAs, the resources available to them and the nature of their service requirements (particularly for roads) are quite different from other LGAs which are dependent upon agricultural production as an economic base and which are primarily concerned with the provision of services to small and dispersed populations.

In order to reduce the effects of these differences, subsequent

analyses consider rural local government in two sub-categories:

- *Town* authorities encompass LGAs associated with urban centres of population of 5000 to 99 999 at 30 June 1971; and
- *Rural* authorities are those associated with centres of population of less than 5000 or which had no association with an urban centre at 30 June 1971[1].

These sub-categories are derived from the eight category classification of Australian LGAs developed by Harris (1975). Table 2.1 shows the relationship between the Harris classification and *Town* and *Rural* categories.

Some adjustments were made to the listings of LGAs to reconcile the modified Harris categories with the definition of rural areas. These largely involved the exclusion of LGAs which lie on the peripheries of urban areas (as defined in the *Roads Grants Act 1980)* and which have an urban as well as a rural component. Most of these LGAs are included in the Harris category 'Metropolitan Fringe'[2]. Further

TABLE 2.1-CLASSIFICATION OF LGAs

Harris category		*Population range of urban centre (in 1971) with which local authority is associated*	*Category used in the study*
1	Metropolitan	500 000 and over	*Urban*
2	Large City	100 000 to 499 999	*Town*
3	Metropolitan Fringe	25 000 to 99 999	
4	Small City	10 000 to 24 999	
5	Large Town	5 000 to 9 999	
6	Medium Town	2 500 to 4 999	*Rural*
7	Small Town	1 000 to 2 499	
8	Rural	No association with an urban centre	

Source: Harris (1975).

1. The term *'Rural'* (italicised) refers specifically to those LGAs within this definition. This is done to avoid confusion with the term 'rural' (non-italicised) which refers to both *'Town'* and *'Rural'* groups combined, that is the wider definition of rural areas specified in the *Road Grants Act*.
2. The Harris classifications are based on LGA's populations as recorded on 30 June 1971. In the light of population movements since then, it is likely that many of the excluded 'Metropolitan Fringe' LGAs now more closely resemble metropolitan suburbs, ie urban areas. However, no adjustments have been made to account for population changes, as the *Road Grants Act 1980* definition of rural areas is also based on 1971 Census designations.

adjustments were made to account for amalgamations of rural LGAs since 30 June 1971.

NUMBER OF RURAL LOCAL GOVERNMENT AUTHORITIES

At 30 June 1980 there were 859 LGAs in the six Australian States, of which 671 (78 per cent) were rural authorities. *Rural* local governments accounted for 545 (63 per cent) of the total number and *Town* authorities for 126 (15 per cent). The proportion of rural authorities in each State varied from 68 per cent in Victoria to 92 per cent in Queensland (Table 2.2).

The number of local authorities is subject to frequent change, due mainly to the continuing restructuring of rural local government in New South Wales and South Australia. There were 719 rural LGAs listed in the 1976 Population Census, but this number had reduced to 664 by 31 December 1980. On 1 January 1981, a further 40 rural LGAs in New South Wales were amalgamated to form 17 new LGAs.

GENERAL FEATURES

An outstanding feature of rural local government in Australia is its variability across a wide range of physical, demographic and financial characteristics. These differences are quite marked even within the narrower *Town* and *Rural* Harris categories. Variations are due to more than simply the urban/rural nature of each LGA and reflect differences at both regional and local levels in:

- historical settlement and development patterns
- economic activity

TABLE 2.2-NUMBER OF LGAs, 30 JUNE 1980

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town	45	27	24	13	10	8	126
Rural	105	116	99	101	90	34	545
Total Rural	150	143	123	113	100	42	671
Urban	49	68	11	25	28	7	188
Total	199	211	134	138	128	49	859

Source: Derived from ABS 1979-80 AMIS data file.

- climate
- land forms
- proximity to other population clusters
- political attitudes
- relationships with other levels of government.

Area of rural local government authorities

Rural LGAs have large areas. The average area of *Rural* LGAs in 1980 was 9208 square kilometres, varying from an average 1604 square kilometres in South Australia to 23 789 square kilometres in Western Australia. *Town* LGAs ranged in area from an average 194 square kilometres in Victoria to 9711 square kilometres in Western Australia, with an overall average of 2800 square kilometres (Table 2.3).

The areas of individual rural LGAs also vary greatly (Figure 2.1). The smallest rural LGA, Narromine Municipality (NSW), had an area of 3.6 square kilometres and the largest, East Pilbara Shire (WA), had an area of 377 647 square kilometres.

TABLE 2.3-AVERAGE AREA OF RURAL LGAs, 30 JUNE 1980

(square kilometres)

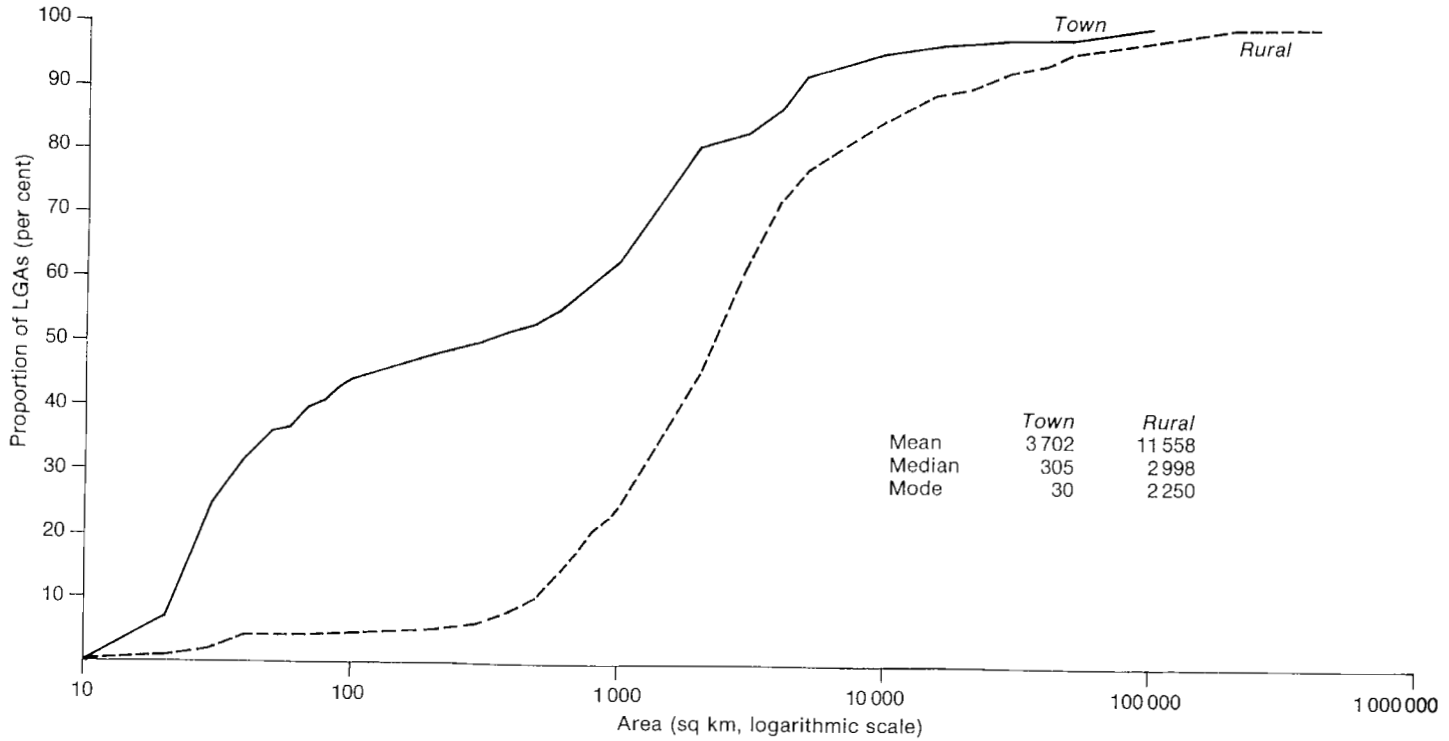
	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town	1 632	194	6 058	9 711	632	721	2 800
Rural	5 929	1 824	15 927	23 789	1 604	1 782	9 208

Source: Derived from ABS 1979-80 AMIS data file.

Population of rural local government authorities

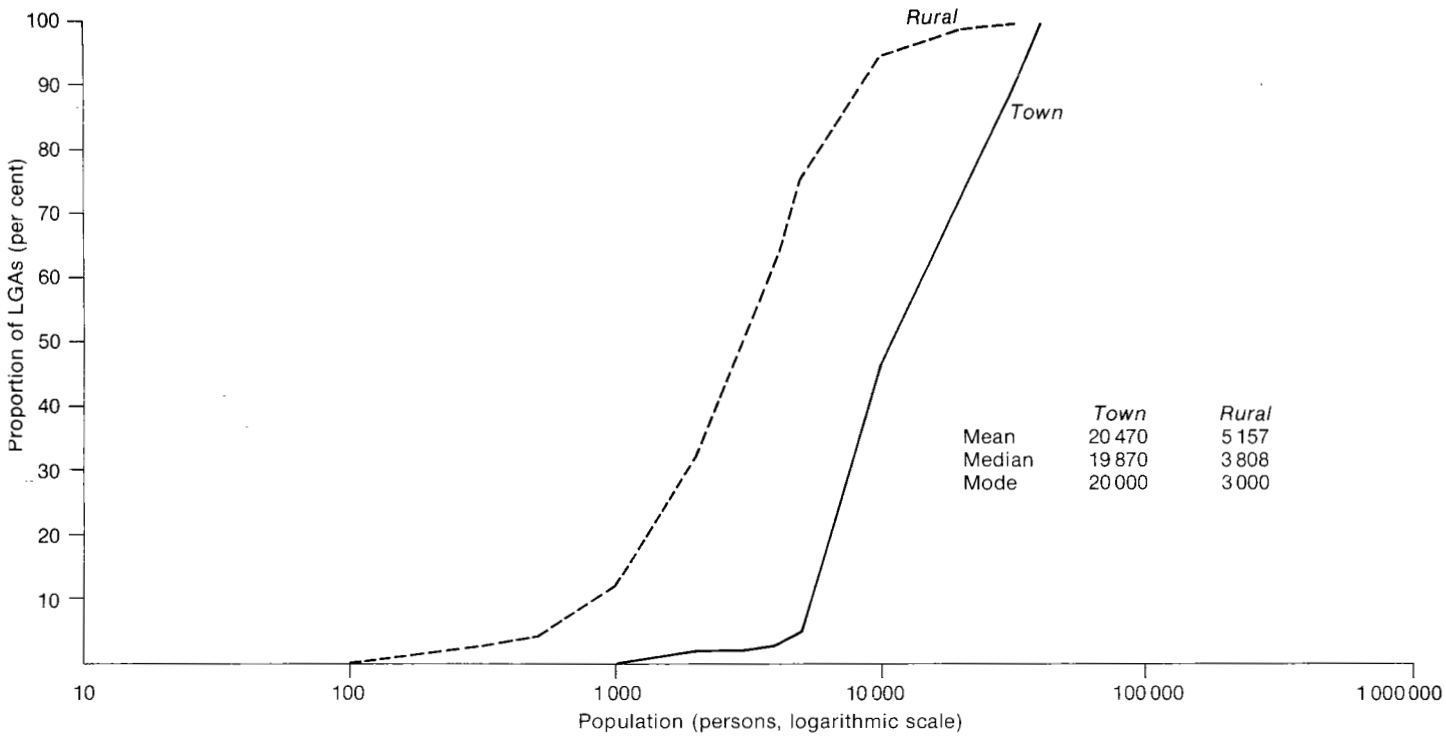
Generally, the populations of rural local governments are small. At 30 June 1980, the average population of *Rural* LGAs was 3940 persons compared to an average of 16 090 persons in *Town* LGAs (Table 2.4).

There are large variations in populations among authorities (Figure 2.2). Populations of less than 1000 occurred in 12 per cent of *Rural* LGAs, while 5 per cent had populations over 10 000. Sandstone Shire (WA) recorded the smallest population, of 50 persons, compared to Shoalhaven City (NSW) which recorded the greatest population of 40 800.



Source: Derived from ABS, 1979-80 AMIS data file.

Figure 2.1—Cumulative frequency distributions of areas of *Town* and *Rural* local governments, 30 June 1980



Source: Derived from ABS, 1979-80 AMIS data file.

Figure 2.2—Cumulative frequency distributions of populations of *Town* and *Rural* local governments, 30 June 1980

TABLE 2.4-AVERAGE POPULATION OF RURAL LGAs, 30 JUNE 1980
(persons)

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town	20 084	11 660	18 908	11 077	12 475	12 145	16 090
Rural	5 230	4 798	4 426	2 325	2 850	3 277	3 940

Source: Derived from ABS 1979-80 AMIS data file.

Population densities of rural local government authorities

The population densities of rural LGAs tend to be low, ranging from a median of 0.4 persons per square kilometre for Western Australian *Rural* LGAs to 403.3 persons per square kilometre for Victorian *Town* LGAs, at 30 June 1980 (Table 2.5). However, 44 per cent of *Rural* LGAs had population densities of less than one person per square kilometre and 54 per cent of *Town* LGAs had densities of less than 100 persons per square kilometre (Figure 2.3). Figure 2.4 shows the very uneven distribution of Australia's population.

Population decline in rural local government authorities

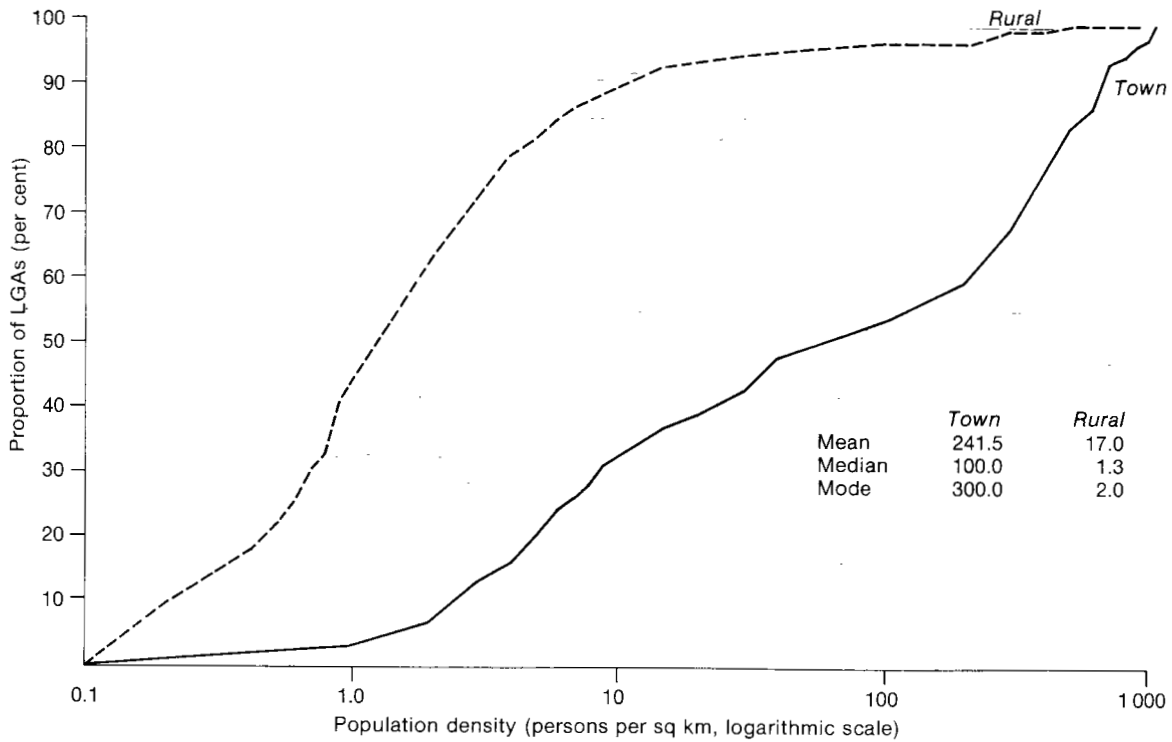
At 30 June 1980 an estimated 4.1 million of Australia's 14.7 million population (27.9 per cent) lived in rural areas. Approximately 2.0 million (13.8 per cent) people lived in *Town* LGAs and 2.1 million (14.6 per cent) resided in *Rural* LGAs.

The *Rural* local government component of Australia's population has continually declined relative to more urban areas, from 31 per cent in 1947 to 21 per cent in 1954 and 14 per cent in 1976. Figure 2.5 shows that this pattern has occurred in all States, but that the rate of decline has slowed in more recent times. (The source of Figure 2.5

TABLE 2.5-MEDIAN POPULATION DENSITIES OF RURAL LGAs, 30 JUNE 1980
(persons per square kilometre)

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town	99.9	403.3	20.0	7.5	9.5	15.5	100.0
Rural	1.1	2.4	0.6	0.4	1.3	1.6	1.3

Source: Derived from ABS 1979-80 AMIS data file.

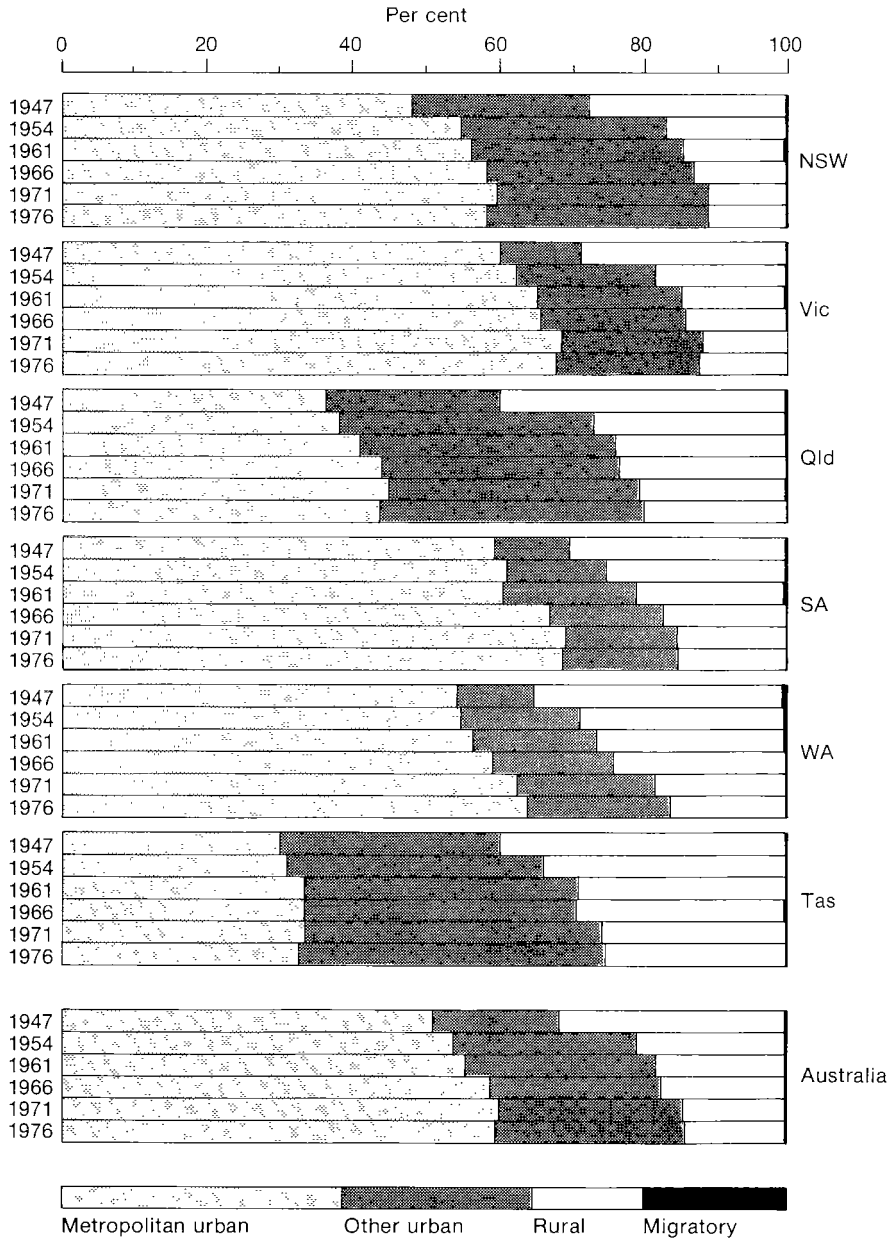


Source: Derived from ABS, 1979-80 AMIS data file.

Figure 2.3—Cumulative frequency distributions of population densities of *Town* and *Rural* local governments, 30 June 1980

Source: Readers Digest, *Atlas of Australia*, 1977

Figure 2.4—Population density, Australia, 30 June 1976



Source. Australian Population and Immigration Council, 1980.

Figure 2.5—Distribution of metropolitan urban, non-metropolitan urban, rural and migratory populations of Australia, 1947-76

utilises a slightly different definition of rural to that used for this study, hence the discrepancy in the percentages. However, the comparisons of directions of population movement are still valid.)

The non-metropolitan urban population has accounted for a greater proportion of each State's population since 1947 (Figure 2.5). Growth in *Town* authority populations has occurred for a number of reasons, which probably differ among individual local government areas:

- Diminishing employment opportunities and rising land prices in the cities has tended to reduce movement of population from small towns and rural areas.
- Technological and structural changes in the rural sector has led to a reduction in the numbers of farm workers and their (partial) replacement by specialists based in towns.
- Farm workers and their families are increasingly living in towns and commuting to properties each day.
- Migration of persons from the cities seeking rural lifestyles has occurred in some locations.

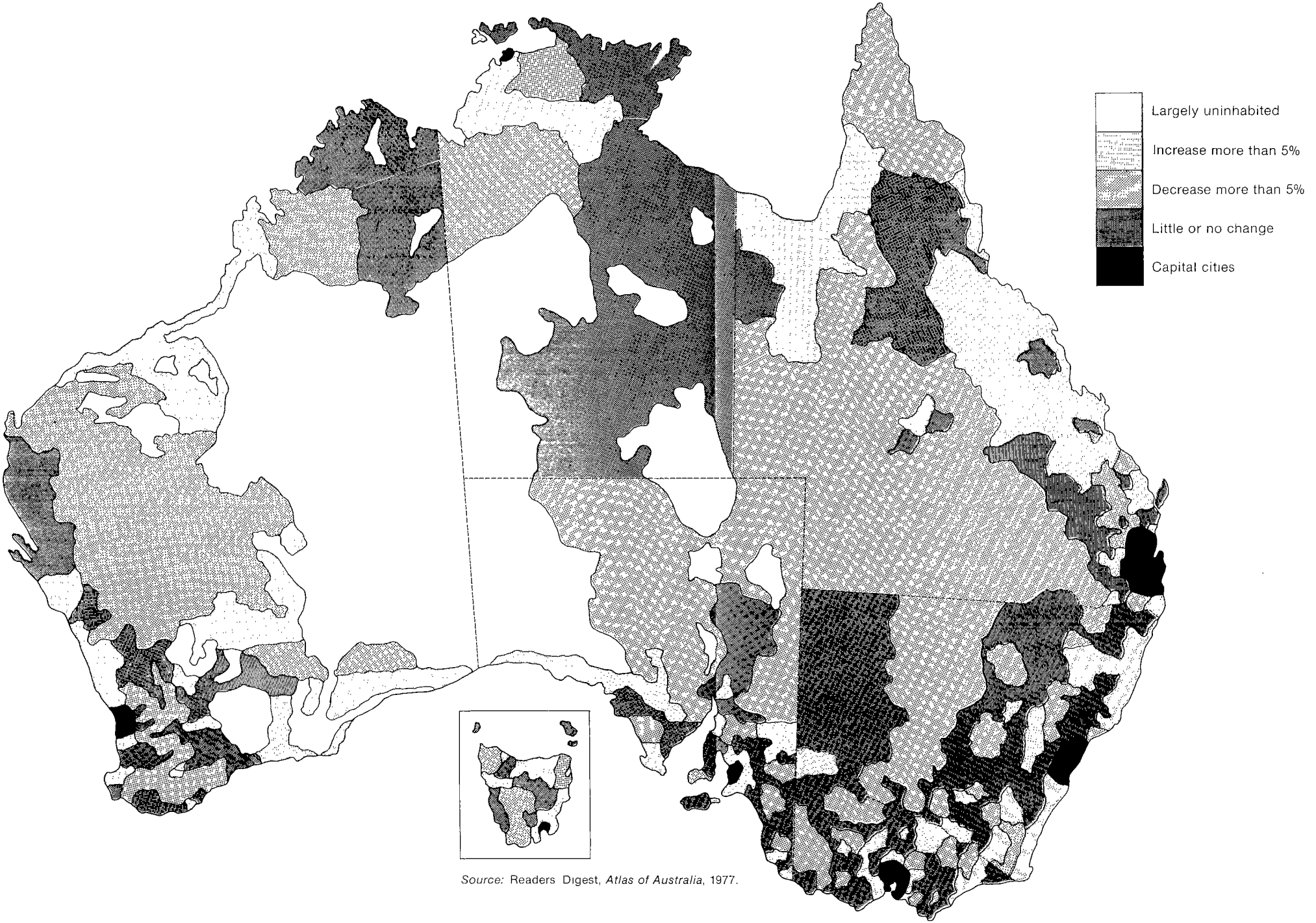
Individual LGAs display a more varied pattern of population movements. Whilst most rural LGAs recorded static or declining populations between 1971 and 1976 (Figure 2.6), some indicated strong growth. These were predominantly related to expansion around country towns and cities, (particularly along the coastal areas of New South Wales and Queensland), and to mining industry developments.

Land in rural holdings

The dependence of rural local government areas on the agricultural economy is reflected in the large proportions of their land areas occupied by rural holdings. The proportion ranges from the lowest average of 30 per cent in Tasmania to 94 per cent in Queensland (Table 2.6).

Length of roads in rural local government areas

The average lengths of the roads system in rural local government areas are shown in Table 2.7. Differences among States are due largely to differences in size of LGAs and settlement and development patterns in the incorporated areas. The large, sparsely populated outback areas of Western Australia and Queensland mean that rural local governments in these States are less well served by roads per unit area, but have greater total lengths to care for and much greater



Source: Readers Digest, *Atlas of Australia*, 1977.

Figure 2.6—Changes in population, Australia, 1971–76

TABLE 2.6-AVERAGE AREA OCCUPIED BY RURAL HOLDINGS IN RURAL LGAs, 30 JUNE 1980

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town							
Square kilometres	1 045.0	134.0	5 676.0	4 937.0	405.0	352.0	2 000.0
Per cent of total area	64.0	69.1	93.7	50.8	64.1	48.8	71.4
Rural							
Square kilometres	4 956.0	1 193.0	14 548.0	10 641.0	1 463.0	542.0	6 100.0
Per cent of total area	83.6	65.4	91.3	44.7	91.2	30.4	66.2

Source: Derived from ABS 1979-80 AMIS data file.

TABLE 2.7-AVERAGE LENGTH OF ROAD IN RURAL LGAs, 30 JUNE 1980

(kilometres)

	NSW	*Vic*[a]	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town							
Road length	704.00	232.00	738.00	596.00	551.00	426.00	569.00
Length per capita	0.04	0.03	0.05	0.07	0.08	0.05	0.05
Length per square kilometre	2.03	4.21	1.76	1.98	4.02	0.82	2.52
Rural							
Road length	1286.00	1080.00	1338.00	1204.00	846.00	484.00	1113.00
Length per capita	0.31	0.30	0.72	0.13	0.58	0.22	0.57
Length per square kilometre	0.80	0.92	0.31	0.36	1.13	0.41	0.69

a. Excludes Country Roads Board declared State highways, freeways, tourist and forestry roads.

Source: Derived from ABS 1979-80 AMIS data file.

lengths per capita, than the six States average. Similar areas in New South Wales and South Australia are mostly unincorporated.

A broad indicator of the quality of rural LGA road networks is the length of sealed roads as a proportion of the total road network (Table 2.8). On average, rural local governments in Victoria have substantially greater proportions of their road networks sealed, and in South Australia substantially lower lengths sealed, than the six States average. Length of surface treatment is not the only indicator of road quality, and the differences shown in Table 2.8 should be treated cautiously. Quality is also affected by considerations of road and shoulder widths, widths sealed, roughness, horizontal and vertical geometry, reliability of water crossings and so on.

More detailed information on the rural local government road network is presented in Chapter 5.

Rate revenue in rural local government authorities

Rural local governments received, on average, about 77 per cent of their rate revenue from taxes levied on the value of rural properties in 1974-75 (Table 2.9). Despite this average, there is a large variation in the percentage of rates each LGA received from this source. Five per cent of *Rural* authorities received less than 23 per cent of rate revenue from rural properties while 35 per cent received more than 90 per cent from such sources. Those States with higher *Rural* LGA population densities (Victoria, South Australia and Tasmania) tended to rely less heavily on rates from rural holdings, as residential rates held a more important place in local authorities' revenue. Rates levied on commercial and industrial property averaged no more than 8 per cent in any State. These figures emphasise the dependence of *Rural* authorities on the rural economy and its profitability.

TABLE 2.8-AVERAGE LENGTH OF SEALED ROADS IN RURAL LGAs, 30 JUNE 1980

	NSW	*Vic*[a]	*Qld*	*WA*	*SA*	*Tas*	*All States*
Town							
Length sealed (km)	337.0	141.0	338.0	254.0	184.0	202.0	267.0
Per cent of total road length	47.9	60.8	45.8	42.6	33.4	47.4	46.9
Rural							
Length sealed (km)	346.0	347.0	298.0	249.0	128.0	132.0	270.0
Per cent of total road length	26.9	32.1	22.3	20.7	15.1	27.3	24.3

a. Excludes Country Roads Board declared state highways, freeways, tourist and forestry roads.

Source: Derived from ABS 1979-80 AMIS data file.

TABLE 2.9-AVERAGE PROPORTION OF *RURAL* LGA[a] RATES BY SOURCE, 1974-75

(per cent)

Source	*NSW*	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*All States*
Residential	9.6	16.9	6.7	11.3	22.1	34.3	14.7
Industrial	0.7	2.1	0.6	3.8	2.1	6.9	2.2
Commercial	2.1	2.9	2.8	4.6	4.8	7.9	3.7
Farm	84.7	75.0	88.1	78.1	68.4	45.1	76.7
Other	2.8	3.0	1.8	2.3	2.6	5.2	2.7

a. *Rural* authority is defined here as an LGA included in Harris Categories of Small Town or Rural.

Source: Secretariat to the Local Government Ministers' Conference (1980).

CHAPTER 3-THE PROVISION OF RURAL ROADS

HISTORY OF ARRANGEMENTS

In the early days of European settlement in Australia, roads in the colonies were under the authority of the Colonial Office in London, and administered by the appropriate governor. Pressures to supply the bare necessities of food and water at first outweighed the need for roads (Lay 1981). As these pressures eased, funds for road construction using convict gangs came intermittently from the Colonial Office. When these funds were not available money was provided from taxes on liquor, loans from the Crown and donations from free settlers. Roads beyond the 'limits of location'[1] were provided in a crude form by squatters.

From 1810 contracts were made between the Crown and private individuals who constructed and maintained certain main roads to a specified standard. These contracts were financed by the collection of tolls. Toll roads proved to be of mixed success depending on the ease of evasion, with the most successful being roads through dense bush or difficult terrain and river crossings.

As the free settler populations of the colonies were small, convict labour was crucial for the development of roads. Hobart and Sydney had adequate supplies of convict labour for the making of roads, but the development of road networks in what were to become Victoria and South Australia proceeded slowly, and the West Australian road network was virtually non-existent until the arrival of convicts in 1850. When convict shipments ceased, roads in New South Wales and Tasmania began to deteriorate. The lack of attention to roads and the shortage of labour was exacerbated as the gold rushes and agricultural booms swept the colonies.

Two systems of road management developed independently in the first half of the 19th century. Road trusts, Australia's first form of local government, were formed in all colonies except Queensland to

---

1. 'Limits of location' are those areas which had not been surveyed and so were not Crown Land.

administer the building and maintenance of roads, largely as a result of the demonstrated inability of the colonial governments to manage resources for roads. At around the same time legislation was passed providing for the voluntary establishment of local government corporations and areas. However, few areas outside the large urban centres were incorporated under this legislation. Road trusts existed side by side with incorporated areas with each taking responsibilities for certain roads. Roads which lay outside the two systems were the responsibility of the appropriate colonial government.

Much of the arterial network was in the hands of trusts or incorporated areas. Lack of co-operation, limited financial resources and the spread of parochialism meant that the whole network was generally in a bad condition. There were some attempts to create uniformity and cohesion in the road system by declaring main roads a colonial responsibility, but this was interrupted by the advent of railways. The development of rail caused a decline in the use of roads for long distance travel and for some three decades roads were of local rather than colonial/State or national importance (Commonwealth Bureau of Census and Statistics 1966).

Soon after Federation New South Wales, Queensland and Tasmania passed local government legislation which extended the powers of local governments, consolidated past legislation relating to municipalities and road trusts and took away the voluntary aspect of incorporation, thus establishing the basis for the present system of local government. In most States, local government remained wholly responsible for roads in their areas.

The popularisation of the motor vehicle brought roads sharply to the attention of all levels of government. Local governments had generally failed to provide and maintain consistent and adequate road standards, particularly on main roads. Pressure from motoring organisations for better roads and the need for co-operation in the face of rapid change led to the establishment of the State Road Authorities (SRAs) and the decision that declared main roads were to be a State responsibility. The principal functions of SRAs were to:

- provide overall planning for the development of the State's road networks;
- ensure uniform standards of construction and maintenance across local administrative boundaries;
- provide the necessary engineering skills for development of State road systems and to advise local government;

- raise and/or administer taxes to finance roadworks and to assess appropriate levels of local government contributions to the main road network; and
- ensure adequate effort from local government and to prevent leakage of main road grants to local roads.

Although each State followed the same basic pattern described above, there are many historical and political reasons why each State developed its present system of responsibility for the provision of roads. The development of each State system and the development of the Commonwealth's role in road provision are described in the following sections.

New South Wales

The financing of roads in the colony of New South Wales, though formally the responsibility of the Colonial Office, was in practice left to the Governor's initiative (New South Wales DMR 1976). Often the administration relied on the colonists themselves to build and maintain the roads by means of donation or actual participation in road maintenance. Turnpike roads, first introduced in New South Wales in 1810 by Governor Macquarie, supplied some revenue. Some major turnpike roads were managed by trusts but, distinct from the later road trusts, trustees were appointed by the Governor rather than elected by local landowners.

In the 1820s the Surveyor-General and three Commissioners were given the task of surveying and constructing roads. By the early 1830s the road network had actually deteriorated to the extent that road responsibilities were transferred back to the Governor. An *Imperial Act* of 1832 made it lawful for the colonial government to levy taxes for the repair of roads. Primary roads were subject to a toll and secondary roads were funded partly through tolls and partly through taxes levied on owners of adjacent land (New South Wales DMR 1976).

Through the 1830s the Government became increasingly pressed with problems of road costs and management of the road system. Suggestions of a solution involving road management by local units resulted in the *Parish Roads Act 1840* which entitled landowners to apply to the local magistrate for permission to meet and elect trustees to control their local needs; principally the maintenance of parish (or local) roads. The trustees could levy rates (to a maximum of sixpence an acre) or collect tolls.

Because of the element of voluntarism in the Parish Roads Act few

elected road trusts were formed and this gave the colonial government the impetus to establish a system of road trusts.

> Elected trustees were mostly inactive and there was strong opposition to rating. The slow extension of the system forced the Government to take the initiative and legislation was further enacted for appointed trusts for certain roads or districts. (Australian Council for Intergovernmental Relations ACIR 1981b, p130)

Various Acts between 1848 and 1855 appointed road trusts to manage certain main roads.

A second system was established as a result of a demand for locally elected councils which could provide a range of services including roads. This demand was strengthened by the colonial government's inability and a certain unwillingness to provide purely local services (Power et al 1981, p129). The *New South Wales Constitution Act 1842* provided for the establishment of district councils which were empowered to make and maintain roads, as well as undertaking other functions. However, by 1858 only eight such councils existed and the roads under their responsibility had fallen into disrepair. This, along with a fear on the part of some of the councillors of the newly constituted Legislature that the district council system was the basis for a 'double-election' plot, resulted in that part of the 1842 Act which established the councils being repealed. The *Municipalities Act 1858* allowed for permissive or voluntary incorporation of councils which were given, among other responsibilities, the responsibility for roads. However there was still little incentive to incorporate.

By 1855, railways had come into prominence and, while road trusts continued to exist, major roads were placed under the Commissioner for Railways. In 1861 these roads were transferred to the Department of Public Works and were administered by a Commissioner of Main Roads. In 1864 responsibility for a further 3286 miles of minor roads (including several road trusts) was given to the Department of Public Works. Tolls were abolished in 1877 but road trusts still existed under their original Acts and supervised the grants from the colonial government.

In 1901 the State Government was still responsible for the provision of local services (including roads) to 99 per cent of the State. Soon after Federation the permissive (voluntary) system was replaced by State power to initiate shires in unincorporated areas. By 1905, 60 per cent of the State was incorporated and 28 700 miles of roads had

been transferred to shires. The *Local Government Act 1906* set up the present system of local government authorities. In 1907 the roads function of the Department of Public Works was passed to LGAs because, under the Act, they now had responsibility for the care and upkeep of roads.

As motorised transport became more widespread the role of roads changed and the demand for better roads became a powerful pressure. The provision and maintenance of roads rapidly became a major task for local government which had been given no powers to regulate wheel widths and vehicle weights. Parochial interests and this lack of regulatory power prevented local government from fulfilling its changing function of providing a road network to meet demand and arterial roads were neglected. In response to this development the position of Commissioner for Main Roads, which had been abolished in 1907, was re-established in 1924 along with the Department of Main Roads (DMR). Declared main roads, along with trunk and developmental roads and State highways (and, more recently, tourist roads and freeways) were made the responsibility of the DMR.

Victoria

The settlement at Port Phillip Bay received few road funds from the colony of New South Wales. Most of the colony's responsibilities were delegated to, or simply taken up by, local enterprise (Victorian Transport Study 1980b).

The first road trust was established in the Port Phillip area under the New South Wales *Parish Roads Act 1840* and built the first macadamised road (part of the Great Heidelberg Road). It was largely financed by a toll. However, the Parish Roads Act was not a great success and in Victoria few trusts were formed as 'few districts wanted the responsibility and even fewer wanted to pay the cost' (ACIR 1981b, p237).

Immediately after Victoria's separation from New South Wales in 1851 a committee was established to inquire into and report on the state of roads and bridges. In 1852 it reported that the network was in a deplorable state and recommended that road building proceed according to a general plan. Partly as a result of this report, but precipitated by the extra demand on roads as a result of the gold rush and agricultural expansion, a Central Roads Board and a number of district roads boards were established. The Central Roads Board had exclusive powers over main roads and the district roads boards were responsible for maintaining minor roads 'where local residents are unable or unwilling to undertake the task' (ACIR 1981b, p238).

The *Municipal and Land Corporations Act 1863* allowed the establishment of the first shires. Roads within a shire were put under the control of the shire council. Roads outside these areas remained the responsibility of district roads boards and, where no district had been defined, the Victorian Government. As more shires were formed the Central Roads Board and the district roads boards were abolished and, in this way, the whole of Victoria was incorporated.

By the early 1870s 'about half the revenues of local government derived from central government grants, and the most important functions of the councils (like roads) were under some measure of central government supervision' (ACIR 1981b, p243). In 1874 the hitherto independent urban and rural systems of local government were joined by the *Local Government Act 1874*. The Act allowed councils to become multi-functional authorities with the capacity to move into new fields. This has remained the shape of local government structure to the present day.

By 1910 it was apparent that a central road authority was needed. There had been little co-operation between LGAs in the construction and maintenance of arterial roads, road funds had been spent with little supervision and little regard for needs and the road network had suffered from years of neglect. The Country Roads Board (CRB) was established in 1912 to develop a State road network and to assist local government with funding. An Act of 1924 allowed for the declaration of State highways and subsequent Acts established tourist roads and forest roads. All of these became the direct responsibility of the State, although local governments were required to contribute to the costs of capital works and maintenance. Individual council contributions were calculated by the Board according to its assessment of the gain to the council from the improvements.

Queensland

Present day Queensland was part of the colony of New South Wales until 1859. The New South Wales *Municipalities Act 1858* had given local government the responsibility for the care and management of roads and other services. Under this legislation local government was able to pass by-laws. However, because incorporation was voluntary and there were few incentives to incorporate, there were very few local government bodies in Queensland at the time of separation.

There were also very few roads for these bodies to manage. By 1861 the only formed road was between Brisbane and Ipswich (Queensland Main Roads Department 1970). New South Wales legislation regarding local

government applied in Queensland until the *Municipal Institutions Act 1864* allowed the establishment of LGAs by petition of residents. One restriction was that the LGAs must include a city or a town (Harris 1978a). In the same year, a Select Committee reported that Queensland roads were in a very bad state and that funds were needed to remedy the situation. However, until 1920 railways were the most important means of land transport.

Through the 1870s there was intense pressure on the colonial government to provide roads. In 1878 and 1879 a dual system of local government was introduced for rural areas. Shires and divisional boards were established in the sparsely settled areas of the colony by a series of Acts of Parliament. Both shires and divisions were given powers under these Acts to construct roads, collect tolls and pass by-laws.

The basis for the present system of local government was laid by the *Local Authorities Act 1902*. Under this Act shires and divisions became shires, and councils established under the *Municipalities Acts 1858* and 1864 became cities or towns. It gave LGAs the responsibility to construct and maintain roads and the control over those roads as well as the power to acquire land. The *Local Government Act 1936* consolidated previous Acts and gave statutory recognition and wider powers to make by-laws.

The first decade of the twentieth century saw an increase in the demand for roads but little or no improvement in the road network (Queensland MRD 1963). LGAs were unable or unwilling to provide roads of adequate quality. Their rate base was often small and they did not believe it was their duty to provide roads for through traffic. In response to this problem the *Main Roads Act 1920* established the Main Roads Board (which later became the Main Roads Department) to develop a State-wide network of arterial roads. The cost of construction and maintenance of main roads declared under the Act was shared between the State and LGAs. Later, legislation was passed to allow for the declaration of developmental roads, State highways and secondary roads. For the most part the construction and maintenance of these roads was financed by the Main Roads Board but carried out by local government with its existing resources.

South Australia

The colony of South Australia was proclaimed in 1836. In the original survey for the colony, carried out by Colonel Light, there was no provision for roads beyond the Adelaide Hills. As settlers pushed out

from Adelaide, a network of rough tracks developed and as traffic on some tracks became heavier the need for properly constructed roads became apparent. A Board of Trustees was appointed to borrow money for the construction and maintenance of the Great Eastern Road and to levy tolls to repay the loans. The construction of parallel roads soon made it easy to avoid the toll and the system was abandoned in 1847. A later attempt to collect a toll on the Port Road failed for the same reason.

The Central Board of Main Roads was established in 1849 to control the important Northern, Southern, Eastern, Western and Port Roads. As new centres of settlements developed, a series of Main Roads Boards was set up in Mt Gambier, Port Augusta and Port Lincoln. The same Ordinance which established the first Board made provision for the appointment of five-man district boards of road in each administrative division (Hundred) for the control of district or local roads. However, few appointments were made. It may well have been their narrow responsibilities that made the district boards of road unpopular. Legislation in 1849 and 1852, permitting the voluntary formation of general-purpose local authorities, met with a success unprecedented elsewhere in Australia. The system of district boards of road was effectively abandoned when the *District Councils Act 1852* gave urban and rural LGAs sole control of local roads.

In 1874 the whole colony was divided into eight main roads boards districts. Within each district, main roads and district roads were declared. The Boards administered these roads while LGAs retained responsibility for all undeclared local roads. By the late 1880s, the development of rail in South Australia meant that the importance of a colony-wide road network declined and the administration costs for the eight Main Road Boards were seen to be out of proportion to the amount expended on road maintenance. In 1887 the Boards were abolished and district councils were made responsible for the construction and maintenance of declared roads, in addition to local roads. Roads in unincorporated areas were the responsibility of the Crown Lands Office. Councils were granted funds to assist in the construction and maintenance of main roads and were responsible for funding and work on district roads. However councils contributed little of their own funds to the main road network until the passing of the *Road Improvement Act 1921* requiring certain council contributions for roads.

The Local Government Department was formed in 1917 to administer the operations of LGAs. This included giving advice on where and how to spend money on roads. In 1926 under the Highways Act this department

became the Highways and Local Government Department and, in response to the increasing demand for better roads, a Commissioner for Highways was appointed. 'The general scheme of the Act was for the establishment of the system of co-operation between State and Local Government Authorities which now operates' (ABS 1966, p259).

Western Australia

The provision and management of roads was the responsibility of the Advocate General and the Surveyor General until the *Towns Improvement Act 1838* which allowed for the setting up of town and country trusts. In addition, a Central Road Trust was established by the *General Road Trust Act 1841* to administer roads in the colony by creating district committees able to levy tolls, raise loans and request Government assistance. Due to their small populations and to a shortage of funds, the trusts and committees failed to achieve any substantial improvement in the colony's roads. The functions of the Central Road Trust were handed to the Central Board of Works in 1847 and then to the Governor who retained that responsibility until 1897. The road network developed slowly until convicts arrived in Western Australia in 1850 and by 1870 there were about 1100 miles of road.

The *Municipal Institutions Act 1871* and the *Road Districts Act 1871* formed the basis for the system of local government which existed until 1960. Both municipalities and road boards were given the responsibility of constructing and maintaining roads in their areas and were given the power to levy rates and to provide other local services. The Roads and Bridges branch of the Public Works Department was responsibile for the development of highways and trunk roads and maintained a close supervision of the Boards' works.

As a result of increasing traffic levels and insufficient road maintenance, the upkeep of main roads was considered to be beyond the capability of local road boards. Local and State authorities increasingly saw the need for road planning on a State-wide basis and so in 1926 Western Australia legislated for State control of main roads. The *Main Roads Act 1926* established the Main Roads Board which declared main and developmental roads. The construction and maintenance of main roads was the responsibility of the Main Roads Board while the responsibility for the maintenance of developmental roads was passed to LGAs after the Board had completed their construction.

The 1926 Act required districts benefitting from a main road to meet half the expenditure on construction and maintenance on the road.

This proved unworkable and, in 1929, was replaced by an amendment whereby rural LGAs traversed by main roads paid 22.5 per cent of the vehicle licence fees collected by them while contiguous rural LGAs paid 15 per cent and others 10 per cent (SWATSG 1977a, p5). In 1930, the Board was abolished and a Commissioner was appointed as head of the Main Roads Department (MRD). In 1954 the MRD began a scheme whereby the Department and LGAs equally shared the costs of sealing developmental roads. By 1974, 6840 kilometres of rural roads had been sealed under the scheme.

The system of local government established in 1871, including the earliest established provisions for compulsory incorporation, appears to have served Western Australia adequately. It was not until 1960 that the Local Government Act consolidated into one statute the legislation pertaining to municipalities and road districts. The Act gave both types of local authority wider powers and provided for common accounting and election systems. There is also provision in the Act for the formation of regional councils to handle functions given to them by groups of councils (Commonwealth Bureau of Census and Statistics 1971).

Tasmania

Tasmania was so reliant on convict transportation for its existence that, when transportation ceased in 1852, Tasmania was plunged into a recession which lasted two decades during which the road network deteriorated. During this period, responsibility for roads rested with various Government departments: Engineering, Roads and Bridges, and Public Works.

Local government in Tasmania effectively began in 1840. In 1812 a system of counties, hundreds and shires had been established but their only lasting function was to define land titles. Governor Arthur's police districts established in the 1820s formed the basis for the formation of future districts and councils but they were given no roads responsibilities. From 1840 a system of elected district road trusts was established and each trust was given the responsibility for maintaining secondary roads. These existed as a separate system to that of the Roads and Bridges Department.

The *Rural Municipalities Act 1858* allowed councils to be incorporated by petition in electoral, police or road districts. Between 1860 and 1866 nineteen rural councils had been established. After petitioning fell into disuse in 1866, a network of *ad hoc* bodies developed to provide services such as roads where no roads trust or council existed (ACIR 1981b, p714).

Yet a third system (the system of main roads boards) was established in 1884 in response to the new mineral discoveries which increased the demand for roads. Both the boards and the road trusts were abolished in 1906 and local government reform made incorporation compulsory. The councils thus formed were multi-purpose bodies with responsibilities for secondary roads. The boundaries and functions of the councils have remained largely unchanged to the present.

In 1935 the roads responsibilities of the Public Works Department (formerly the Roads and Bridges Department) were redefined. Finally, in 1977, the Department was divided into two, one part becoming the present Department of Main Roads.

The Commonwealth

The Commonwealth role in providing roads in the States has been confined to the provision of financial assistance. Sections 106 and 107 of the *Commonwealth of Australia Constitution Act 1900* stated that the State Constitutions would continue and that a State's powers, unless exclusively withdrawn from the State or vested in the Commonwealth, would remain unaltered. The Federal Government was given no responsibility for the provision of roads, but since Federation a tripartite system of road funding has developed.

After World War I the increase in the number and speed of motor vehicles and the expanding soldier settlements had stimulated public pressure for better roads. The end of the War had also brought with it considerable unemployment. It was under these conditions that Commonwealth assistance to the States for roads was introduced under the *Loan Act 1922*. Under Section 96 of the Constitution the Commonwealth was able to provide assistance to the States for the specific purpose of roads. This was done for the first time under the *Main Roads Development Act 1923*. The grants were aimed at providing employment and imprinting 'a national transport development proposal onto the country' (BTE 1981d, p5).

Over succeeding years, the Commonwealth's role was formalised. The purposes of the assistance, the formulae and the conditions under which assistance has been given have changed many times since 1922 but the Commonwealth still contributes substantially to the provision of roads. A detailed discussion of Commonwealth road legislation is contained in BTE Occasional Paper 8 (BTE 1977a) and Occasional Paper 48 (BTE 1981d).

All Commonwealth road grants made under this legislation were paid to

State governments. Whilst successive Commonwealth Governments have acknowledged the local government role in providing roads, grants have always been designated specifically for local roads and not for local government. The Commonwealth has always delegated to the States the decisions on the proportions of Commonwealth road grants to be passed on to local government. This has extended to the setting of priorities (within broad funding categories) and distribution methodologies, although the Commonwealth has reserved the right of final approval of fund allocations at various times. Thus the explicit emphasis in Commonwealth roads legislation has been to provide assistance to the States for roadworks, and local governments have been regarded as agents of the States for this purpose.

Nonetheless, Commonwealth representatives have regularly expressed recognition of local government's roading role and a concern to ensure that councils have the financial capacity to undertake roadworks. These concerns have largely been addressed through administrative controls and the (Commonwealth) Ministerial discretionary provisions of the legislation, and it has not yet been considered necessary to explicitly legislate for assistance to local governments.

In practice, substantial proportions of Commonwealth grants have reached local government, although they may not always have been readily identifiable as Commonwealth-sourced funds. In recent years the SRAs have, with Commonwealth encouragement, awarded the bulk of local road grants to local government for works on council controlled roads. Councils also have received substantial but indeterminable sums of other categories of Commonwealth road grants, both for works on State controlled roads and for specific projects on council roads.

In addition to the annual assistance provided under the general road Acts, the Commonwealth has at various times provided funds for specific road works in the States. These include grants for Beef Roads, the Eyre and Barkly Highways, the Tasmanian Gordon River Road, road safety, Tasmanian tourist roads and the Australian Bicentennial Road Development Program. As with the annual road grants, these grants are made to the States, but may be passed on to local governments. Further information on these grants is contained in the Commonwealth Parliament Budget Papers (Number 7, Payments To or For The States, The Northern Territory and Local Government Authorities) of various years.

Further Commonwealth assistance has been provided to State and local governments by way of natural disaster relief, general revenue sharing

and unemployment relief grants. In part these grants were allocated to roadworks by SRAs and councils. However, due to the lack of end-use reporting in these grants programs, it is impossible to estimate the amount of these funds used in this way. The major grant programs comprised general revenue grants (40 per cent of Personal Income Tax Sharing (PITS) for the States and 2 per cent for local government) and unemployment relief grants (notably the Regional Employment Development Scheme).

THE PRESENT POSITION

The constitutional responsibility for roads in Australia rests with individual State governments. This responsibility has in part been delegated to local government which has assumed powers and responsibilities for certain classes of roads. The extent of delegated responsibility and the roads to which it applies varies from State to State.

This delegation of responsibility is in effect an administrative arrangement, for while local governments are constituted by State legislation they are not recognised by the Crown, and have no autonomous legislative or executive powers. For all intents and purposes the local government sector is part of the State administration. Therefore, the ultimate responsibility for roads still rests with the respective State governments (see ACIR (1981c) for further information on this topic).

An effect of this specific relationship between State and local governments is that it hampers direct links between the Commonwealth and local government. The Australian Constitution makes no mention of the third tier of government and any dealings between the Commonwealth and local government are usually made through the appropriate State government.

This condition extends to the provision of financial assistance. Any financial dealings between the Commonwealth and local governments are usually channelled through the appropriate State government, a role which successive governments in each State have guarded with some vigour. In all States the State government has retained responsibility for the allocation of Commonwealth road grants to the local government sector as well as the distribution of its own funds for expenditure by individual LGAs. However, the process of allocation of Commonwealth funds among LGAs and other authorities is subject to approval by the Commonwealth Minister.

Within this context the remainder of this chapter examines:

- the sources of funds presently available to local government for the construction and maintenance of roads;
- the relative administrative responsibilities for roads of State and local governments; and
- the administrative arrangements for the allocation of funds to LGA roads.

SOURCES OF FUNDS

Funds available to LGAs for roadworks fall into two broad categories:

- Specific Purpose Funds, which *must* be spent on road maintenance and construction. This category includes:
  - Commonwealth road grants and special project grants (eg Bicentennial Road Projects);
  - State road grants and subsidies;
  - State reimbursements to LGAs for work done on behalf of State authorities; and
  - loans raised by LGAs for specific road works.
- General Purpose Funds, which *may* be spent on any function (including roads) at the LGAs individual discretion. This category includes:
  - individual LGAs' share of the 2 per cent of Federally-raised Personal Income Tax made available by the Commonwealth Government for distribution among councils; and
  - LGAs own funds raised through general rates, rents, charges, etc.

Specific purpose funds

Commonwealth road grants

The Commonwealth provides annual Section 96 grants to the States for the construction and maintenance of roads. The grants are made under specific legislation (at the time of writing the *Road Grants Act 1981)* for three categories of roads, viz:

- national roads which include national highways and developmental roads;
- arterial roads; and
- local roads.

These categories have been defined to facilitate the allocations of Commonwealth road grants and are functional in character. They

therefore bear little relationship to the classifications in each State which determine the division of responsibility for roads between the SRA and LGAs. In every State there are overlaps between State road classifications and Commonwealth categories which means that there are arterial roads which are the responsibility of LGAs, and local roads which are the responsibility of the SRAs. From a Commonwealth perspective both SRAs and LGAs are entitled to receive appropriate Commonwealth grants for the construction (and in the case of local roads, maintenance) of those roads.

This imprecise matching of Commonwealth and State road classifications, combined with the lack of constitutional recognition of local government, means that despite an underlying Commonwealth view that local road funds and grants were to be largely passed on to local government, a proportion is invariably allocated to the SRAs and other State agencies for expenditure on local roads which are under their control.

The proportion of local road grants retained for use by State agencies has at times evoked negative comments from the Commonwealth Government. Although the Commonwealth Government has acknowledged that State agencies may have legitimate claims for local road funds, it has occasionally considered that the amounts retained were too great and were disadvantaging LGAs[1]. The Commonwealth's usual recourse has been limited to withholding approval of the proposed programs[2]. Although this has proven an effective measure it has the inherent problem that if a State adopts a particularly firm stance on the proposed program, then the main sufferers will be the LGAs which do not receive any local road grants until the program is finally approved. However, in several instances the SRAs have made progress payments to LGAs in anticipation of eventual program approval, to minimise disadvantage to LGAs.

---

1. The then Minister for Transport, Mr Hunt, in answer to a question concerning the NSW local roads program replied in the following way:

   > ...I regret very much that I have not been in a position to approve the application by the relevant NSW Minister for expenditure for funds for local roads ... He has submitted a rural local roads program but has subtracted from expenditure on rural local roads no less than $1.5m for expenditure on traffic facilities in NSW. So he is distorting the whole point and purpose of the Commonwealth Government's allocation of funds to assist local government with the construction and maintenance of local roads. (Australia 1980).

2. Under Commonwealth roads legislation there are formulae in each State for the distribution of Commonwealth funds for local roads among LGAs.

To partially overcome this problem the Commonwealth has been negotiating with the States for the introduction of formulae to allocate Commonwealth local road grants to State agencies and LGAs. The formulae would need the agreement of both the SRA and the appropriate local government association before it would be agreed to by the Commonwealth, although if no agreement is reached the Commonwealth can impose formulae. The adoption of such formulae would remove the need for yearly approval of allocation programs.

The implicit recognition in the formulae that State agencies should have access to local road grants highlights the reality that these grants are not solely for specific assistance to local government, but are grants for the construction and maintenance of roads which by definition provide a local access function.

State road grants and reimbursements

Funds provided by the SRAs from their own sources can take a number of forms, among which are:

- *Block Grants* to LGAs for LGA roads (eg Vic/WA)
- *Subsidies* on LGA capital works (eg Qld)
- *Tied Grants* to LGAs for specific projects and subject to conditions (eg NSW)
- *Reimbursements* to LGAs for work on SRA roads.

In practice the distinction between SRA grants (in whatever form) and reimbursements can be quite blurred and the terms are often interchanged.

In essence the difference between a grant and a reimbursement is that in the first case councils retain some degree of autonomy as to where and how the grant is spent, while in the latter case the council fulfills a contract for works of a specific type, extent and duration. However, SRAs can exert considerable control over LGA activities (such as attaching conditions to grants) and the dividing line between the two avenues can become quite indistinct. In the context of this study it is not important to be able to correctly distinguish funds as either grants or reimbursements except to recognise that the distinction exists.

From the LGAs own perspectives, reimbursements can be very important and much sought after. Firstly, they ensure that some works are carried out on State classified roads within their area; secondly, they ensure a continuity of work for men and plant; thirdly, councils

believe (although this belief was not tested) they can carry out a variety of works in their own areas more efficiently than the SRAs, and so argue that more work is done for the same expenditure.

On many occasions councils had little knowledge of the origin of funds passed on to them. What they called 'State Grants' were frequently reimbursements of Commonwealth road grants or a combination of Commonwealth/State funds. Not unexpectedly councils were not overly concerned about where the funds came from, and concentrated their interest on the quantity and continuity of these funds.

Loans

Loans are strictly not an alternative source of funds, as they must be repaid (with interest) from general revenue over a period of years. However loans allow councils to decide whether to make capital expenditures now and obtain immediate benefits, or to delay the investment until such time as funds are available from other sources.

Within limits, LGAs are able to raise loans to finance capital works. These limits include:

- restrictions set by State governments on the total amounts of loan borrowings that can be undertaken by individual councils in any one year; and
- restrictions (either self-imposed or contained in Local Government Acts) on the proportion of revenue that can be committed to interest and redemption payments of all loans.

Within these restrictions councils can use loans to finance permanent road works. Once a loan has been approved and raised for a specific project it cannot be easily transferred to other purposes.

During discussions with councils it was found that there was an ambivalent attitude to raising loans for roadworks, with some councils happy to raise funds annually by this method, while others did not regard roadworks as an appropriate long term investment to be funded by loans.

General purpose funds

General purpose grants

Under the tax sharing agreement *(Local Government (Personal Income Tax Sharing) Act 1976)*, local governments throughout Australia are entitled to share in a fixed proportion of all Personal Income Tax raised by the Commonwealth. That proportion is currently 2 per cent.

Briefly, these funds are allocated in the following fashion:

- The 2 per cent share is divided among the States in specific proportions which are subject to recommendation by the Commonwealth Grants Commission.
- Each State allocates a minimum of 30 per cent amongst local authorities by taking into account at least the population of the respective areas, but possibly also their respective sizes and population densities and any other matters which may be relevant. The exact formula to be applied is subject to agreement between the Commonwealth and individual State governments.
- The remaining assistance is allocated among local authorities with due regard being given to individual financial needs which are the subject of recommendation by each State Grants Commission (Commonwealth of Australia, 1980).

The funds eventually received by LGAs under this arrangement are totally discretionary. That is, councils can expend them for any purpose they see fit, including the construction and maintenance of roads. Invariably, while General Purpose grants are recorded as a specific revenue item, for expenditure purposes they are regarded as part of the council's other general revenue (ie rates, charges, rents etc) and the final destination of the grants are very rarely recorded.

Council's own funds

Councils' own-source funds include all revenue from individual councils' general rates and any commercial activities they may be involved in. Councils have reasonable autonomy on setting rates and charges (however in NSW State legislation regulates the maximum rate increases that can be applied in any given year) and have almost complete discretion on how these self-raised funds can be applied. The only exception is that on occasions councils may levy special rates on defined benefitted properties for the purpose of financing specific works or services.

RESPONSIBILITY FOR ROADS AND ADMINISTRATIVE ARRANGEMENTS

Background

The financial and administrative arrangements between individual councils and the SRAs are complex, and in many cases not well understood by elected council representatives and officers. During discussions with councils there were many occasions where councils

were not aware of the reasons why decisions were taken by SRAs.

Similarly, councils were not fully informed as to how the SRAs decided how grants were allocated to individual councils, nor how they went about evaluating the works programs submitted by councils. In all States there were examples of lack of communication between State and local government.

In this section the division of financial responsibilities for roads between the State and local government and the administrative arrangements that exist in each State to regulate the flow of funds from the SRAs to individual councils are discussed.

In order to maintain some consistency in presentation each State will be discussed separately under the following headings.

Road responsibilities and funding
This describes the relative financial and administrative responsibilities between the SRAs and local government. Responsibilities are discussed in the context of the State's own road classifications which may vary markedly from the Commonwealth categories under the Road Grants Act. As there are no general relationships between Commonwealth categories and State classifications it cannot be assumed that all local roads are under the control of local government, or that local government only has responsibilities for local roads.

Further, there are cases in each State where other State instrumentalities have specific road responsibilities. Usually these affect only small lengths of roads and involve small expenditures. In most cases they are ignored and are discussed in detail only where their influence is marked.

Administrative arrangements
This section describes the administrative arrangements for the disbursement of Commonwealth and State road funds to LGAs. Where appropriate, special reference will be made to possible new arrangements for the distribution of Commonwealth grants resulting from Commonwealth/State discussions taking place at the time of writing.

New South Wales

Road responsibilities and funding
Roads in NSW can be placed into four distinct types, each with a

different mix of administrative control and financial responsibility. These four 'types' are not the same as the official NSW State road classifications which categorises roads according to purpose. Rather, the four types developed in this part reflect the position of each road in the administrative and financial network that exists among the relevant authorities and agencies, although there are no legal impediments to LGAs contributing funds to any of the road classes mentioned. These types are as follows:

- Roads under the administrative and financial control of the NSW DMR. This class is made up of State classified freeways, most State highways, most ordinary main roads within the County of Cumberland (which approximately describes the Sydney Metropolitan area and some classified roads in country areas) and unclassified roads in the unincorporated areas of Western NSW.
- Roads under the administrative and (partial) financial control of other State agencies. For example, this includes roads controlled by the NSW Department of Public Works, the Forestry Commission and the NSW Parks and Wildlife Service. Funding for these roads may come exclusively from the relevant agencies, the DMR, or both.
- Roads under the administrative control of LGAs, but with varying financial support from the NSW DMR. This class includes the balance of classified roads, listed below.
  - Trunk roads for which full cost of works are met by grants from the DMR.
  - Ordinary main roads outside the County of Cumberland where the full cost of works are met by grants from the DMR.
  - Development roads where construction costs are met by the DMR with maintenance met by the appropriate LGA. This classification also provides for developmental works; ie a single work such as a bridge or a road which would otherwise not be classified as a developmental road.
  - Tourist roads for which the DMR may assist councils financially for up to one half the cost of construction and maintenance.
  - Secondary roads which are contained entirely within the County of Cumberland. The DMR may meet up to half the cost of construction and maintenance.
- Roads under administrative and financial control of LGAs. This includes most unclassified roads in the incorporated area of NSW.

The financial (as distinct from administrative) responsibilities of both the DMR and the LGAs are summarised in Table 3.1.

TABLE 3.1-NEW SOUTH WALES; SUMMARY OF FINANCIAL RESPONSIBILITIES FOR ROADS, DEPARTMENT OF MAIN ROADS AND LGAs

(percentage of total)

Road class	*DMR*			*LGAs*		
	Construction	*Maintenance*	*Bridges*	*Construction*	*Maintenance*	*Bridges*
Freeways	100	100	100	0	0	0
State highways	100	100	100	0	0	0
Trunk roads	100	100	100	0	0	0
Ordinary main roads						
County of Cumberland	100	100	100	0	0	0
Rest of State[a]	100	100	100	0	0	0
Developmental roads and projects	100	0	100	0	100	0
Tourist roads	up to 50	up to 50	up to 50	50-100	50-100	50-100
Secondary roads	up to 50	up to 50	up to 50	50-100	50-100	50-100
Unclassified roads						
Unincorporated						
Western region	100	100	100	0	0	0
Incorporated areas	0	0	0	100	100	100

a. DMR has met full cost of works on trunk roads and ordinary main roads outside the County of Cumberland since 1972.

Source: DMR Annual Reports and BTE analysis.

Administrative arrangements

Prior to 1979, Commonwealth local road funds were disbursed to LGAs on the basis of a Public Works Department formula. The formula provided for the division of available funds between shires and urbanised areas (municipalities) in the ratio of approximately 96:4, and within each group for a base grant (60 per cent of the total), evenly distributed among LGAs regardless of size, rating capacity or road length. The remaining 40 per cent was allocated according to road length and bridge area and according to the relative *needs* of each council.

This formula was replaced in 1979 by one developed by the DMR in consultation with the Shires Association of NSW. It has also formed the basis of discussions between the Commonwealth and NSW on a formula to allocate Commonwealth local road grants. At the time of writing the Commonwealth Department of Transport reported that a formula had been agreed to for 1982-83 but that it would be reviewed before 1 July 1983[1].

Not all local roads are under the control of LGAs, and some Commonwealth grants for this category are allocated to the DMR and other agencies for expenditure on their local roads. In past years the proportions withheld have varied slightly (Table 3.2). However, from 1981-82 the percentage that will be withheld for use by the DMR and other State instrumentalities will be fixed by the formula agreed to by both the Commonwealth and the State Government. For 1981-82 and until revised that proportion was set at 9 per cent.

The formula that has applied since 1979 retains the concept of the base grant in order to avoid 'disadvantaging' any council. However, its magnitude has been gradually reduced so that by 1982-83 it constituted only 25 per cent of the total grant available to LGAs, and not 60 per cent as was the case before 1979.

---

1. Since preparation of this paper a formula for distribution of Commonwealth funds has been agreed to. Rural local roads are allocated 73.7 per cent of the road grants and 26.3 per cent to urban local roads. The allocation to rural local roads is:
   - 9 per cent to State instrumentalities;
   - 9 per cent to councils for specific works; and
   - 82 per cent distributed among individual councils on the following basis
     - 80 per cent according to road length
     - 20 per cent according to population

   (BTE (1984), 'Assessment of the Australian Road System: Financing', Occasional Paper 61).

TABLE 3.2-ALLOCATION OF COMMONWEALTH LOCAL ROAD GRANTS TO RURAL LGAs IN NSW, 1975-82

	1975-76	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*
Commonwealth Grant ($m)	16.5	18.2	25.8	27.6	29.7	33.0	35.6
Allocation to LGAs ($m)	16.5	16.3	23.3	24.1	27.6	30.2	32.4
Percentage to LGAs	100.0	89.6	90.3	87.3	93.2	91.5	91.0

Source: DoT, personal communication (1982).

The remaining 75 per cent of the grant is distributed according to the following guidelines:

. *needs* (construction) grant	45 per cent
. maintenance grant	34 per cent
. population grant	15 per cent
. bridge grant	6 per cent.

Some additional constraints were placed on the distribution of funds. Briefly these were:

- in any one year no council should receive less than its 1978-79 allocation;
- where, according to the formula, a council is due for an increase in any year, the increase should not be more than 20 per cent (nominally) of the grant approved for the authority in the previous year; and
- councils which amalgamated prior to 1 July 1979 were treated as a single entity. Councils which amalgamated after 1 July 1979 will receive a total of the allocations which the individual councils would have received had they not amalgamated.

Victoria

Road responsibilities and funding

The Country Roads Board (CRB)[1] is the SRA in Victoria. The Board, a statutory authority first constituted under the *Country Roads Act 1912*, is headed by three members (a Chairman, Deputy Chairman and a Member) appointed by the Governor in Council. Their powers and responsibilities for roads are set out in the *Country Roads Act 1958*. The CRB has decentralised the management of much of its road network into ten regional divisions, each headed by a divisional engineer who is responsible for works in his own area. The CRB is responsible for the roads declared or proclaimed under the provisions of the Country Roads Act. LGAs are responsible for unclassified roads, that is, all other public roads. More specifically road responsibilities and funding can be divided into the following groups:

- Roads for which the CRB is responsible and which are entirely funded by the CRB. This group comprises roads declared or proclaimed by the Board as:

  State highways, freeways, tourist roads, and forest roads.

---

1. Since completion of this paper the CRB has been superseded by the Road Construction Authority.

Forest roads are within or adjacent to forest areas. The Board meets the full cost of works required to cater for the needs of through traffic. Responsibility for the remainder is unclear.

- Roads for which the CRB is responsible, but which are not entirely funded by the CRB. This group is composed entirely of roads declared by the Board as main roads. As the responsible authority the CRB decides what work is to be done on main roads, then LGAs do the work on its behalf. Funds are provided by the CRB with a contribution by the LGAs.
- Roads for which LGAs are responsible: unclassified roads. Works on these roads are entirely the responsibility of LGAs and are mostly funded solely by them. The CRB does provide financial assistance (consisting of Commonwealth grants for local roads and the State's own road funds) for some works on unclassified roads. Any assistance given is based on the nature, extent and location of the particular work and the financial position of the municipality concerned. The CRB Annual Reports record that the LGAs contribute about one-fifth (on average) of the total cost of works for which assistance is provided.

The financial responsibilities of both the CRB and the LGAs are summarised in Table 3.3.

The CRB makes substantial contributions (made up of both Commonwealth

TABLE 3.3-VICTORIA; SUMMARY OF FINANCIAL RESPONSIBILITY FOR ROADS, COUNTRY ROADS BOARD AND LGAs

(percentage of total)

	Responsibility		*Funds provided by*	
Road class	*CRB*	*LGAs*	*CRB*	*LGAs*
State highway	100	0	100	0
Freeway	100	0	100	0
Tourist roads	100	0	100	0
Forest roads	100	0	100	0
Main roads	100	0	90[a]	10
Unclassified roads	0	100	80[b]	20
For all other works	0	0	0	100

a. Average contribution for all works undertaken by LGAs.
b. Average contribution for works undertaken with CRB assistance.

Source: Country Roads Board, Annual Reports.

and State funds) to LGAs for work on main and unclassified roads. Both of these State road classifications encompass both the Commonwealth arterial and local road categories. It has not been possible to deduce from available sources either the actual proportions allocated to LGAs for each Commonwealth road category or the proportion of Commonwealth local road grant actually reaching the LGAs.

However, an indication of the direction of funds in Victoria is that in 1979-80 the total CRB expenditure on construction and reconstruction of unclassified roads (not including maintenance) was $36.3 million, which is more than the total Commonwealth grant for that year for both rural local and rural arterial roads ($34.6 million). It is quite certain that the CRB passes on a considerable amount of its own funds to LGAs for work on local and arterial roads (Table 3.4).

Under the Country Roads Act municipalities are expected to make contributions to the CRB for the construction and maintenance of main roads. However, in 1979-80 this contribution totalled only $3.1 million. The provisions of the Act which relate to the financing of road works on main roads are complex and no attempt is made to unravel them in this paper. While councils are expected to share some of the burden for works on main roads the CRB carries the majority of the costs. Also the CRB has the discretionary powers to provide specific assistance to councils which may be disadvantaged or in financial difficulties due to their statutory commitments to main roads.

Administrative arrangements

At the time of writing the Commonwealth Department of Transport reported that while agreement had not yet been reached on an appropriate formula to distribute Commonwealth local road funds, discussions were in progress with the CRB and the Municipal Association of Victoria[1].

---

1. Since preparation of this paper a formula for distribution of Commonwealth funds has been agreed to. The Road Construction Authority (RCA) retains 35 per cent of total Commonwealth road grants with the remaining 65 per cent allocated to LGAs. The allocation retained by the RCA is distributed as follows:
   - two sevenths allocated to tourist and forest roads (to be spent by either the RCA or LGAs);
   - two sevenths for works and bridges (to be spent by either the RCA or LGAs); and
   - three sevenths to local government on the basis of needs and for works on roads under the direct control of the RCA.

   (BTE (1984), 'Assessment of the Australian Road System: Financing', Occasional Paper 61).

TABLE 3.4-ALLOCATION OF COMMONWEALTH LOCAL ROAD GRANTS AND STATE ROAD GRANTS TO RURAL LGAs IN VICTORIA, 1975-82

($ million, current prices)

	1975-76	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*[a]
Commonwealth Local Road grants	11.8	10.7	19.0	20.3	21.8	29.7	32.4
Approved program of allocations to LGAs for rural roads	26.9	30.7	33.0	33.7	37.7	46.9[b]	51.4
State Contributions	15.1	20.0	14.0	13.4	15.9	17.2	19.0

a. Includes urban local roads and urban LGAs
b. $37.1 million approved for allocation to rural LGAs.

Source: DoT, personal communication (1982).

The CRB does not use a formula method for disbursing State and Commonwealth funds to local authorities, but uses a needs/priority system. However, a formula is used, at a State-wide level only, to divide total road funds between works directly carried out by the CRB and works performed by LGAs. After subtraction of funds for national roads, the formula provides 20 per cent for 'committed expenditure', 2 per cent for a 'needs provision' (at the Board's discretion) and splits the remainder equally between:

- CRB works on State highways, freeways, tourist roads; and
- works carried out by LGAs (ie works on main roads and financial assistance for works on unclassified roads).

The 'committed expenditure' involves forest roads, linemarking, special impact works, traffic control facilities, statutory payments, railway bridges, planning and research, capital and management and operating expenses.

In September-October of each year, councils are invited to apply to the CRB for funds for works on roads and bridges for the following financial year. Councils are required to nominate priorities for projects they wish to undertake. The CRB prepares a budget of all monies expected to be received by the Board from all sources for the ensuing financial year. In association with this budget, target figures for expenditure (and allocations) are determined for various State road classifications and types of work within each of the Board's regional divisions.

The councils' applications for funds are reviewed by divisional engineers who may inspect the proposed works sites and discuss the proposals with council staff. Divisional engineers submit details of their recommended programs (which are expected to be in accordance with approved divisional targets) to the Board for final approval.

Allocations of funds for municipal works are made by the Board in March each year. In making the allocations, the Board considers both the councils' applications and the recommendations of the respective divisional engineers. The main factors taken into account in making the allocations are:

- assessed needs;
- councils' priorities;
- limitations of available funding from State and Commonwealth sources;
- capacity of councils to expend funds; and

. the desire to provide continuity of funding.

Funds for unclassified roads are made in bulk, which allows councils to perform works from an approved list. However, funds for works on main roads are allocated to specific projects, as required by the Country Roads Act.

A problem inherent with this yearly approval of projects is that it inhibits long term planning. To overcome this problem the CRB has introduced a three year rolling program for works on main and unclassified roads, where grants are fixed for the first year and provisional for the next two.

Queensland

Road responsibilities and funding

The Commissioner for Main Roads is responsible for the administration of the *Main Roads Act 1920* (as amended), which provides for the construction, maintenance and financing of classified roads throughout the State. The Queensland Main Roads Department (MRD) assists the Commissioner to carry out his functions under the Act.

The MRD is decentralised into four non-metropolitan and one metropolitan divisions. The four non-metropolitan divisions are each administered by resident assistant commissioners, while the metropolitan division is administered by a divisional engineer.

A number of other State agencies have minor responsibilities for roads, including the Departments of Lands, Forestry and Commercial and Industrial Development. However, once constructed many of these roads are dedicated and handed over into the control of the appropriate LGA.

LGAs in Queensland are very active in road construction and carry out substantial works on all classes of roads for the MRD on a total or partial reimbursement basis. The MRD bears the full cost of maintenance on all classified roads, with the exception of secondary roads where it accepts responsibility for 90 per cent of the cost. LGAs have sole administrative and financial responsibility for unclassified roads in their own areas and provide inputs to the MRD for the programming of works on main and secondary roads. Table 3.5 summarises this information.

Councils are currently required to meet 10 per cent of the costs of construction works on main roads and 15 per cent on secondary roads.

TABLE 3.5-QUEENSLAND; SUMMARY OF FINANCIAL RESPONSIBILITY FOR ROADS, MAIN ROADS DEPARTMENT AND LGAs

(percentage of total)

	MRD			*LGAs*		
Road class	*Construction*	*Maintenance*	*Bridges*	*Construction*	*Maintenance*	*Bridges*
State highways	100	100	100	0	0	0
Developmental roads	100	100	100	0	0	0
Main roads[a]	90	100	90	10	0	10
Secondary roads[a]	85	90	85	15	10	15
Unclassified roads	0	0	0	100	100	100

a. As the MRD contribution is towards individual projects undertaken by LGAs it should not be assumed that LGAs contribute 10-15 per cent of the total overall expenditure on these classes of roads.

Source: MRD Annual Reports and BTE analysis.

The individual LGAs financial share of any construction works on declared roads is contributed in the first instance by the MRD. The State Treasury pays the local government contribution to the MRD, usually by offsetting the sum of local governments contribution against the loan indebtedness of the MRD to the Treasury. At the same time, the Treasury creates a loan for the LGA which is repayable with interest over a period of 30 years. A similar agreement with respect to maintenance work exists, but funds are usually repayable within a maximum of 10 years.

Administrative arrangements

The disbursement of funds to LGAs is through a two-tiered process. In the first instance, district engineers and LGAs draw up a program of works for *classified roads* which is then presented to the Assistant Commissioners. The Assistant Commissioners meet at program conferences and negotiate the distribution of funds among the four non-metropolitan divisions using the proposed programs as guidelines. The programs for each division are then adjusted by the district engineers, in consultation with the LGAs concerned, to meet the funds available. This process accounts for approximately 80 per cent of funds made available to LGAs.

The remaining 20 per cent of funds for expenditure on *unclassified roads* are allocated on a formula basis. These are normally divided on the basis of 60 per cent population and 40 per cent area, but this may be adjusted in cases of special needs. The resulting distribution is adjusted so that no LGA receives less than in previous years, thereby ensuring some continuity in the available funds.

The overlap that exists in Queensland between Commonwealth road categories and State classifications has resulted in the MRD being responsible for considerable lengths of rural local roads (under the Commonwealth system) which are classified roads under the State system. The MRD uses a proportion of the Commonwealth local road grant for expenditure on these roads. Table 3.6 shows the allocation of local road grants between:

- funds allocated to LGAs for works on LGA controlled roads; and
- funds programmed for expenditure on local roads which are declared under the *Main Roads Act 1920*.

In most cases, LGAs are the constructing or maintaining agents in rural areas for works on MRD controlled roads. A large part of the local road funds programmed for expenditure on MRD roads therefore also passes on to LGAs. However, these funds are not paid directly to LGAs as allocations. For construction works, councils operate on MRD

TABLE 3.6-ALLOCATION OF COMMONWEALTH RURAL LOCAL AND URBAN LOCAL ROAD GRANTS TO LGAs IN QUEENSLAND, 1975-82

($ million, current prices)

	1975-76	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*
Rural local roads	16.340	14.100	18.800	20.106	21.610		
Urban local roads	1.947	2.220	3.800	4.064	4.368	na	na
Total Commonwealth local Road Grants	18.287	16.300	22.600	24.170	25.978	28.875	31.496
Queensland Government rural Local road expenditure	2.548	3.201	3.538	8.007	9.411	9.268	na
Total Commonwealth and State Government local road expenditure	20.835	19.501	26.138	32.177	35.389	38.143	na
Amounts allocated to LGAs for works on LGA controlled roads[a]	7.888	8.100	9.987	11.193	12.247	13.577	18.892
Amounts programmed for works on roads controlled by MRD	12.947	11.401	16.151	20.178	22.252	24.566	12.604[b]

a. Urban local roads entirely funded from Commonwealth funds. No Commonwealth urban local road funds allocated to MRD controlled roads.
b. Expenditure from Commonwealth funds only.

na not available

Source: DoT, personal communication (1982).

bank accounts established in their areas, while for maintenance they claim reimbursements of actual expenditure. Also, the programmed expenditures might not be realised in some LGA areas but are exceeded in others, so the annual amounts scheduled for each LGA are estimates only.

In addition, the MRD has provided LGAs with the option of redirecting funds allocated to council controlled roads to those controlled by the MRD to take advantage of a dollar for dollar matching grant scheme for council expenditure on declared roads. Under this scheme, the balance of the Commonwealth local road grant allocated to the council area is not changed, but additional State funds may be spent in the area.

It has not been possible to establish how much of the Commonwealth local road grant actually reaches LGAs, nor the final mix of expenditures on council controlled and MRD controlled roads from the local road grant.

A formula to distribute 52.7 per cent of Queenslands' share of the Commonwealth grant for local roads was gazetted in September 1982. The balance of the Commonwealth grant is distributed by the MRD by way of a program of allocations approved by the Commonwealth Minister for Transport.

South Australia

Road responsibilities and funding

The Commissioner of Highways is responsible for the administration of the *Highways Act 1926*, which provides for the construction and maintenance of roads. The Highways Department (HD) assists the Commissioner to carry out his responsibilities.

Approximately 85 per cent of the area of South Australia has not been incorporated into LGAs. In the unincorporated areas, the HD is responsible for all roads regardless of their classification.

In the incorporated area, the *Local Government Act 1934* specifies that all public roads are vested in and under the care, control and management of the appropriate LGA. Whilst local government has primary responsibility for all roads, in actual fact many of the principal roads are maintained by the HD. This arises because the Commissioner of Highways, under the Highways Act, can take over specified powers of local government, in particular the construction and maintenance of certain roads, to assume responsibility for what broadly can be called the major road network of the State.

Neither the gazettal of a main road under the terms of the Highways Act nor the declaration of a road as a national highway or arterial road under the Commonwealth road grant legislation automatically places that road under the care of the Commissioner of Highways. The issue of a notice under Section 26 of the Highways Act to assume responsibility for certain roads is an act of discretion by the Commissioner with the approval of the South Australian Minister for Transport and is independent of the road's classification.

Historically, dating back as far as early 1850s, and subsequently embodied in the *Highways Act 1926*, roads in South Australia were divided into main roads and district roads. With the passage of time, and alterations to the road network, this system has ceased to reflect the hierarchical nature of roads and is no longer used by the HD for allocating road responsibility or funding. The mechanism for declaring roads as main roads still exists in the Highways Act although it is not known if it is still in use.

The allocation of road responsibilities and funding is now broadly geared to the road categories embodied in the Commonwealth Government's roads grants legislation.

However, because of the evolutionary history of roads and their management, the specifications of the Local Government Act and the Commissioner of Highways powers under the Highways Act, there is currently a mismatch between declared arterial roads and roads maintained by the HD.

Approximately 17 per cent of the arterial road network in the incorporated areas is currently maintained by the LGAs, and between 1 and 2 per cent of the local road network is maintained by the HD.

The HD makes annual grant allocations to the LGAs for the construction and maintenance of arterial roads that are currently councils' responsibility. To facilitate orderly development of the arterial road network these grants are distributed on the basis of need rather than equally to all councils.

Also, under the provisions of the Highways Act, the Commissioner may assume the control of any road if he considers that the LGA is not adequately fulfilling its responsibility (with regards to construction and maintenance). The LGA may be liable to pay up to one-third of the cost of works carried out by the HD on its behalf and the road may be returned to the LGA when the roadworks are completed. In summary the Commissioner has very wide discretionary powers over roads which would

normally be the exclusive province of the LGAs. The division of financial responsibilities between the HD and the LGAs is summarised in Table 3.7.

Administrative arrangements

The extent of the unincorporated area in SA and the high rate of participation of the HD in the construction and maintenance of district roads (which are generally local roads) has meant that the HD retains a comparatively high proportion of Commonwealth local road funds when compared to other States. Available records are not detailed enough to allow the extraction of data specifically for rural local roads. Table 3.8 therefore, contains information for both rural and urban local road grants.

Up to and including the 1980-81 financial year, the Commonwealth local road funds were distributed by the HD to the HD and LGAs on the basis of perceived needs. A relatively high proportion of local road funds (in the order of 50 per cent in 1980-81) were allocated to the HD. The HD claims this was necessary because of its responsibilities for all roads in the unincorporated areas, accounting for some 85 per cent of the State's area. However, the unincorporated areas account for only 13 per cent of local road length in the State and 4 per cent of rural area population. This has caused some dispute between the HD and the Commonwealth and local governments.

According to a formula agreed to in June 1982 the Commissioner for Highways retains 40 per cent of grants for local roads. The remainder is distributed to councils for expenditure on roads under their control.

At time of writing, arrangements are being finalised to distribute all the Commonwealth local road funds by a formula from 1982-83 onwards[1].

---

1. Since the preparation of this paper arrangements for distribution of Commonwealth funds has been finalised. Initially up to 6 per cent of the total grant is reserved for expenditure by the appropriate authorities on forest, tourist and national park roads.
   The balance is to be allocated as follows:
   - 40 per cent to be retained by the Commissioner of Highways for construction and maintenance of local roads under his care, control or management in either incorporated or unincorporated areas; and
   - 60 per cent to be distributed to local authorities.

   The distribution of funds among rural authorities is on the basis of an equal weighting population, road length and road expenditure effort (excluding these grants). (BTE (1984), 'Assessment of the Australian Road System: Financing', Occasional paper 61).

TABLE 3.7-SOUTH AUSTRALIA; SUMMARY OF FINANCIAL RESPONSIBILITY FOR ROADS, HIGHWAYS DEPARTMENT AND LGAs

(percentage of total)

	HD			*LGAs*		
Road class	*Construction*	*Maintenance*	*Bridges*	*Construction*	*Maintenance*	*Bridges*
National highways	100	100	100	0	0	0
Arterial roads	100	83	50[a]	0	17	50[a]
Local roads in incorporated areas	1	1	50[a]	99	99	50[a]
Local roads in unincorporated areas	100	100	100	0	0	0

a. Approximate value only.

Source: SA Highways Department Annual Reports.

TABLE 3.8-ALLOCATION OF COMMONWEALTH RURAL AND URBAN LOCAL ROAD GRANTS TO LGAs IN SOUTH AUSTRALIA, 1975-81

	1975-76	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*
Rural local roads $m	5.3	5.3	6.7	7.2	7.7	na
Urban local roads $m	1.2	1.1	2.2	2.4	2.5	na
Total Commonwealth local road grants $m	6.5	6.4	8.9	9.6	10.2	11.4
Grants to LGAs $m	3.7	4.7	6.0	6.4	6.5	5.6
Per cent to LGAs	56.9	73.4	67.4	66.7	63.7	49.5
State grants to LGAs $m	1.0	1.2	0.3	0.3	0.1	0.1
Total grants to LGAs $m	4.7	5.9	6.3	6.7	6.6	5.7

na not available

Sources: SA Highways Department Annual Report 1980-81 and DoT, personal communication (1982).

Western Australia

Road responsibilities

The Commissioner for Main Roads is responsible for the administration of the *Main Roads Act 1930,* which provides for the construction, maintenance and financing of roads throughout the State which have been classified under the Act. The Main Roads Department (MRD) assists the Commissioner to carry out his functions. The MRD administers road construction throughout the State through eleven regional divisions, that are each under the control of a divisional engineer.

The MRD has full administrative and financial responsibility for State highways and main roads. Secondary roads (which are also classified) are nominally the responsibility of the appropriate LGAs. However, the MRD may itself carry out construction and some maintenance of the more important secondary roads. The MRD also provides some financial assistance to LGAs for maintenance and construction of secondary roads. In addition LGAs are entitled to receive Commonwealth rural arterial road grants for secondary roads where these also happen to be declared arterial roads.

Unclassified roads are the responsibility of the LGAs, although the Main Roads Act provides for the Commissioner to allocate funds for assistance. Table 3.9 summarises the division of financial responsibilities between the MRD and LGAs.

Administrative arrangements

Western Australia has a complex administrative arrangement for the disbursement of funds, involving several types of grants which are provided for a variety of purposes.

Rural shire councils receive three types of grants:

- statutory grant
- specific grant
- maintenance grant.

Country town councils receive only statutory grants. The composition of each of these grants is given below.

Statutory Grants

The Statutory grants are composed almost entirely of Commonwealth local road grants and account for about two-thirds of the local road grants received by Western Australia. These grants are distributed on

TABLE 3.9-WESTERN AUSTRALIA; SUMMARY OF FINANCIAL RESPONSIBILITY FOR ROADS, MAIN ROADS DEPARTMENT AND LGAs

(percentage of total)

	MRD			*LGAs*		
Road class	*Construction*	*Maintenance*	*Bridges*	*Construction*	*Maintenance*	*Bridges*
Highways	100	100	100	0	0	0
Main Roads	100	100	100	0	0	0
Secondary Roads[a]	na	na	na	na	na	na
Unclassified Roads[b]	0	0	0	100	100	100

a. The amount of MRD financing is not fixed and varied from project to poject.
b. The MRD may make funds available for unclassified roads but this does not really alter the LGA's implicit responsibility to these roads.

Source: MRD Annual Reports and BTE analysis.

the basis of a formula adopted in 1977 and reviewed in February 1982[1].

Local authorities are listed in groups on a geographic and population density basis, and funds allocated to each group in accordance to population and weighted road length formulae.

Specific Grants

Specific grants comprise the remaining one-third of Commonwealth local road grants as well as some State funds. The distribution of these funds depends on an assessment of each council's needs, based on the submission of a program of projects to the MRD. Specific grants are usually related to levels provided in previous years. However, 'special' specific grants may be made for larger projects on secondary roads and for the construction of bridges. In the case of secondary roads there is often a joint financial arrangement between the Department and the council.

Maintenance Grants

Shire councils receive two separate maintenance allocations: one for secondary roads within their boundaries and the other for all other council roads. These allocations are related to road lengths and are composed entirely of State funds.

The final distribution of funds to an LGA is fixed once it has been announced, however, adjustments may be made to the composition of the grants if, for example, a council decides to give works on arterial roads a higher priority than was accorded in the council's initial program. In this case, the MRD may adjust the mix between the Commonwealth and State funds by reducing the rural local road funds available to the council. The overall level of funds to the council would not change as the State would make up the difference with its own funds.

Generally the West Australian MRD passes on all Commonwealth local road grants to the LGAs (Table 3.10). The only example in recent times when this did not occur was in 1975-76 when $315 000 (out of a grant of $10.9 million) was allocated for works on forest roads in rural areas.

---

1. A complex formula was agreed upon in 1983. See BTE (1984), 'Assessment of the Australian Road System: Financing', Occasional Paper 61.

TABLE 3.10-ALLOCATION OF LOCAL ROAD GRANTS TO RURAL LGAs IN WESTERN AUSTRALIA, 1975-80

	1975-76	*1976-77*	*1977-78*	*1978-79*	*1979-80*
Commonwealth grant ($m)	10.9	12.1	14.4	15.4	16.6
Allocation to LGAs ($m)	10.6	12.1	14.4	15.4	16.6
Percentage to LGAs	97	100	100	100	100

Source: DoT, personal communication (1982).

Tasmania

Road responsibilities and funding

The Director of Main Roads is responsible for the administration of the *Roads and Jetties Act 1935* which provides for the control and direction of the declared road network. The Department of Main Roads (DMR) assists the Director to carry out his functions under the Act.

The DMR administers road works through three regional districts, each under the control of a district engineer who is generally responsible for road works within his area.

Tasmania differs from other States in that the activities of three levels of government authority are explicitly recognised in the construction and maintenance of the State's road network. These are:

- classified roads administered by the DMR;
- roads of LGAs administered by the relevant LGAs; and
- roads of other government authorities administered by the Hydro-Electric Commission and the Forestry Commission.

Classified roads

Under Tasmanian legislation the DMR has financial and administrative responsibility for the classified road network which is comprised of:

- highways
- main roads
- secondary roads
- tourist roads
- developmental roads.

Funds for these roads come from Commonwealth road grants and State sources.

Roads of local government authorities

LGAs have administrative and financial responsibility for all unclassified roads (except those under the control of 'other' authorities) in the State. Funds for these roads come from the Commonwealth's local road grants and the LGAs own funds. The DMR does not provide funds to LGAs for expenditure on unclassified roads. It does, however, undertake bridge construction and maintenance on their behalf.

Roads of other government authorities

Roads of other Government authorities are largely under the control of the Hydro-Electric Commission and the Forestry Commission, and are constructed and maintained to facilitate the activities of these instrumentalities. The cost of construction is normally funded as part of the project that they service, although subsequent expenditure for reconstruction and maintenance may be shared by general road funds, especially when these roads are freely available for public use.

The activities of the Forestry and the Hydro-Electric Commissions are noted here as they form an integral part of the Tasmanian road system. However, their activities are not directly relevant to the subject matter of this study and are therefore taken no further.

The division of financial responsibilities between the DMR and the LGAs is summarised in Table 3.11.

Administrative arrangements

A Commonwealth-State agreement phased in from 1 July 1981, contains a new formula for the distribution of Commonwealth local road grants. The agreement provides for the distribution of funds to be made in accordance with the following principles:

- 19 per cent retained by the DMR for construction and maintenance of council bridges;
- 3 per cent reserve retained by DMR for restoration of flood damage on council roads and bridges and specific projects; and
- 78 per cent for council and State local roads. Any unexpended funds from the reserves for flood damage and extra-ordinary projects to be shared pro-rata to the total length of local road under the control of councils and State authorities respectively.

The share of funds available for council controlled roads (ie the 78

TABLE 3.11-TASMANIA; SUMMARY OF FINANCIAL RESPONSIBILITY FOR ROADS, MAIN ROADS DEPARTMENT AND LGAs

(percentage of total)

Road class	*DMR*			*LGAs*		
	Construction	*Maintenance*	*Bridges*	*Construction*	*Maintenance*	*Bridges*
State highway	100	100	100	0	0	0
Main roads	100	100	100	0	0	0
Secondary roads	100	100	100	0	0	0
Tourist roads	100	100	100	0	0	0
Developmental road	100	100	100	0	0	0
Unclassified roads	0	0	100	100	100	0

Source: DMR Annual Reports and BTE analysis.

per cent of total funds) will be distributed among councils on the following basis:

- 73 per cent of funds will be allocated to councils pro-rata to the length of council road within each municipality; and
- 27 per cent of funds will be allocated to councils pro-rata to the population within each municipality.

A three-year transition period was provided.

Councils now have a greater opportunity to determine their own priorities, although the State Minister can still direct that certain works be given priority. One constraint imposed by the DMR on local authorities is that they must devote at least 25 per cent of their grant to the maintenance of roads.

Table 3.12 shows how Commonwealth local road grants are distributed. Generally, the proportion available to LGAs has been increasing in recent years. The grants not distributed to the LGAs find their way to the Hydro-Electric and Forestry Commissions or are retained by the DMR for bridge works on council roads.

TABLE 3.12-ALLOCATION OF COMMONWEALTH RURAL LOCAL ROAD GRANTS TO LGAs IN TASMANIA, 1975-82

($ million, current prices)

	1975-76	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*[a]
Commonwealth grants	4.2	4.1	4.9	5.2	5.6	7.5	8.2
Payments to LGAs for rural local roads	2.3	2.6	3.0	3.3	3.8	5.3	6.0
Proportion of Commonwealth grant (per cent)	(54.8)	(63.4)	(61.2)	(13.5)	(67.9)	(70.7)	(73.2)

a. Includes urban local roads and urban LGAs

Source: DoT, personal communication (1982).

CHAPTER 4-THE RURAL LOCAL GOVERNMENT ROAD NETWORK

BACKGROUND

This chapter describes selected physical characteristics of the road network in rural LGA areas. Most of the data presented in the chapter are derived from the BTE *Survey of the Australian Road System - Local Government Authorities* conducted in November 1980. A description of this survey is contained in BTE (1982d).

The survey information relates to public roads for which LGAs had some financial or administrative responsibility. Each State has different road classifications and administrative arrangements, and separate questionnaires were used to accommodate these differences. Table 4.1 indicates the road classifications in each State and their relationship to the survey. Roads excluded from the survey were National and State highways, other State declared roads for which LGAs had no responsibility, roads constructed or maintained by other State instrumentalities and all roads in unincorporated areas.

Information was also sought for arterial and local road categories, to provide some uniform basis for data comparison and to assist interpretation relative to Commonwealth roads legislation. However, comparison of survey estimates with other available published sources has indicated some problems of definition, particularly for the arterial road category.

Arterial roads as defined under Commonwealth legislation are those declared as arterial by the Commonwealth Minister for Transport on the basis of recommendations submitted by the States. Local roads comprise all remaining roads other than similarly declared national roads. There have been few changes to these declarations since those originally made in the early 1970s.

In its reports to the Commonwealth Government, the Commonwealth Bureau of Roads (CBR 1973, 1975a) recommended that the declarations should be consistent with the dominant functional purpose of the roads based on the nine functional classifications developed by the National

TABLE 4.1-STATE ROAD CLASSIFICATIONS INCLUDED IN THE 'SURVEY OF THE AUSTRALIAN ROAD SYSTEM: LOCAL GOVERNMENT AUTHORITIES, 1980'

Road category	*NSW*	*Vic*	*Qld*	*SA*	*WA*	*Tas*
National highways	*	*	*	*	*	*
State highways	*	*	*	.		*
Highways					*	
Freeways	*	*	.	.		
Urban arterials	.	.	*	.		
Tourist roads	-	*				*
Forest roads	.	*				
Developmental roads	-	.	-			*
Other roads constructed and maintained by other authorities	*	*	*	*	*	*
Unclassified roads	-	-	-	-	-	-

Note: - = category exists in State, and is included in survey.
* = category exists in State, and is excluded from survey.
. = category does not exist for that State.

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.

Association of Australian State Road Authorities (NAASRA). The recommended correspondence between the legislative declarations and NAASRA functional classifications is reproduced in Table 4.2. The terms 'arterial' and 'local' as used by the CBR, and subsequently by the BTE (BTE 1979), follow these definitions.

Whilst the original Commonwealth declarations approximately matched these NAASRA functional classes, the correspondence was by no means universal. Subsequent changes in traffic levels and movement patterns without associated re-declarations by the Commonwealth have broadened the differences. Furthermore, neither the NAASRA classes nor Commonwealth legislative classes agree with the various State legal classifications.

The survey received a 55 per cent response rate by rural LGAs. The data were statistically adjusted using aggregate data from other published sources to obtain estimates for all rural LGAs. However, a definitional discrepancy appears to remain between the survey and other published data. The inclusion of Table 4.2 in the Guide to Completing the survey is believed to have resulted in some respondents

TABLE 4.2-RELATIONSHIP BETWEEN COMMONWEALTH ROAD CATEGORIES AND NAASRA FUNCTIONAL CLASSES

Commonwealth category	*NAASRA functional class*	*Description*
Arterial roads	1	Those roads which form the principal avenue for communications between major regions of Australia, including direct connection between capital cities.
	2	Those roads, not being Class 1, whose main function is to form the principal avenue of communications for movements: (i) between a capital city and adjoining States and their capital cities; (ii) between a capital city and key towns; (iii) between key towns.
	3	Those roads, not being Class 1 or 2, whose main function is to form an avenue of communication for movements: (i) between important centres and Class 1 and Class 2 roads and/or key towns; (ii) between important centres; (iii) of an arterial nature within a town in a rural area.
	6	Those roads whose main function is to perform the principal avenue of communication for massive traffic movements.
	7	Those roads, not being Class 6, whose main function is to supplement the Class 6 roads in providing for traffic movements or which distribute traffic to local street systems.
Local roads	4	Those roads, not being Class 1, 2 or 3, whose main function is to provide access to abutting property (including property within a town in a rural area).
	5	Those roads which provide almost exclusively for one activity or function and which cannot be assigned to Class 1, 2, 3 or 4.
	8	Those roads, not being Class 6 or 7, whose main function is to provide access to abutting property.
	9	Those roads which provide almost exclusively for one activity or function and which cannot be assigned to Class 6, 7 or 8.

Source: BTE (1979, Table A5.1, p387).

assigning roads to arterial or local categories according to NAASRA functional descriptions rather than Commonwealth legislative declarations.

The results presented in this Chapter therefore do not necessarily accurately reflect Commonwealth legislative declarations. Furthermore, not all responses were complete and sampling errors for individual questions ranged from 2.5 per cent to 20 per cent with the time series data tending to be less reliable. Notwithstanding the above qualifications the data do provide a useful insight into the condition of local roads in Australia.

LENGTH OF RURAL ROAD NETWORK

Roads in rural areas accounted for some 700 649 kilometres or 90 per cent of the 782 044 kilometres of road networks in the six States at 30 June 1979 (Table 4.3). Roads declared or gazetted under the relevant main roads legislation in each State comprised 147 915 kilometres or approximately 19 per cent of the total States road networks.

Rural LGAs had full or partial responsibility for an estimated 668 000 kilometres (95 per cent) of the rural road network in 1980. Apart from Western Australia, for which the definitional discrepancy referred to above was most marked, the proportion of each State's rural road network for which rural LGAs had some financial or administrative responsibility ranges from 85 per cent in Tasmania to 97 per cent in Victoria (Tables 4.3 and 4.4).

Arterial roads

In 1980 there were 126 000 kilometres of arterial roads in rural LGA areas in Australia, with 58 700 kilometres (47 per cent) of the network sealed and approximately equal amounts of the remainder gravelled or natural surfaced. Victoria had the highest proportion of sealed arterial network; 11 600 kilometres or 82 per cent. Western Australia had the lowest proportion sealed with 10 400 kilometres or 26 per cent. However, given the definitional problems with Western Australian data stated earlier, it is most likely that the 'estimated' arterial network has been inflated with a significant number of unsealed roads, leading to a higher proportion of its declared arterial network being sealed than the 26 per cent given above.

Local roads

The 542 000 kilometres of local road network contained proportionately

more unsealed road than the arterial network, with only 93 100 kilometres or 17 per cent being sealed. This characteristic is evident in all States (Table 4.4).

Victoria had the highest proportion of sealed road on its local road network: 27 800 kilometres or 25 per cent. South Australia recorded the lowest with 4160 kilometres or 6 per cent of its local road network being sealed.

Table 4.5 shows the distribution of sealed roads by width of seal and lists details for arterial and local roads combined. Four categories of width are used: more than 7 metres, more than 6 metres but less than 7 metres, more than 4 metres but less than 6 metres and less than 4 metres. The category of width 'more than 7 metres' includes those roads which have three or more lanes. The other categories, in decreasing width, correspond to good quality double lane road, lower quality double lane road and roads which have been centre sealed.

Victoria, Queensland and Western Australia all have a large proportion of their sealed roads centre sealed (47, 46 and 41 per cent, respectively). This may be due in part to the Commonwealth Government Beef Roads program in the early 1960s, which involved a drive to seal certain roads in beef producing areas in northern Queensland and to a lesser extent in northern Western Australia. Victoria and Western Australia also had contributory sealing policies whereby SRAs provided financial assistance on a rotating basis to LGAs to extend seal on rural roads as far as possible. This was done by narrow centre seals.

New South Wales and Tasmania have about 64 per cent of their sealed road in the lower quality double lane category. South Australia has a greater proportion of higher quality sealed road than other States, with 59 per cent in the good quality double lane category and 22 per cent with more than two lanes, although in actual kilometres, South Australia had much less sealed road in its system than other States.

This probably results from the different strategies that SRAs and LGAs may use in allocating their financial resources to sealing roads. More road can be sealed if the standards are lowered.

BRIDGES

The number of bridges on the arterial road network in rural LGA areas was approximately 5740 in 1980 and they were mainly constructed of either timber/masonry or reinforced concrete (Table 4.6). New South

TABLE 4.3-ESTIMATED LENGTHS OF ALL ROADS OPEN TO PUBLIC TRAFFIC IN RURAL AREAS AND STATE TOTALS, 30 JUNE 1979

(kilometres)

Surface type	*New South Wales*		*Victoria*[b]		*Queensland*		*Western Australia*		*South Australia*[c]		*Tasmania*[b]		*All States*[d]	
	Rural[a]	*Total*	*Rural*	*Total*	*Rural*	*Total*	*Rural*	*Total*	*Rural*	*Total*	*Rural*	*Total*	*Rural*	*Total*
Sealed	49 231	70 480	40 513	58 691	37 347	45 348	27 348	35 229	11 916	18 088	5 766	7 391	172 121	235 217
Formed and surfaced	63 927	66 413	41 162	45 353	29 191	29 737	33 103	33 596	19 992	21 093	13 430	14 097	200 805	210 289
Formed or cleared only	64 620	67 678	49 646	52 657	83 374	85 242	68 453	68 975	60 941	61 237	689	749	327 723	336 538
Total	177 778	204 571	131 321	156 701	149 912	160 327	128 904	137 800	92 849	100 418	19 885	22 227	700 649	782 044
Declared or gazetted under main roads legislation	40 300	42 786	21 800	23 706	40 000	40 121	13 300	13 575	22 800	24 031	3 500	3 696	141 700	147 915

Notes: a. Includes unincorporated areas
b. Figures for 30 June 1978.
c. Excludes 23 558 km of roads under the control of the Forest Department
d. Excludes the Northern Territory and A.C.T.

Sources: ABS, Year Book Australia 1982, No.65, ABS, Canberra. New South Wales Year Book 1982, No.67, ABS, Canberra. Victoria Year Book 1981, No.95, ABS, Melbourne. Queensland Year Book, 1981, No.41, ABS, Brisbane. South Australian Year Book 1981, No.15, ABS, Adelaide. Western Australian Year Book, 1982, No.20, ABS, Perth. Tasmanian Year Book, 1981, No.15 ABS, Hobart. Standardised Local Government Finance Statistics, 1979-80 data file, ABS, Canberra.

TABLE 4.4-ESTIMATED ARTERIAL AND LOCAL ROAD LENGTHS IN RURAL LOCAL GOVERNMENT AREAS BY SURFACE TYPE, 1980

(kilometres)

	Arterial				*Local*				
State	*Sealed*	*Gravelled*	*Natural*	*Total*	*Sealed*	*Gravelled*	*Natural*	*Total*	*Total*
New South Wales	15 300	8 760	3 880	27 900	29 900	56 900	45 800	133 000	160 000
Victoria	11 600	2 310	175	14 100	27 800	38 600	46 400	113 000	127 000
Queensland	12 800	4 760	10 900	28 500	15 100	28 600	70 800	114 000	143 000
South Australia	6 730	2 830	1 470	11 000	4 160	37 700	27 800	69 700	80 700
Western Australia	10 400	13 400	17 000	40 800	13 200	27 400	47 600	98 400	139 000
Tasmania	1 830	1 240	166	3 240	2 970	9 010	1 690	13 700	16 900
All States	58 700	33 300	33 600	126 000	93 100	208 000	240 000	542 000	668 000

Note: Figures may not add due to rounding.

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.

TABLE 4.5-DISTRIBUTION OF SEALED LOCAL AND ARTERIAL ROADS BY WIDTH OF SEAL AS A PROPORTION OF TOTAL SEALED LENGTH, 1979-80

(per cent)

	Width			
State	*Less than 4 metres*	*More than 4 metres Less than 6 metres*	*More than 6 metres Less than 7 metres*	*More than 7 metres*
New South Wales	11.4	64.5	14.7	9.4
Victoria	47.4	23.2	21.6	7.8
Queensland	46.2	37.9	10.1	5.8
South Australia	4.1	15.8	58.5	21.6
Western Australia	41.6	32.4	18.3	7.8
Tasmania	2.2	64.0	22.3	11.5
Australia	31.2	40.0	19.7	9.1

Source: BTE, Survey of The Australian Road System: Local Government Authorities, 1980.

TABLE 4.6-ESTIMATED NUMBER OF BRIDGES ON ARTERIAL ROADS IN RURAL LOCAL GOVERNMENT AREAS, 1980

State	Construction type					Number over 25 years old
	Timber/ masonry	Steel	Reinforced concrete	Other	Total	
New South Wales	1 080	122	1 490	16	2 708	1 460
Victoria	333	74	724	36	1 167	455
Queensland	411	17	279	5	712	326
South Australia	33	66	217	0	316	183
Western Australia	417	0	126	5	548	280
Tasmania	242	0	47	0	289	36
Australia	2 516	279	2 883	62	5 740	2 740

Note: Figures may not add to totals due to rounding.

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.

Wales, with 2700 bridges, had the largest number of bridges. New South Wales, Victoria and Tasmania had similar numbers of bridges relative to the length of their arterial network (9.7, 8.3 and 8.9 bridges per 100 kilometres, respectively) while Queensland, South Australia and Western Australia had lower densities of bridges (2.5, 2.9 and 1.3 bridges per 100 kilometres, respectively). This is most likely explained by differing topography and population distribution between States.

Local roads in rural LGA areas contained approximately 12 900 bridges, with about 60 per cent of them being constructed of timber and/or masonry (Table 4.7). New South Wales accounted for almost half of the total number with 5660 bridges. The pattern of New South Wales, Victoria and Tasmania having similar densities of bridges is repeated (4.3, 3.0 and 4.3 bridges per 100 kilometres, respectively) with Queensland, South Australia and Western Australia again having lower densities (1.3, 0.6 and 1.3 bridges per 100 kilometres, respectively). The densities overall for local roads were about one-half those for arterial roads. On local roads, many watercourses, especially in the flatter and more arid parts of the country, are crossed by culverts or causeways.

Approximately 60 per cent of bridges on local roads and 48 per cent on arterial roads were over 25 years old in 1980. These proportions

TABLE 4.7-ESTIMATED NUMBER OF BRIDGES ON LOCAL ROADS IN RURAL LOCAL GOVERNMENT AREAS, 1980

	Construction type					*Number*
State	*Timber/ masonry*	*Steel*	*Reinforced concrete*	*Other*	*Total*	*over 25 years old*
New South Wales	3 600	69	1 900	87	5 656	3 780
Victoria	1 420	192	1 580	177	3 369	1 750
Queensland	1 220	11	249	8	1 488	1 050
South Australia	145	139	160	2	446	308
Western Australia	876	2	287	161	1 326	701
Tasmania	530	0	63	0	593	210
Australia	7 791	413	4 239	435	12 848	7 799

Note: Figures may not add to totals due to rounding.

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.

correspond to 7800 bridges and 2740 bridges respectively. This marked relative difference in the age of the bridges on the two networks is present in all States except Western Australia, where the proportions are almost equal (Table 4.7).

There is no particular importance attached to the selection of 25 years as an age threshold for bridges. Marsh (1981) points out that many of these structures give good service for as long as 100 years. However, the implication is that a large proportion of bridges built more than 25 years ago were designed for lower traffic volumes and lighter vehicles than those in use now.

The combination of more and heavier vehicles has required restrictive measures such as stringent weight limitations on some bridges. These bridges will require upgrading or reconstruction, a task which may be beyond the resources of many LGAs.

In addition, the existence of many old timber bridges means that they may eventually need replacement at about the same time, again a task which many LGAs claimed were beyond their resources. Councils in the south west of Western Australia are in this position at present. A possible solution could be to implement a program of progressive replacement of old timber bridges, but LGA's responses will generally be limited to remedial action once bridges have failed (see Interviews with LGAs Appendix VI on microfiche).

STATE ROAD CLASSIFICATION ASSESSMENT

In the survey LGAs were asked to supply information on:

- the length of any undeclared roads that should be declared;
- the length of any declared roads that should be changed in classification; and
- the reasons why this change in classification should take place.

Of the 367 respondents, 160 indicated an opinion that some roads should be reclassified. All but 14 of these supplied a reason for this view. Overall, rural LGAs expressed a desire that 9590 kilometres of road be reclassified. This represents 2.5 per cent of the network length of those LGAs responding to the survey. In all cases, reclassification related to increases in hierarchical status of the affected roads. The main reasons given by LGAs for reclassification were:

- high traffic volumes (15 per cent of cases);
- the arterial nature of the road within the LGA area (28 per cent of cases);
- the arterial nature of the road in providing access to areas outside the LGA area (22 per cent of cases); and
- tourists use of the road (18 per cent of cases).

Table 4.8 provides details of the lengths of road that respondents believe should be reclassified.

The reasons listed above account for 83 per cent of the desired reclassifications. Such changes in hierarchical status would usually involve corresponding alterations in the financial responsibilities for works on the affected roads, with (as the LGAs see it) increased contributions from the SRA. The high level of association between reclassification recommendations, and traffic characteristics underlines the local government belief that SRAs should bear the financial burdens of works on roads of an arterial nature or carrying a substantial proportion of non-local traffic, thus freeing council funds for the less heavily trafficked roads catering for local residents and businesses.

However, many of the roads proposed for reclassification probably carry substantially less traffic than other parts of the State declared system. In a period of tight financial constraints these roads are likely to be accorded low priority (and hence funding) by

TABLE 4.8-ESTIMATED NUMBER OF RESPONDING LGAs EXPRESSING NEED FOR UPGRADING THE STATE LEGAL CLASSIFICATION OF SOME ROADS, AND THE ROAD LENGTHS INVOLVED IN RURAL LOCAL GOVERNMENT AREAS, 1980

State	*Number of respondents*	*Number expressing need for upgrading*	*Length of road to be upgraded (km)*
New South Wales	68	31	2 179
Victoria	96	57	2 004
Queensland	60	35	2 825
South Australia	58	8	434
Western Australia	70	26	2 107
Tasmania	15	3	40
Australia	367	160	9 589

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.

SRAs, so that even if SRAs were to reclassify roads as requested there is no guarantee that they would have greater funds allocated to them. Where these roads provide an important service to local users, it may be better for councils to retain control of the roads under existing arrangements, to ensure that some funds are expended to maintain their condition.

SIGNIFICANT ROADWORKS

Significant roadworks were defined as:

- construction of new formation or alignment, including works on roads which did not previously exist or which have been realigned significantly;
- reconstruction or widening, including replacement or strengthening of road pavements (but not patching, shouldering or similar) and extensions of the width of the pavement and/or seal;
- sealing or resealing, including seals, reseals, placement of asphaltic concrete overlays and similar types of work; and
- gravelling, referring to the addition (to a depth of not less than 50 mm) of gravel or crushed rock to a pavement.

Table 4.9 presents estimates of the total length of significant roadworks carried out by rural LGAs in each State on the arterial and local road networks for the financial years ending 1976-80. In 1980, 8320 kilometres of significant roadworks were carried out on arterial roads and 20 200 kilometres on local roads. This was an increase of 35 per cent for arterial roads and 29 per cent for local roads from the 1976 figures of 6160 kilometres and 15 700 kilometres respectively.

Table 4.10 presents the significant roadwork data as a percentage of network length. This table highlights how much of the network receives attention by rural LGAs in a year. In all cases the percentage is small, ranging from 1.3 per cent for South Australia in 1976 to 7.4 per cent for Tasmania in 1980. For all States in aggregate, the values range from 3.3 per cent in 1976 to 4.3 per cent in 1980. Tables 4.9 and Table 4.10 indicate that the amount of work done by LGAs on their roads has been increasing over the period 1976-80. Figure 4.1 shows this trend for all rural areas by network type and work type.

This may be due to a number of factors including:

- improved efficiency in utilisation of resources by LGAs;
- decreased standards so that the cost of a given length of road is less;
- a change in the definition of categories used in Figure 4.1; and
- a revised assessment of what is a significant road work.

The first two factors were reported during interviews with LGA representatives but, given the decrease in real expenditure on rural local roads, further explanation, such as the last two factors, is required.

The relative composition of significant works has not changed markedly over the survey period, as is illustrated by Figure 4.2. Table 4.11 provides a guide to the average relative composition of significant roadworks for each State. Gravelling forms the major component of significant works for Queensland, South Australia and Tasmania, while for New South Wales and Victoria it is sealing and resealing works. The major component for Western Australia is reconstruction or widening works.

TABLE 4.9-ESTIMATED LENGTHS OF SIGNIFICANT ROADWORKS UNDERTAKEN BY RURAL LOCAL GOVERNMENT, 1976 TO 1980

(kilometres)

	Year ending 30 June[a]									
	1976		*1977*		*1978*		*1979*		*1980*	
State	*Arterial*	*Local*	*Arterial*	*Local*	*Arterial*	*Local*	*Arterial*	*Local*	*Arterial*	*Local*
New South Wales	1 370	3 790	1 630	3 580	1 840	4 150	2 140	4 370	2 170	4 270
Victoria	1 790	4 480	1 690	4 610	2 010	5 100	1 790	5 470	1 940	4 870
Queensland	1 400	2 250	1 180	3 280	1 870	3 310	1 840	3 150	1 330	3 840
South Australia	121	933	73	1 070	150	1 420	484	1 470	478	1 670
Western Australia	1 430	3 340	1 400	3 460	1 570	3 060	1 880	3 670	2 340	4 350
Tasmania	44	853	63	1 040	78	971	115	1 060	56	1 200
All States	6 160	15 700	6 040	17 000	7 510	18 000	8 250	19 200	8 320	20 200

a. Except for New South Wales and Victoria where the LGAs end their financial years on 31 December and 31 September respectively.

Note: Figures may not add due to rounding.

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.

TABLE 4.10-RATIO OF ESTIMATED LENGTH OF SIGNIFICANT ROADWORKS TO LENGTH OF TOTAL ROAD NETWORK FOR RURAL LGAs, 1976-80

(per cent)

State	Year ending 30 June[a]				
	1976	*1977*	*1978*	*1979*	*1980*
New South Wales	3.2	3.3	3.7	4.1	4.0
Victoria	4.9	5.0	5.6	5.7	5.4
Queensland	2.6	3.1	3.6	3.5	3.6
South Australia	1.3	1.4	1.9	2.4	2.7
Western Australia	3.4	3.5	3.3	4.0	4.8
Tasmania	5.3	6.5	6.2	7.0	7.4
Australia	3.3	3.5	3.8	4.1	4.3

a. Except for New South Wales and Victoria where the LGAs end their financial years on 31 December and 31 September respectively.

Source: BTE, Survey of the Australian Road system: Local Government Authorities, 1980.

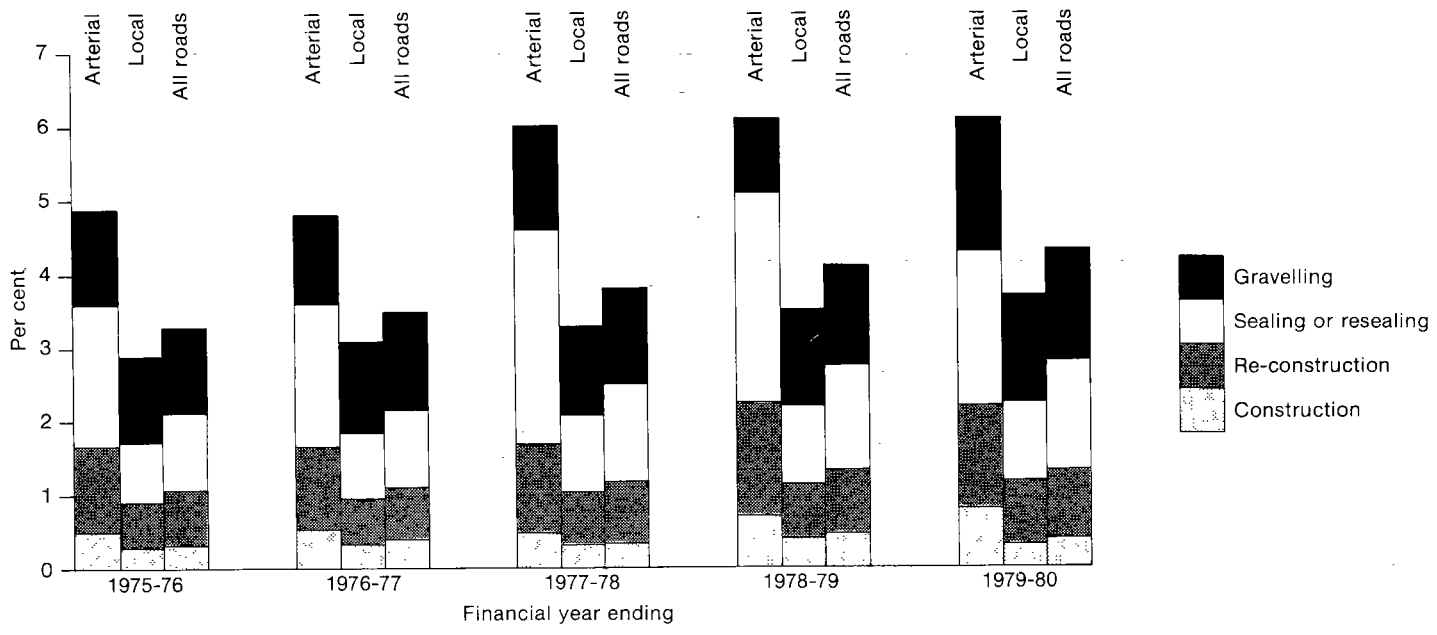
TABLE 4.11-ESTIMATED AVERAGE COMPOSITION OF SIGNIFICANT ROADWORKS UNDERTAKEN BY RURAL LOCAL GOVERNMENT, 1980

(per cent)[a]

State	*New construction*	*Reconstruction*	*Sealing or resealing*	*Gravelling*
New South Wales	8.5	16.7	41.5	33.3
Victoria	4.1	19.0	53.6	23.4
Queensland	23.4	14.1	25.4	37.1
South Australia	2.8	21.4	12.9	62.9
Western Australia	12.3	39.5	13.9	34.4
Tasmania	9.4	7.7	17.3	65.7

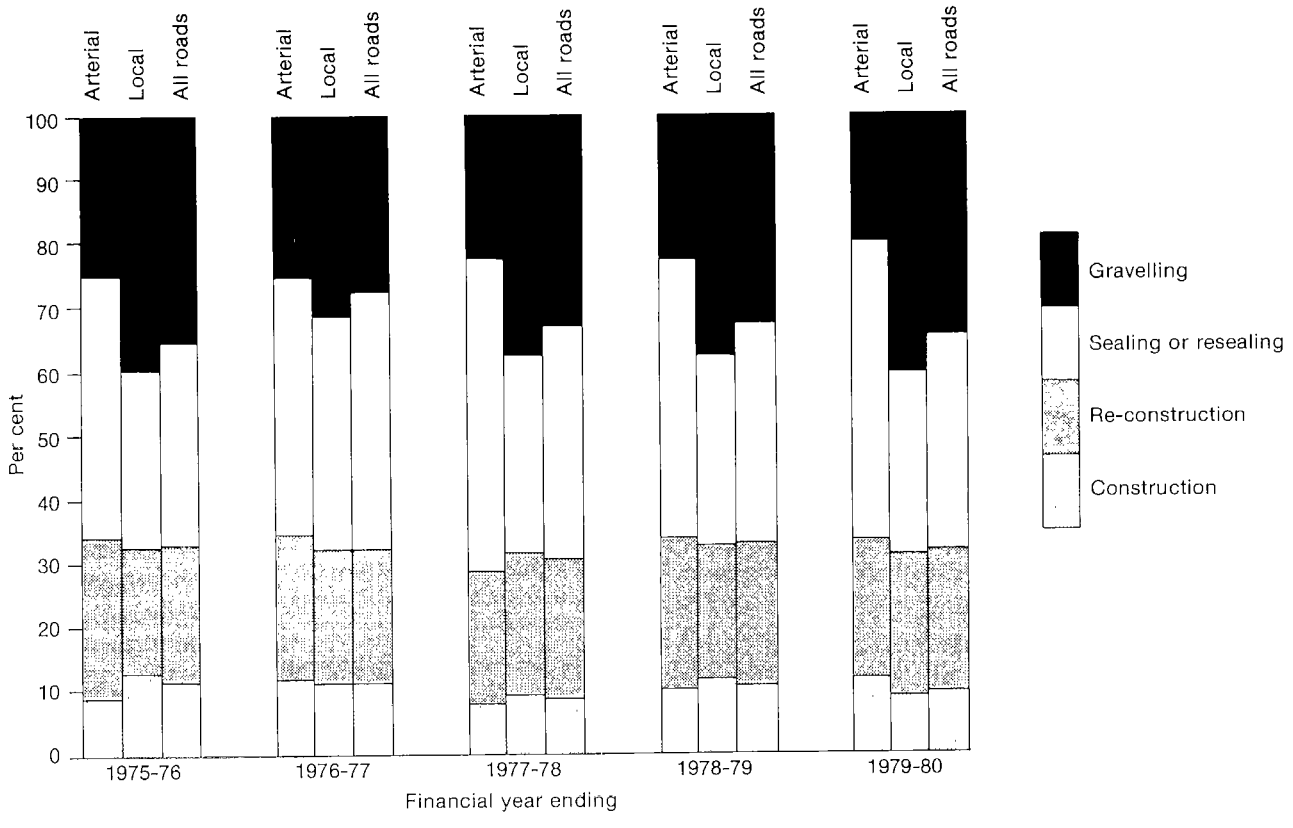
a. Percentage of total expenditure.

Source: BTE, Survey of the Australian Road System: Local Government Authorities, 1980.



Source: BTE, Road Assessment Studies Survey, 1980.

Figure 4.1—Ratio of length of rural local government roadworks to length of road network, 1976-80



Source: BTE, Road Assessment Studies Survey, 1980

Figure 4.2—Composition of significant works on rural roads by local government, 1976–80

CHAPTER 5-ROADWORKS AS A COUNCIL FUNCTION

In all States, legislation vests local authorities with responsibility and power to meet a wide range of functions. These include public works and services, personal and public health, social welfare, provision of recreation facilities and land use planning in addition to the provision of roads. In practice no authority uses all its available legal powers or performs all its possible legal functions. Within States there are considerable variations in the functions actually undertaken by authorities, even though they are constituted under the same legislation. Despite these differences among authorities, all have responsibility for, and undertake, provision of roads. This chapter identifies the level of commitment by rural local government to the provision of roads, both in absolute terms and relative to other functions, traces changes in their commitment during the period 1967-68 to 1979-80, and examines the sources of funds that go to make up councils' budgets.

EXPENDITURE ON ROADS BY RURAL LOCAL GOVERNMENT

Table 5.1 shows details of expenditure on roads by rural local government between 1967-68 and 1979-80 derived from the 1979-80 Australian Municipal Information System (AMIS) and the Standardised Local Government Finance Statistics (SLGFS) files. This represents expenditures by LGAs on all roads using finances from all sources. Expenditure in all States increased from $162.7 million in 1968-69 to $459.4 million in 1979-80 (in current prices). Large variations exist among States in the amounts spent on roads. Aggregate spending in South Australia in 1979-80 was relatively low, owing to much of that State not being incorporated into local authorities and to a general reduction in road expenditures by rural local government in that State. In current prices, spending by *Town* and *Rural* LGAs in every State increased in the decade to 1979-80, but there were considerable variations among States in the rate of increase.

Table 5.2 shows the same data in constant prices, indicating changes over time in the purchasing power of local government road

TABLE 5.1-OUTLAYS ON ROADS BY RURAL LOCAL GOVERNMENT, YEARS ENDING 30 JUNE 1968 TO 1980

($'000, current prices)

	1968	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*[a]
Rural													
NSW	54 898	57 122	54 888	59 225	64 638	71 821	77 166	88 325	118 759	110 623	123 089	99 367	90 157
Vic	34 623	29 707	30 844	31 649	33 776	34 922	38 348	52 819	58 312	65 868	72 926	88 089	94 139
Qld	17 955	18 854	19 431	27 180	29 656	34 752	40 035	53 573	65 931	67 951	71 539	81 828	85 944
SA	na	13 685	13 979	12 663	12 622	13 343	12 558	12 994	14 130	14 118	17 484	19 956	19 913
WA	7 113	7 903	9 875	10 198	10 447	11 205	14 769	17 244	24 003	24 089	24 976	30 906	26 722
Tas	2 582	2 464	2 571	2 850	3 395	4 242	4 389	5 871	7 773	7 409	8 292	10 901	10 355
All States	na	129 735	131 588	143 765	154 534	170 285	187 265	230 826	288 908	290 058	318 306	331 047	327 230
Town													
NSW	12 233	13 389	13 335	15 368	18 284	22 417	24 560	28 684	53 641	45 815	54 358	63 767	56 365
Vic	6 736	5 879	5 978	6 745	7 544	7 778	9 211	14 757	16 893	18 691	19 040	20 463	21 735
Qld	6 994	7 500	7 516	10 169	10 515	14 242	16 606	23 968	32 264	28 255	31 253	33 072	36 777
SA	na	2 546	2 550	1 978	2 848	3 185	3 173	3 320	4 505	4 709	5 246	5 057	4 979
WA	1 715	1 989	2 411	2 705	2 936	3 215	3 618	4 672	6 213	5 592	7 216	7 757	6 833
Tas	1 466	1 668	1 673	1 825	2 466	2 799	2 884	3 771	5 847	5 249	5 368	5 197	5 513
All States	na	32 971	33 463	38 790	44 593	53 636	60 052	79 172	119 363	108 311	122 481	135 313	132 202

TABLE 5.1 (Cont)-OUTLAYS ON ROADS BY RURAL LOCAL GOVERNMENT, YEARS ENDING 30 JUNE 1968 TO 1980

($'000, current prices)

	1968	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*[a]
All States *Rural* and *Town*	na	162 706	165 051	182 555	199 127	223 921	247 317	399 908	408 271	398 369	440 787	466 360	459 432

a. New South Wales 1979-80 data derived from the SLGFS File. Because of differing definitions these data may not be directly comparable with those of earlier years.

na not available

Source: Derived from ABS 1979-80 AMIS and SLGFS Files.

TABLE 5.2-OUTLAYS ON ROADS BY RURAL LOCAL GOVERNMENT, CONSTANT PRICES, YEARS ENDING 30 JUNE 1970 TO 1980

($'000, June 1980 prices[a])

	1970	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980[b]*
Rural											
NSW	179 319	180 662	181 420	188 467	178 542	158 985	184 844	151 916	154 134	115 404	90 156
Vic	100 767	96 543	94 799	91 639	88 728	95 073	90 761	90 453	91 319	102 306	94 139
Qld	63 481	82 910	83 237	91 192	92 629	96 432	102 620	93 315	89 584	95 034	85 944
SA	45 669	38 629	35 427	35 012	29 057	23 388	21 993	19 386	21 892	23 176	19 913
WA	32 262	31 108	29 321	29 403	34 173	31 040	37 358	33 082	31 275	35 895	26 722
Tas	8 399	8 693	9 530	11 131	10 154	10 569	12 098	10 173	10 383	12 660	10 355
All States	429 898	438 546	433 733	446 844	433 283	415 487	449 673	398 326	398 587	384 477	327 230
Town											
NSW	43 565	46 878	51 318	58 826	56 826	51 632	83 491	62 919	68 068	74 060	56 365
Vic	19 530	20 576	21 173	20 409	21 311	26 564	26 293	25 669	23 843	23 764	21 735
Qld	24 555	31 020	29 514	37 371	38 423	43 144	50 217	38 803	39 135	38 410	36 777
SA	8 331	6 034	7 994	8 357	7 341	5 975	7 011	6 465	6 570	5 874	4 979
WA	7 877	8 252	8 239	8 435	8 370	8 409	9 670	7 681	9 037	9 010	6 833
Tas	5 466	5 567	6 923	7 344	6 671	6 789	9 102	7 207	6 720	6 034	5 513
All States	109 324	118 327	125 162	140 742	138 942	142 213	185 784	148 743	153 373	157 153	132 202

TABLE 5.2 (Cont)-OUTLAYS ON ROADS BY RURAL LOCAL GOVERNMENT, CONSTANT PRICES, YEARS ENDING 30 JUNE 1970 TO 1980

($'000, June 1980 prices[a])

	1970	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980[b]*
All States *Rural* and *Town*	539 222	556 873	558 895	587 586	572 225	558 000	635 457	547 069	551 960	541 630	459 432

a. Adjusted to constant prices using the BTE Road Construction Input-Price Index (BTE 1982c).
b. New South Wales 1979-80 data derived from the SLGFS File. Because of differing definitions these data may not be directly comparable with those of earlier years.

Source: Derived from ABS 1979-80 AMIS and SLGFS Files.

expenditure[1]. Converted to an index, this information is shown in Figures 5.1 and 5.2, allowing comparison of changes to road expenditure among States. In real terms, expenditure on roads by *Rural* LGAs in all States reached peaks in 1973 and 1976 but declined overall by over 20 per cent between 1969-70 and 1979-80. Expenditure by *Town* LGAs in real terms also reached peaks in 1973 and 1976 but overall increased by about 20 per cent.

It is likely that the 1973 spending peak was attributable to the effects of the Commonwealth Regional Employment Development Scheme grants on council budgets. The 1976 peak reflects the start of Commonwealth General Revenue Assistance grants and the payment of Commonwealth flood relief grants in New South Wales, Victoria and Queensland in that year. The effect of General Revenue Assistance on road expenditure appears to have been temporary, however, as councils subsequently established other priorities for the use of these funds.

Within these general trends there has been considerable variation among States in changes in expenditure between 1969-70 and 1979-80:

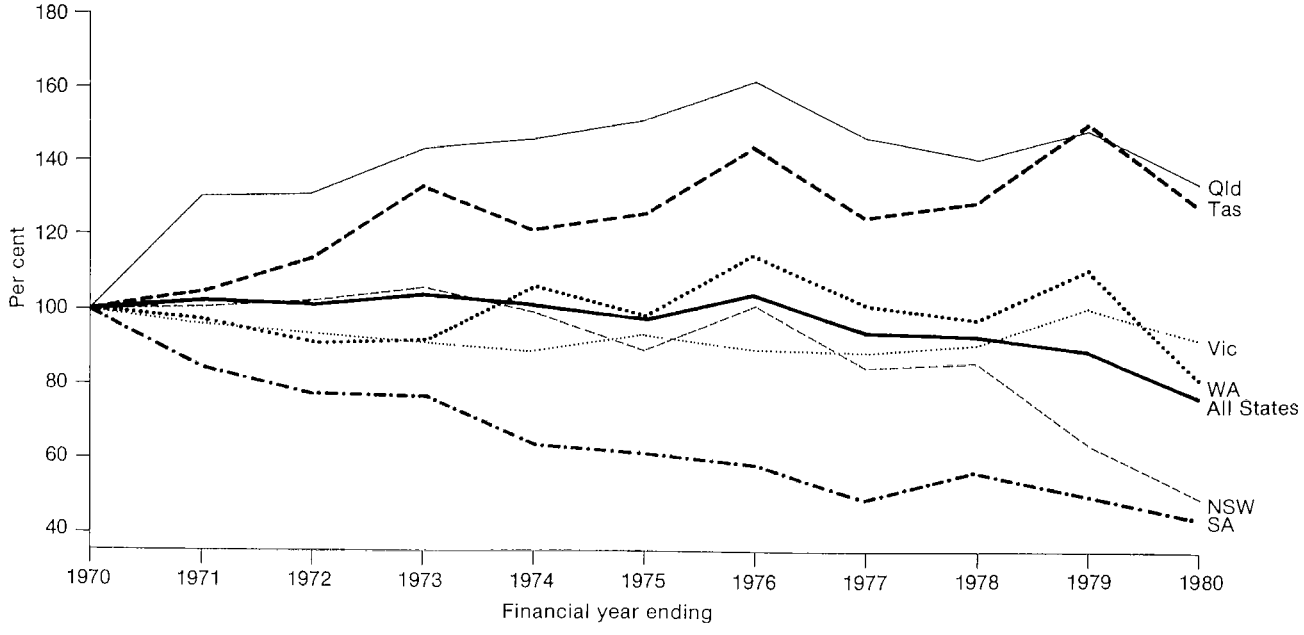
- in constant prices, expenditure by *Rural* authorities in South Australia fell by 56.4 per cent, much more than in any other State;
- South Australia was also the only State in which real expenditure by *Town* authorities fell;
- spending by Queensland authorities increased more than in other States, in real terms by 35.4 per cent in *Rural* LGAs and by 49.8 per cent in *Town* LGAs; and
- spending by *Rural* LGAs in Tasmania and *Town* LGAs in New South Wales also increased faster than the all State average.

EXPENDITURE ON CONSTRUCTION AND MAINTENANCE

Data gathered in the survey of rural local government, shown in Table 5.3 and Figure 5.3, allowed estimates to be made of the relative importance of road construction compared to road maintenance. For all 341 respondents who gave information on this matter, the average proportion of total outlays on roads spent on construction was 49.9 per cent in 1979-80. There were considerable differences among States in the proportion of total outlay devoted to construction. Mean

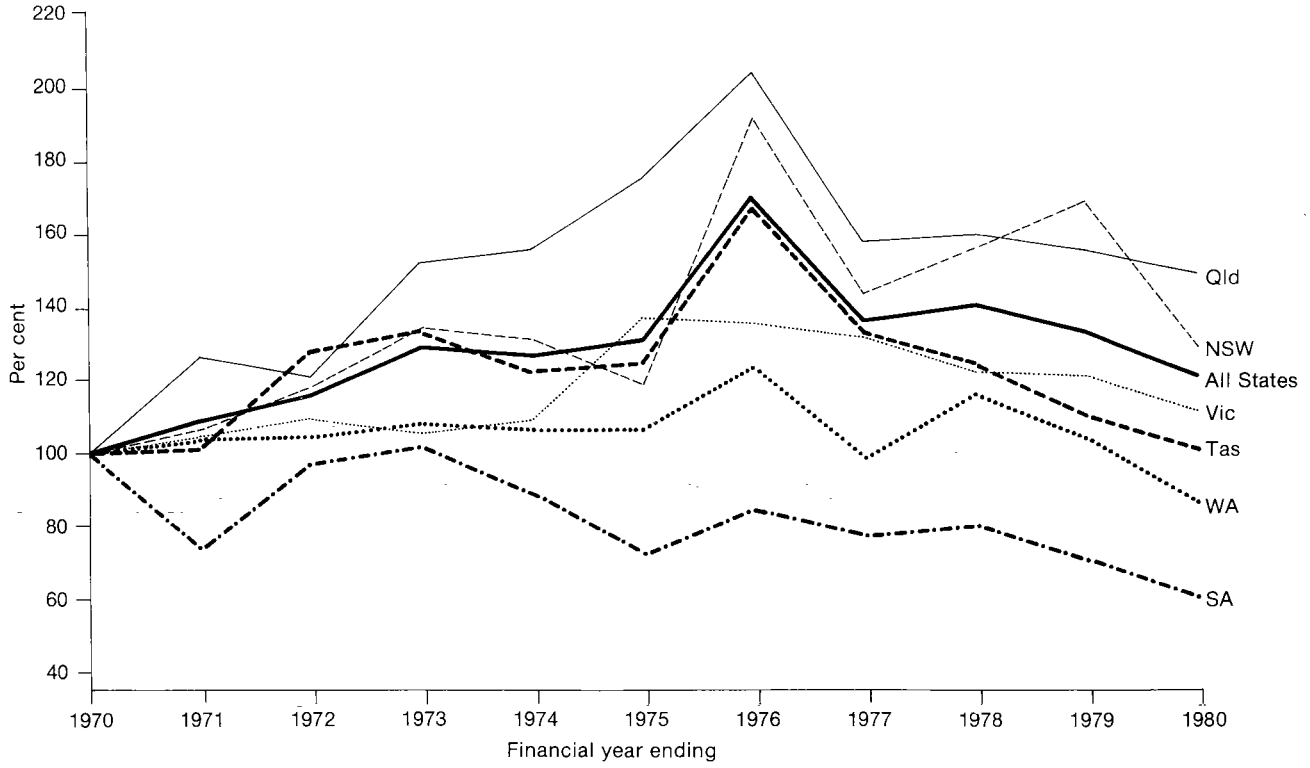
---

1. Figures are deflated to constant prices using the BTE Road Construction Input-Price Index (BTE 1982). Between 1970 and 1981 prices of road inputs rose faster than the CPI.



Sources: Derived from ABS, 1979–80 AMIS data file; ABS, 1979–80 SLGFS data file.

Figure 5.1—Index of *Rural* local government road outlays, 1969-70 to 1979-80



Sources: Derived from ABS, 1979–80 AMIS data file; ABS, 1979–80 SLGFS data file.

Figure 5.2— Index of *Town* local government road outlays, 1969-70 to 1979-80

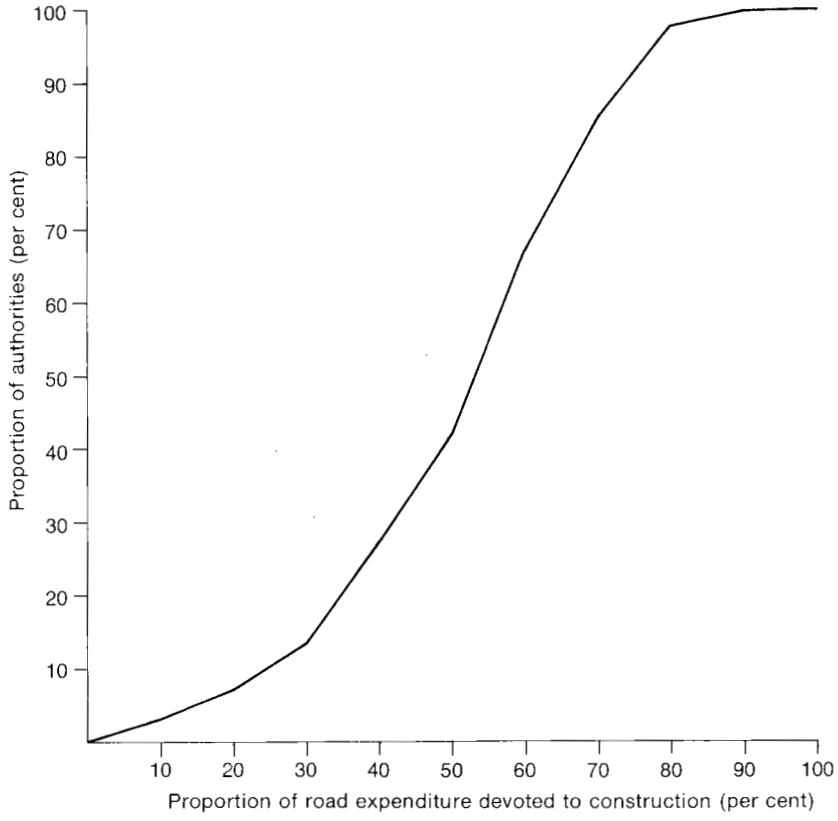
TABLE 5.3-PROPORTION OF RURAL LGA ROAD EXPENDITURE DEVOTED TO CONSTRUCTION, 1979-80

	NSW		*Vic*		*Qld*		*SA*		*WA*		*Tas*		*Total*		
	Town	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*States*
Number of authorities responding	18	41	13	77	8	48	5	51	5	61	3	11	52	289	341
Mean	52.0	50.8	47.1	42.3	62.1	48.6	52.2	53.9	69.6	57.8	26.0	28.7	52.5	49.4	49.9
Standard deviation	11.9	15.1	19.6	17.0	11.2	22.4	23.3	18.9	21.9	10.8	23.7	25.4	18.7	18.6	18.7
Standard error	2.8	2.4	5.4	1.9	4.0	3.2	10.4	2.6	9.8	1.4	13.7	7.7	2.6	1.1	1.0
Minimum	28.6	12.5	16.1	0.0	46.7	0.0	18.8	0.0	36.1	34.8	0.0	0.0	0.0	0.0	0.0
Maximum	71.4	83.3	70.6	70.0	81.8	90.9	76.7	86.8	92.6	82.0	46.4	67.6	92.6	90.9	92.6

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

proportions ranged from 28.7 per cent in Tasmania to 57.8 per cent in Western Australia for *Rural* LGAs, and from 26.0 per cent in Tasmania to 69.6 per cent in Western Australia for *Town* LGAs. The data suggest that the smaller, longer settled States of Victoria and Tasmania devoted a smaller proportion of road expenditure to construction than did the larger States. Differences among States were statistically significant at the 0.01 level (Table 5.4), but there was no significant difference between *Town* and *Rural* LGAs in the proportion of road funds devoted to construction (Table 5.5).

Variations among and within States are due to a range of economic, financial and climatic factors. Construction is likely to take a larger share of total outlays on roads in areas of expanding economic



Source: BTE, Road Assessment Studies Survey, 1980.

Figure 5.3—Proportion of roads expenditure devoted to construction; cumulative frequency distribution of rural local government authorities. 1979-80

TABLE 5.4-NUMBER OF RURAL LGAs DEVOTING GIVEN PERCENTAGE OF ROAD EXPENDITURE TO CONSTRUCTION, BY STATE 1979-80

Percentage of road	*NSW*	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*All States*
0-25	2	12	6	4	0	5	29
26-35	3	8	7	4	0	5	27
36-45	10	17	7	12	7	0	53
46-55	18	14	4	6	14	1	57
56-65	17	26	15	13	24	1	96
66-75	7	9	9	9	14	2	50
76-100	2	4	8	8	7	0	29
Total	59	90	56	56	66	14	341

Chi-square[a] = 47.71, df = 24, $p < 0.005$

a. Excluding Tasmania, in order to meet the conditions of the chi-square test.

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE 5.5-NUMBER OF *TOWN* AND *RURAL* LGAs DEVOTING GIVEN PERCENTAGE OF ROAD EXPENDITURE TO CONSTRUCTION, 1979-80

Percentage of road expenditure devoted to construction	*Number of LGAs*		
	Town	*Rural*	*Total*
0-29	6	41	47
30-39	7	40	47
40-49	7	44	51
50-59	9	76	85
60-69	15	51	66
70-100	8	37	45
Total	52	289	341

Chi-square = 4.84, df = 5, $p < 0.5$

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

activity, when funds are readily available, or after flooding. Conversely maintenance is likely to assume more importance in areas of slow economic growth, when there is increased competition for limited funds from other works and services, or when drought makes construction impracticable.

ROADWORKS IN RELATION TO OTHER COUNCIL FUNCTIONS

The BTE survey of rural local government also provided information[1] on the range of services undertaken by rural LGAs and revealed considerable variations in the number and nature of services undertaken.

- *Town* LGAs generally provide a greater range of services than *Rural* LGAs. The range of services provided by an LGA appears to be related to population size, but this was not tested empirically.
- Services provided in the more remote areas tend to be basic, such as water supply, garbage collection and disposal, town hall, cemetery, sports grounds and parks, and licensing and inspection services. The proportion of *Rural* LGAs providing these basic services was not greatly different from that of *Town* LGAs.
- Higher order services, such as cultural facilities and health and welfare services, are more commonly provided by *Town* LGAs than by *Rural* LGAs. One exception is that more *Rural* LGAs support important medical services such as ambulances, doctors and dentists.
- A higher proportion of *Rural* LGAs share or support recreation and welfare services rather than provide them themselves.
- The only service undertaken by all *Rural* LGAs is the provision of roads.

Expenditure

The large proportion of total ordinary service expenditure devoted to roads by both *Town* and *Rural* LGAs in all States is shown in Table 5.6. While this proportion fell between 1968-69 and 1979-80 from 49.1 per cent to 38.6 per cent for all LGAs, provision of roads remains the single most important activity of rural local government in terms of expenditure. Table 5.6 also shows variations among States, both in

---

1. Summarised in Appendix VI, Tables VI.1 to VI.4 (on microfiche).

TABLE 5.6-RURAL LOCAL GOVERNMENT EXPENDITURE ON ROADS AS A PERCENTAGE OF TOTAL ORDINARY SERVICES EXPENDITURE, 1968 TO 1980

(per cent)

	Financial years ending												
	1968	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*[a]
Rural													
NSW	58.6	57.0	54.4	55.3	56.0	55.6	54.9	52.0	52.0	50.6	49.8	52.3	46.4
Vic	67.9	60.1	59.4	57.7	57.3	53.4	52.7	53.4	50.8	51.4	48.7	47.3	47.5
Qld	44.1	44.1	43.7	48.4	50.6	51.9	51.7	52.3	54.4	50.6	48.7	49.2	49.1
SA	na	59.0	58.2	55.9	53.6	50.8	49.6	47.7	43.0	39.2	38.7	38.2	34.2
WA	34.1	34.3	37.3	37.5	38.0	35.1	43.1	39.2	41.0	40.3	37.7	36.2	29.1
Tas	56.4	52.4	52.2	51.9	53.5	55.9	53.8	53.1	52.8	52.1	48.8	53.1	63.6
All States	na	53.3	52.1	52.6	53.2	52.0	52.2	50.9	50.6	49.1	47.3	47.3	44.2
Town													
NSW	38.9	38.7	36.3	37.7	38.7	40.9	39.9	34.8	39.9	35.9	36.7	35.1	29.9
Vic	42.9	36.5	33.8	33.7	34.3	31.5	29.9	32.4	30.0	30.9	26.4	26.8	24.9
Qld	37.1	35.6	35.2	39.1	37.4	40.2	37.9	40.6	43.4	36.8	34.7	33.1	33.4
SA	na	52.7	48.4	39.9	45.0	42.4	39.9	32.9	29.1	27.2	27.4	27.7	25.5
WA	28.2	27.0	32.0	30.2	30.2	29.2	32.6	31.4	33.1	28.9	29.1	27.9	23.6
Tas	42.5	43.6	41.2	40.2	43.3	43.2	40.0	37.4	38.9	39.1	36.2	36.0	33.9
All States	na	37.6	36.1	36.9	37.4	38.3	37.0	35.6	38.0	34.4	33.2	32.3	29.3

TABLE 5.6 (Cont)-RURAL LOCAL GOVERNMENT EXPENDITURE ON ROADS AS A PERCENTAGE OF TOTAL ORDINARY SERVICES EXPENDITURE, 1980

(per cent)

	Financial years ending												
	1968	*1969*	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*[a]
All States *Rural* and *Town*	na	49.1	47.8	48.2	48.6	47.9	47.5	45.9	46.1	44.0	42.3	41.7	38.6

a. New South Wales 1979-80 data derived from the SLGFS File. Because of differing definitions these data may not be directly comparable with those of earlier years.

na not available

Source: Derived from ABS 1979-80 AMIS and SLGFS Files.

the proportion of total expenditure devoted to roads in 1979-80 and in changes in this proportion between 1968-69 and 1979-80:

- the decline in the proportion of total expenditure devoted to roads was particularly marked in South Australia and Victoria;
- the proportion of total expenditure devoted to roads by *Rural* LGAs in Queensland and Tasmania increased, counter to the national trend;
- in 1979-80 expenditure on roads by *Rural* LGAs ranged from 29.1 per cent of total expenditure in Western Australia to 63.6 per cent in Tasmania; and
- in 1979-80 expenditure on roads by *Town* LGAs ranged from 23.6 per cent in Western Australia to 33.9 per cent in Tasmania.

Variations among States in the proportion of expenditure devoted to roads may in part be due to differences in the range of functions which LGAs in each State are required to provide.

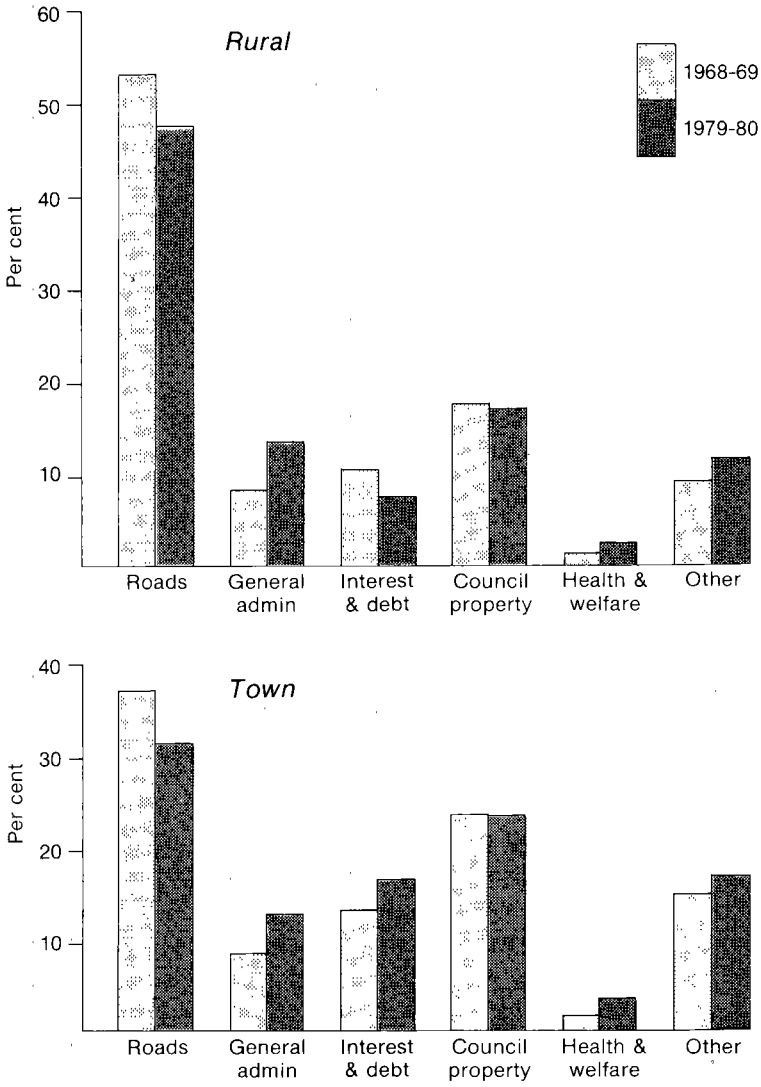
Table 5.6 also shows that, overall, *Rural* LGAs spent a greater proportion of total ordinary services expenditure on roads than did *Town* LGAs; 44.2 per cent compared with 29.3 per cent in 1979-80. The Rural Local Government Study (Secretariat 1980) suggests three reasons for this difference between *Rural* and *Town* LGAs:

- higher priority placed on access and communications by *Rural* residents;
- the nature of *Rural* LGA receipts, particularly road grants and reimbursements, which tie council expenditure to roadworks; and
- past investment in roads leaving *Rural* LGAs with extensive networks needing maintenance and upgrading.

Figure 5.4 indicates that the pattern of change in composition of LGA expenditure between 1968-69 and 1979-80 was similar for *Rural* and *Town* LGAs, with the proportion of expenditure devoted to outlays on roads and interest and debt repayments declining while that allocated to general administration, council properties, health and welfare services and 'other' expenditure remained steady or increased. In some cases these changes represent real shifts in authorities' priorities; in other cases it is likely that changes are due to the extent to which services incur fixed costs which are not easily cut back in periods of spending restraint. It is relatively easy for councils to make savings by reducing expenditure on roads, both because roads absorb the greatest single share of total spending and

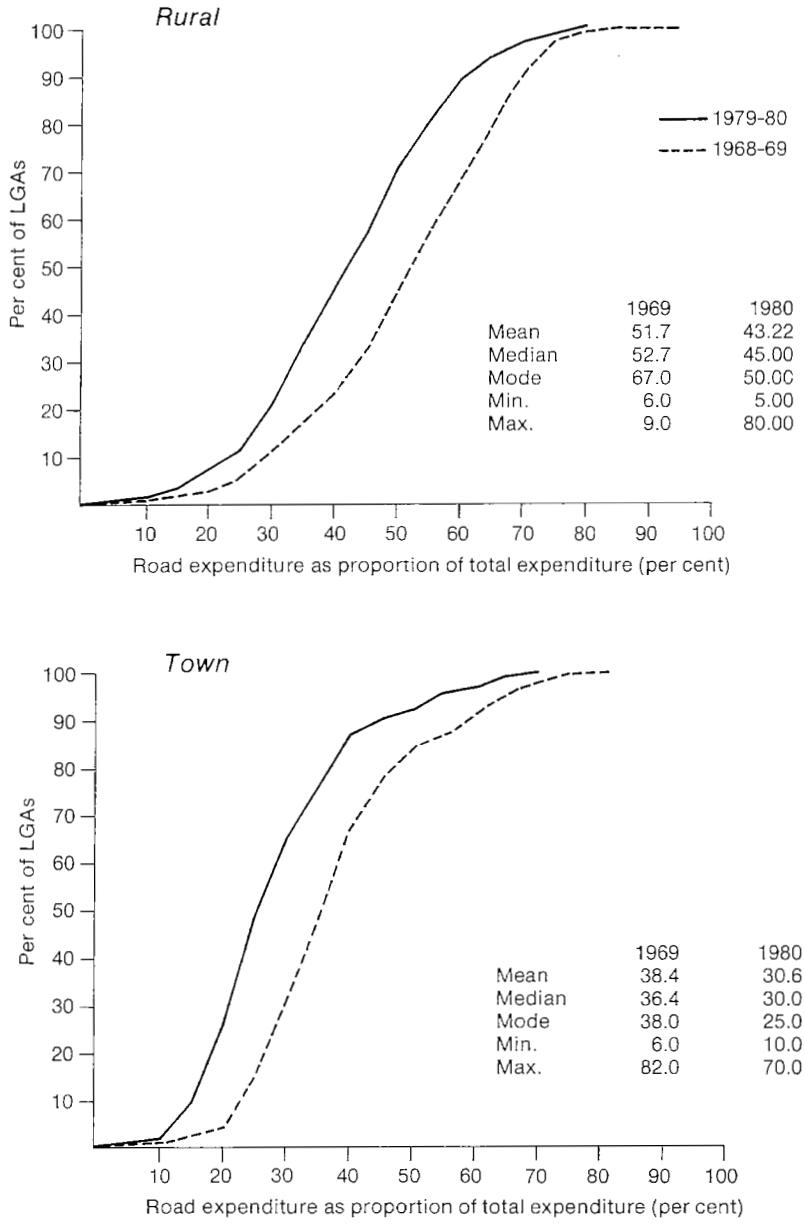
because it is more convenient to defer roadworks than to cut most other services.

Figure 5.5 shows cumulative frequency distributions (for Australia) of the proportion of total ordinary services expenditure devoted to roads



Source. Derived from ABS, 1979-80 SLGFS data file.

Figure 5.4—Composition of rural local government expenditures, Australia 1968-69 and 1979-80



Sources: Derived from ABS, 1979-80 AMIS data file; ABS, 1979-80 SLGFS data file.

Figure 5.5—Proportion of total ordinary services expenditure devoted to roads by rural local government; cumulative frequency distributions, 1968-69 and 1979-80

in 1979-80. These indicate the considerable variations among LGAs:

- 20 per cent of *Rural* LGAs spent less than 30 per cent of total expenditure on roads;
- 10 per cent of *Rural* LGAs spent more than 60 per cent of total expenditure on roads;
- 65 per cent of *Town* LGAs spent less than 30 per cent of total expenditure on roads; and
- 5 per cent of *Town* LGAs spent more than 60 per cent of total expenditure on roads.

Manpower

The importance of the provision of roads as a council function is also evident in the large proportion of the rural local government workforce engaged in road related activities. Tables 5.7, 5.8 and Figure 5.6 show the estimated composition of the rural local government workforce. In 1979-80, 59 per cent of the time of the 35 600 full-time staff, and 15 per cent of that of part-time staff was spent on the provision of roads. Certain occupational groups were particularly heavily engaged on roads. Of full-time staff, roadworks accounted for:

- 88 per cent of the time of the 10 500 plant operators (the largest occupational group);
- 70 per cent of the time of the 8840 unskilled workers;
- 65 per cent of the time of the 1080 engineers; and
- 64 per cent of the time of the 624 surveyors and draftsmen.

Councils also hire private contractors and consultants to supplement work done on roads by council staff. However, expenditure incurred by authorities in hiring contractors and consultants forms a relatively small proportion of total expenditure on roads. In 1979-80 this expenditure amounted to $23.6 million (4.6 per cent) against total rural local government outlays on roads of $513 million (Table 5.9).

Councils interviewed (see Appendix IV) were generally reluctant to use private contractors and gave the following reasons:

- lack of suitable contractors in area (particularly in more remote LGAs);
- high level of supervision necessary; and
- day labour gangs invariably produced a better quality job at equivalent or lower cost.

TABLE 5.7-ESTIMATED NUMBERS OF FULL-TIME STAFF EMPLOYED BY RURAL LGAs AND PERCENTAGE OF THEIR TIME SPENT ON ROAD RELATED ACTIVITIES[a] [b], 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All States	
Occupational group	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*
Administrative staff	806	26	527	19	382	24	252	15	254	28	88	13	2 310	23
Professional engineers	508	62	423	70	100	57	5	42	23	80	17	34	1 080	65
Other professional staff	387	27	279	11	80	10	28	11	42	8	4	82	818	18
Surveyors/draftsmen	318	57	161	72	108	75	11	73	9	65	17	31	624	64
Supervisors/overseers	652	59	336	80	598	76	154	78	170	87	63	75	1 970	72
Plant operators	3 100	84	2 330	91	2 820	91	854	83	1 130	89	260	74	10 500	88
Skilled tradesmen	1 080	70	457	44	687	43	85	74	130	60	63	78	2 510	58
Unskilled workers	3 520	73	1 710	66	2 850	68	260	65	356	64	134	75	8 840	70
Clerical staff	2 200	14	520	15	1 020	28	182	12	197	26	59	22	4 180	18
All other Staff	1 240	21	723	3	426	29	165	3	189	5	25	37	2 760	15
All groups	13 800	56	7 470	58	9 080	65	1 990	57	2 500	65	731	60	35 600	59

a. See Appendix I for notes relating to this table.
b. These figures refer to the financial year ending June 1980, except for New South Wales and Victoria where the figures refer to financial years ending in December and September respectively.

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE 5.8-ESTIMATED NUMBERS OF PART-TIME STAFF EMPLOYED BY RURAL LGAs AND PERCENTAGE OF THEIR TIME SPENT ON ROAD RELATED ACTIVITIES[a] [b], 1979-80

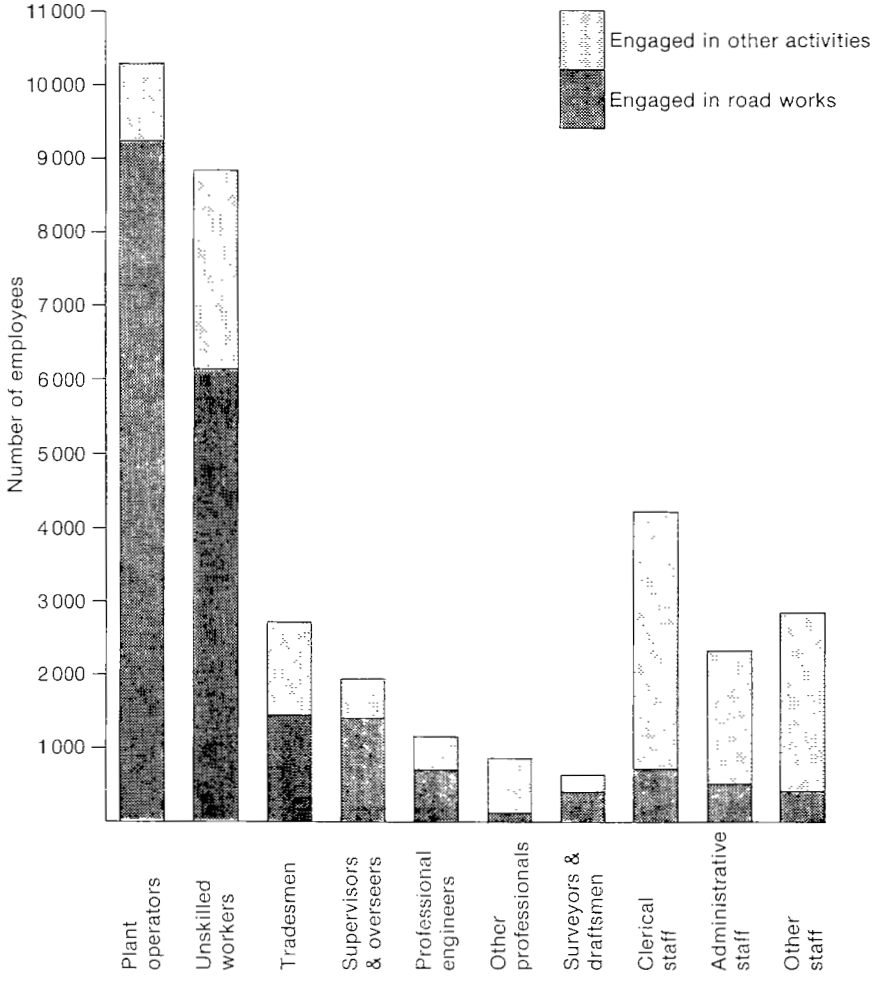
	NSW		Vic		Qld		SA		WA		Tas		All States	
Occupational group	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*	*Number*	*Road (per cent)*
Administrative staff	27	32	51	13	18	8	38	7	17	16	0	0	151	15
Professional engineers	256	4	5	11	44	67	9	1	34	83	8	15	357	19
Other professional staff	271	5	52	6	13	12	32	0	11	13	17	2	396	5
Surveyors/draftsmen	281	5	23	75	21	51	7	35	6	100	4	44	342	15
Supervisors/overseers	291	2	8	0	3	57	7	84	9	41	4	87	321	6
Plant operators	432	15	28	100	16	30	32	55	0	0	8	44	515	23
Skilled tradesmen	165	0	0	0	21	28	0	0	0	0	4	44	190	4
Unskilled workers	634	15	287	43	106	26	78	63	48	46	59	87	1 210	31
Clerical staff	66	10	69	2	52	11	25	3	17	3	17	13	245	7
All other Staff	139	12	1 210	5	144	4	90	3	155	0	21	17	1 760	5
All groups	2 560	9	1 740	14	437	22	316	26	297	22	143	49	5 490	15

a. See Appendix I for notes relating to this table.
b. These figures refer to the financial year ending June 1980, except for New South Wales and Victoria where the figures refer to financial years ending in December and September respectively.

Note: Figures may not add due to rounding.

Source: BTE, Road Assessment Studies; Survey of Rural Local Government, 1980.

Generally, councils would only utilise private contractors for specialised tasks beyond the capacities of their own workforce, when their own day labour could not complete all works by a given date (for example, the end of the financial year) or where additional short-term funds were received from the SRA. In this latter case councils preferred to employ private contractors rather than temporarily expand their own workforces.



Source. BTE, Road Assessment Studies Survey, 1980.

Figure 5.6—Estimated composition of full-time workforce of rural local government, 1979-80

TABLE 5.9-ESTIMATED EXPENDITURE BY RURAL LGAs; PRIVATE CONTRACT AND CONSULTING SERVICES RELATING TO ROADWORKS[a]

($'000)

State	*1976*	*1977*	*1978*	*1979*	*1980*
NSW	5 860 (5.7)	7 120 (6.0)	7 880 (6.3)	8 020 (5.6)	10 200 (6.3)
Vic	4 030 (4.1)	6 840 (5.6)	6 870 (4.7)	6 620 (4.4)	5 490 (3.2)
Qld	1 630 (2.4)	2 170 (2.8)	1 360 (1.5)	1 580 (1.9)	3 450 (3.6)
SA	728 (4.3)	949 (4.7)	1 180 (3.8)	1 650 (5.5)	1 550 (4.5)
WA	381 (1.7)	330 (1.3)	511 (1.8)	933 (3.1)	1 430 (4.2)
Tas	991 (9.4)	697 (6.6)	1 020 (6.8)	964 (6.6)	1 480 (8.6)
All States	13 600 (4.3)	18 100 (4.8)	18 800 (4.3)	19 800 (4.4)	23 600 (4.6)

a. Figures in brackets show this expenditure as a percentage of total rural council outlays on roads.

Source: Derived from BTE, Survey of the Auustralian Road System: Local Government Authorities, 1980.

Revenues

Examination of council expenditures highlighted the point that although expenditure on roads is still the largest single component of *Rural* LGAs expenditure, it has been declining for some years. Declines have occurred in both the level of road expenditure at constant prices and the share of LGA expenditure allocated to roads.

Composition of LGA funds for roads

Rural local governments' funds for roads come basically from three sources (see Chapter 3 for more details):

- Commonwealth road grants;
- State road grants and reimbursements; and
- councils' own funds (including rates, charges and untied grants from whatever source).

Limitations in the data prevent the tracing of all money spent by councils to its original source. For example money provided by SRAs to councils as reimbursements for work done on arterial roads (Commonwealth category) may have originated from Commonwealth arterial road grants to the States. However it would be impossible to trace this back to the source. From the AMIS data collected by the ABS, it is possible to collate information on the basis of:

- reimbursements (from the SRAs);
- road grants (both Commonwealth and State);
- council funds from councils' own revenue (including PITS receipts).

These are contained in Table 5.10.

For *Rural* LGAs there have been significant changes in the composition of funds used for road construction and maintenance. With the exception of Queensland and Western Australia, LGAs themselves are the largest single providers of the funds they spend on roadworks (the New South Wales figures cannot always be compared with those of earlier years because of data problems, see Table 5.8). In Queensland, reimbursements have provided the largest share (since at least 1974), reflecting that State's policy of utilising LGAs to carry out substantial works on rural arterial and national highway projects and rural local roads under the control of the MRD. In Western Australia, road grants have been the largest single source since at least 1970. In South Australia, LGAs contributed an increased proportion from their own sources, offsetting the fall in road grants.

For *Town* LGAs (except in Queensland and Western Australia) the councils themselves again are the largest single providers of road funds. However, the level of LGA contributions is generally larger for *Town* LGAs than for their *Rural* counterparts (on average 50.6 per cent to 33.1 per cent in 1979-80). In Queensland, once again, reimbursements provided the largest share.

In summary, Table 5.10 highlights the following points:

- with some exceptions, LGAs have for the nine-year period provided over 30 per cent for *Rural* LGAs and over 50 per cent for *Town* LGAs of all road funds expended by themselves;

TABLE 5.10-REVENUE COMPOSITION OF RURAL LOCAL GOVERNMENT ROAD EXPENDITURE, FOR THE FINANCIAL YEARS ENDING 1970, 1974 AND 1980

(per cent)

	Reimbursements			*Road grants*			*Council Funds*		
	1970	*1974*	*1980*	*1970*	*1974*	*1980*	*1970*	*1974*	*1980*
				Rural					
NSW[a]	25.3	25.4	47.2	22.6	29.1	23.3	52.1	45.2	29.5
Vic	31.6	24.2	33.9	29.0	32.5	26.6	39.4	43.3	39.5
Qld	37.5	63.7	58.8	18.0	10.4	14.3	44.5	30.0	27.0
SA	7.9	11.2	16.9	56.4	35.7	21.6	35.7	53.1	61.5
WA	40.2	33.6	21.8	43.4	37.3	66.1	16.4	29.1	11.3
Tas	3.7	3.4	6.8	41.3	35.9	35.5	54.9	60.6	57.7
All States	27.4	32.5	41.2	28.9	27.2	25.6	43.6	40.3	33.1
				Town					
NSW[a]	12.9	10.0	32.0	12.0	25.3	11.3	75.1	64.6	56.7
Vic	21.4	14.1	30.3	28.0	20.2	18.1	50.6	67.8	51.6
Qld	34.6	53.2	42.3	19.2	11.3	19.6	46.3	35.5	38.2
SA	8.4	10.9	14.3	35.9	16.0	10.8	55.8	73.1	74.9
WA	11.1	11.4	18.1	67.0	56.3	54.2	21.9	32.1	27.8
Tas	5.0	7.0	6.4	13.1	14.5	20.0	81.9	78.5	73.6
All States	18.3	22.6	32.1	22.2	21.6	17.3	59.5	55.9	50.6

a. New South Wales 1979-80 data derived from SLFGS File. Because of differing definitions these data may not be directly comparable with those of earlier years.

Source: Derived from 1979-80 AMIS and SLGFS files.

- reimbursements have provided an increasingly large proportion of rural local governments' road funds (with the exception of *Rural* Western Australia); and
- road grants, as a proportion of all road funds, have been declining in significance (excepting Rural Western Australia where road grants have increased and *Town* Queensland where the proportion has remained stable).

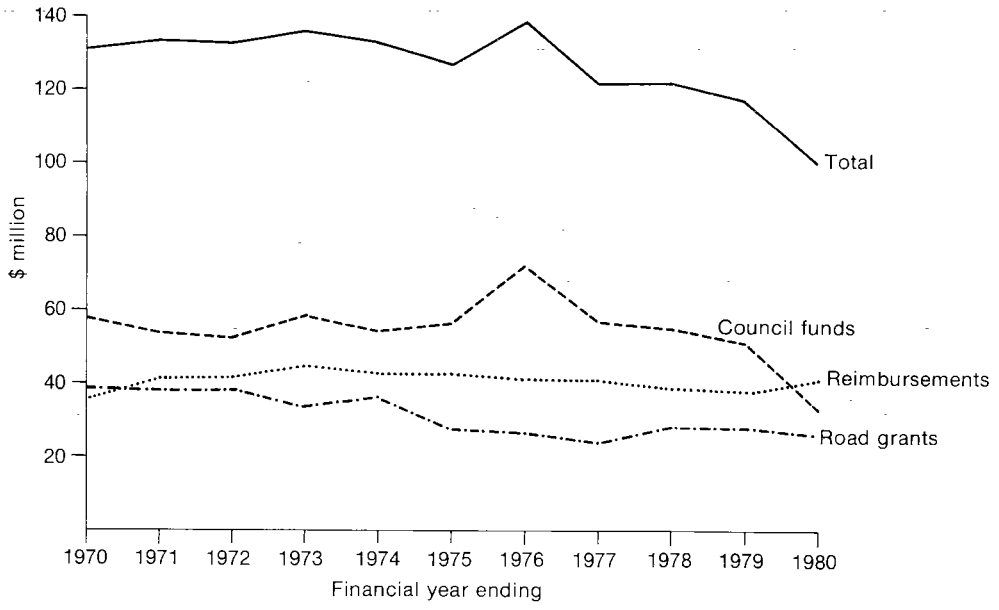
Figures 5.7 and 5.8 show the composition of rural local government road revenue sources in constant prices. Overall, with the exception of council funds, the composition and the amount contributed by each source has not changed significantly, although *Rural* LGAs total road expenditure has fallen (in real terms), while that of *Town* LGAs has shown a steady increase. Both *Rural* and *Town* LGAs' contributions to road expenditure peaked in 1975-76 following the introduction of the PITS arrangements. The effects, however, were short-term only with council contributions falling to previous levels the very next year. They have continued to fall since.

The LGAs own contributions are an important component of their overall road expenditures, and changes to their revenue sources will have an important impact on funds allocated to their various functional activities. An examination of rural local governments' overall revenue structure is required to best understand why the decline in their road activities has taken place in the past nine years.

Overall revenue

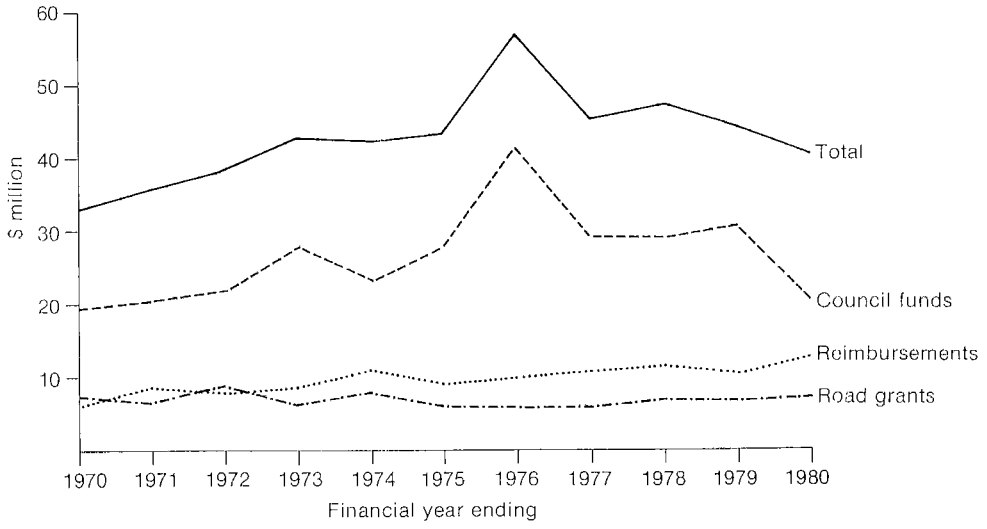
Town and *Rural* councils have experienced quite different trends in respect of their revenues between 1969-70 and 1979-80. While *Town* councils overall experienced reasonable growth in real terms (up to 85 per cent in Queensland), *Rural* LGAs in three States (New South Wales, Queensland and South Australia) experienced declines in their real revenues (Table 5.11).

The effect has been that while some *Town* LGAs in every State may now be capable of undertaking additional works and services (be they roads or other), mainland *Rural* LGAs are now clearly in a comparatively worse position than they were ten years ago. This is despite the fact that almost all *Rural* LGAs have responded to popular pressure to provide some sporting, cultural, welfare and community services. Councils have responded to this by generally trimming expenditure on their largest function: road construction and maintenance (see Table 5.2). The only real exception to this was Queensland, where *Rural* LGAs substantially *increased* their expenditure on roads despite



Sources: Derived from ABS, 1979–80 AMIS data file; ABS, 1979–80 SLGFS data file.

Figure 5.7—Composition of *Rural* local government revenue sources for roadworks; constant (1969-70) prices, 1969-70 to 1979-80



Sources: Derived from ABS, 1979-80 AMIS data file; ABS, 1979-80 SLGFS data file.

Figure 5.8—Composition of *Town* local government revenue sources for roadworks; constant (1969-70) prices, 1969-70 to 1979-80

experiencing a 10.8 per cent decline in the overall amount of funds available.

The overall figures shown in Table 5.11 give no indication of the changes that have taken place in the various components of the LGAs revenues. In particular, since 1974-75 LGAs have access to grants from the Commonwealth Government's PITS arrangements which are described in Chapter 3. These untied grants are distributed to individual LGAs by the Grants Commissions in each State. Since 1974-75 these grants have become an important source of revenue to both *Town* and *Rural* LGAs (see Tables 5.10 and 5.11). Theoretically, these grants were meant to allow councils to curb increases in rates and other council charges, and to provide councils with the financial capacity to provide expanded and improved services to their constituents. Tables 5.12 and 5.13 show that the effects have been different both for *Town* and *Rural* LGAs and for the various States.

For *Town* LGAs (Table 5.12) the following effects are evident:

. In New South Wales, Victoria and Queensland, LGAs increased revenues from their own sources, received increased road grants,

TABLE 5.11-TOTAL RURAL LGA REVENUES; 1977-78 CONSTANT PRICES, 1970 TO 1980

($ million)

	Town			*Rural*		
State	*1969-70*	*1979-80*	*Per cent change*	*1969-70*	*1979-80*	*Per cent change*
NSW[a]	110 102	213 867	+94.2	294 964	222 471	-24.6
Vic	56 920	87 361	+53.5	166 594	198 615	+19.2
Qld	59 850	113 453	+89.6	193 620	178 560	- 7.8
SA	16 370	19 306	+17.9	71 268	57 051	-19.9
WA	24 279	29 032	+19.6	79 718	91 205	+14.4
Tas	13 666	16 704	+22.2	15 705	22 131	+40.9
Australia	281 187	479 723	+70.6	821 869	770 033	-6.3

a. New South Wales 1979-80 data derived from the SLFGS Files. Because of differing definitions these data may not be directly comparable with those of earlier years.

Sources: Derived from ABS 1979-80 AMIS and SLGFS Files. Constant prices were derived from the Government Final Consumption Expenditure figures contained in the ABS and Quarterly Estimates of National Income and Expenditure (Catalogue No 5206.0).

TABLE 5.12-REVENUE RAISED BY *TOWN* LGAs, 1977-78 CONSTANT PRICES, 1970 AND 1980

($'000)

State		Revenue type: *Rates and charges*	*Reimbursements and road grants*	*Other grants*[a]	*Loan funds*	*Other revenue*	*Total*
NSW[b]	1969-70	75 531	10 090	3 860	20 622	8 481	110 102
	1979-80	108 303	24 426	26 971	27 938	21 649	213 867
	per cent change	(43.4)	(142.0)	(598.7)	(35.5)	(155.3)	(94.2)
Vic	1969-70	35 644	7 888	3 404	8 591	1 392	56 920
	1979-80	41 189	10 523	15 214	11 675	8 803	87 361
	per cent change	(15.6)	(33.4)	(346.9)	(35.9)	(532.4)	(53.5)
Qld	1969-70	37 764	9 724	917	10 650	795	59 850
	1979-80	49 541	22 741	12 568	19 650	8 920	113 453
	per cent change	(31.2)	(133.9)	(1 270.6)	(84.8)	(1 022.0)	(89.6)
SA	1969-70	9 618	3 426	142	2 829	355	16 370
	1979-80	10 576	1 249	3 775	2 848	859	19 306
	per cent change	(10.0)	(-63.5)	(2 558.5)	(0.7)	(142.0)	(17.9)
WA	1969-70	13 842	5 719	342	3 690	742	24 279
	1979-80	12 619	4 935	4 337	4 293	2 854	29 032
	per cent change	(-8.8)	(-13.7)	(1 168.1)	(16.3)	(284.6)	(19.6)

TABLE 5.12 (Cont)-REVENUE RAISED BY *TOWN* LGAs, 1977-78 CONSTANT PRICES, 1970 AND 1980

($'000)

State		*Revenue type*					
		Rates and charges	*Reimbursements and road grants*	*Other grants*[a]	*Loan funds*	*Other revenue*	*Total*
Tas	1969-70	8 527	917	132	3 681	409	13 666
	1979-80	10 118	1 455	1 872	1 657	1 500	16 704
	per cent change	(18.7)	(58.7)	(1 318.2)	(-55.0)	(266.7)	(22.2)
Australia	1969-70	180 868	40 302	8 892	50 064	12 173	292 218
	1979-80	232 346	65 323	64 737	68 091	44 585	479 723
	per cent change	(28.5)	(62.1)	(628.0)	(36.0)	(266.3)	(64.2)

a. Includes PITS grants.
b. New South Wales 1979-80 data derived from the SLGFS Files. Because of differing definitions these data may not be directly comparable with those of earlier years.

Source: Derived from ABS 1977-78 AMIS and SLGFS Files.

reimbursements and other revenue and increased loan borrowings. The net effect of these increases, added to the introduction of PITS grants, was that overall real revenue increased substantially.

- Councils in South Australia lost 64 per cent of the value of their road grants but nevertheless gained an overall real increase in revenue of nearly 18 per cent.
- In Western Australia councils reduced their rate revenue and experienced a 14 per cent reduction in specific funds for roads, but also increased real revenue by 20 per cent.
- Councils in Tasmania reduced loan borrowings by 55 per cent but increases in all other categories resulted in a net increase of 22 per cent.
- Overall, for all Australian *Town* LGAs there was a real net increase of 64 per cent between 1969-70 and 1979-80.

By contrast *Rural* LGAs present a much more confused and complex picture, with only Tasmanian LGAs apparently able to increase overall revenue substantially. The salient points of Table 5.13 are as follows:

- In all States, except Tasmania, councils reduced their real revenue from rates and other charges by amounts ranging from 4.0 per cent (Victoria) to 24.3 per cent (South Australia). New South Wales data for 1979-80 cannot be compared with earlier years because of differing definitions.
- Councils in all States, with the exception of Tasmania and Victoria, have had substantial decreases in specific road funds, ranging from 10.6 per cent in Western Australia to 71.8 per cent in South Australia.
- New South Wales, Western Australian and Tasmanian councils have reduced their loan borrowings.
- Councils in Queensland experienced a rise of only 25.3 per cent in other grants (which include PITS), in clear contrast to the large rises in other States.
- The overall effect of these changes was that councils in New South Wales, Queensland and South Australia experienced aggregate decreases in real terms in their overall revenues. Councils in Victoria and Western Australia experienced small increases and Tasmania had a substantial increase.
- Australia-wide *Rural* LGAs experienced an 8.9 per cent reduction in the overall real level of revenue.

TABLE 5.13-REVENUE RAISED BY *RURAL* LGAs, 1977-78 CONSTANT PRICES, 1970 AND 1980

($'000)

State		Revenue type: Rates and charges	Reimbursements and road grants	Other grants[a]	Loan funds	Other revenue	Total
NSW[b]	1969-70	176 549	79 788	7 647	30 979	23 322	318 285
	1979-80	78 231	63 560	29 598	28 681	19 407	219 477
	per cent change	(-55.7)	(-20.3)	(287.1)	(-7.4)	(-16.8)	(-30.0)
Vic	1969-70	86 890	56 794	6 733	9 157	7 000	166 574
	1979-80	83 411	56 950	31 389	17 221	9 655	198 626
	per cent change	(-4.0)	(0.3)	(366.2)	(88.1)	(37.9)	(19.2)
Qld	1969-70	74 928	75 014	20 541	21 601	1 537	193 621
	1979-80	57 370	62 778	25 745	23 782	9 106	178 781
	per cent change	(-23.4)	(-16.3)	(25.3)	(10.1)	(492.5)	(-7.7)
SA	1969-70	37 102	27 311	1 292	4 928	634	71 267
	1979-80	28 080	7 668	11 592	7 705	2 011	57 056
	per cent change	(-24.3)	(-71.8)	(797.2)	(56.4)	(217.2)	(-19.9)
WA	1969-70	35 377	25 079	719	16 462	2 080	79 717
	1979-80	30 572	22 423	13 857	15 947	7 457	90 256
	per cent change	(-13.6)	(-10.6)	(1 827.3)	(-3.1)	(258.5)	(13.2)

TABLE 5.13 (Cont)-REVENUE RAISED BY *RURAL* LGAs, 1977-78 CONSTANT PRICES, 1970 AND 1980

($'000)

State		*Revenue type*					
		Rates and charges	*Reimbursements and road grants*	*Other grants*[a]	*Loan funds*	*Other revenue*	*Total*
Tas	1969-70	9 511	3 520	311	1 945	418	15 705
	1979-80	10 107	4 379	3 933	1 785	1 769	21 973
	per cent change	(6.3)	(24.4)	(1 164.6)	(-8.2)	(323.2)	(39.9)
Australia	1969-70	420 357	267 506	37 243	85 072	34 991	845 169
	1979-80	287 771	217 758	116 114	95 121	49 405	766 169
	per cent change	(-31.5)	(-18.6)	(211.8)	(11.8)	(41.2)	(-9.3)

a. Includes PITS grants.
b. New South Wales 1979-80 data derived from the SLGFS Files. Because of differing definitions these data may not be directly comparable with those of earlier years.

Source: Derived from ABS 1977-78 AMIS and SLGFS Files.

The net effect of the past ten years has been that *Rural* LGAs have suffered substantial reductions (in real terms) in the reimbursements and road grants they received from State and Commonwealth governments. Further they have almost without exception reduced their own real revenue raising through rates and other internal sources and in New South Wales and South Australia have reduced their loan borrowings. This combined loss of income has generally not been matched by increases in other sources of revenue (largely PITS grants), and councils were therefore in a worse (or at best similar) financial position in 1979-80 than they were in 1969-70.

AVAILABILITY OF FUNDS FOR RURAL ROADS

Apart from reduced funds spent by LGAs in rural areas, the overall level of expenditure (in real terms) on the rural road network has declined. Table 5.14 shows clearly that in real terms the total level of funds has declined from $1010.6 million in 1970-71 to $885.1 million in 1979-80. While both State and local government contributions have remained almost constant, Commonwealth grants declined substantially. The fall in Commonwealth grants is quite marked (Table 5.14).

The main reason for this fall was the Commonwealth's decision to take over funding of the national highway system in 1974. National highways are an important part of the rural road network and the volume of traffic they carry normally comprises a large proportion of relatively local traffic. They also have the function of connecting major capital cities and other areas of national interest, and so generally carry a component of long distance traffic of national significance. However, from an LGA and State point of view the declaration of the national highway network has meant that a large proportion of the Commonwealth's road grants is being directed to comparatively few roads.

Table 5.15 shows the position in each State for the financial years ending 1971, 1976 and 1980. The fall in Commonwealth support is evident in all States with the grants in 1979-80 being only a little over half their value in 1970-71. By contrast, State and local governments in most States either held or increased their funding of these roads in real terms. The one clear exception was in South Australia where Commonwealth, State and local government expenditures were all less in 1979-80 than they were in 1970-71. In real terms, expenditure on rural roads in that State declined from $91.2 million in 1970-71 to $54.3 million in 1979-80.

TABLE 5.14-LEVEL OF FUNDS EXPENDED ON RURAL ARTERIAL AND LOCAL ROADS BY LEVEL OF GOVERNMENT, 1980 PRICES, 1971 TO 1980

	Year											
	1971		*1973*		*1975*		*1977*		*1979*		*1980*	
Level of government	*($m)*	*(per cent)*	*($m)*	*(per cent)*	*($m)*	*(per cent)*	*($m)*	*(per cent)*	*($m)*	*(per cent)*	*($m)*	*(per cent)*
Commonwealth	357.9	36	342.6	35	231.3	26	168.3	20	198.6	23	192.7	22
State	443.3	44	419.7	42	371.1	41	445.5	52	426.2	48	441.4	50
Local	209.4	21	229.0	23	298.8	33	248.8	29	249.0	29	251.0	28
Total	1 010.6	100	991.3	100	901.2	100	862.6	100	873.8	100	885.1	100

Source: BTE (1982a).

TABLE 5.15-SOURCE OF FUNDS FOR RURAL ARTERIAL AND LOCAL ROADS BY LEVEL OF GOVERNMENT, 1980 PRICES, 1971, 1975 AND 1980

($ million)

	Financial year ending											
	Commonwealth[a]			*State*			*Local*			*Total*		
State	*1971*	*1975*	*1980*	*1971*	*1975*	*1980*	*1971*	*1975*	*1980*	*1971*	*1975*	*1980*
NSW	93.0	52.0	52.0	154.4	155.6	177.0	101.5	123.4	102.2	348.9	331.0	331.2
Vic	51.2	48.8	35.8	103.2	67.6	77.3	35.1	68.1	46.5	189.5	184.5	159.6
Qld	89.5	69.9	50.1	86.0	79.9	81.2	41.2	65.9	49.5	216.7	215.7	180.8
SA	32.5	10.3	16.4	41.2	24.2	21.1	17.5	23.1	16.8	91.2	57.6	54.3
WA	72.8	37.0	29.0	38.0	33.4	51.2	4.9	18.4	22.8	115.7	88.8	103.0
Tas	19.0	13.2	9.4	20.5	10.2	33.6	9.6	13.4	13.2	49.1	36.8	56.2
All States	358.0	231.2	192.7	443.3	370.9	441.4	209.8	312.3	251.0	1011.1	914.4	885.1

a. These figures exclude funds for National Highways for the years 1975 and 1980.

Source: BTE (1982a).

CHAPTER 6-RURAL LOCAL GOVERNMENT OBJECTIVES AND PRIORITIES FOR ROADS

The analysis of rural councils' expenditure and revenue patterns and manpower allocation indicates the high profile of roadworks in their activities. Despite some decline over the past 10 years in the importance of roadworks relative to other council activities, roads continue to account for the largest share of rural council resources.

The report of the Secretariat to the Local Government Ministers' Conference (1980) suggested a number of factors that act to entrench this emphasis on roads:

- historically, local government developed as a property servicing agent;
- the physical and demographic characteristics of rural areas lead to a high priority being placed on access by rural residents for social and production reasons;
- ratepayers expect and demand that rates (a property tax) be spent on property related services. Outside townships, roads are often the only property service provided by rural councils;
- funds provided by other levels of government are weighted towards roadworks. For many rural councils, roads related grants and reimbursements are greater than councils' own general revenues;
- past investment in the road network has committed councils to extensive and continuing maintenance programs; and
- cost pressures on road construction and maintenance limit the availability of council finances for other services.

Interviews with council officers and elected representatives indicated some additional influences on the level of roadworks:

- Councils generally aim to undertake annual works programs to match the capacity of their workforces and machinery. Large fluctuations in employment levels and plant usage are viewed as undesirable for social and operational reasons. Rural LGAs' manpower and plant resources are largely geared for roadwork activities.

- Roadworks are considered to be the major 'traditional' function of councils. Other service areas may be taken up or expanded in response to community demands after road standards have achieved an 'acceptable' minimum level. Even so, there is still considerable emphasis on the further improvement or maintenance of roads.
- Community (and council) expectations for the standard of roads are continually changing upwards. In part this is a result of the desire of the rural community for similar levels of service to more urbanised areas, but also reflects successive stages of development or improvement in the rural road network.

As a result, councils appear to have little scope for major changes in expenditure priorities for the different service areas. Changes to priorities are only likely to be reflected in expenditure patterns over a relatively long period of time, as indicated in Figure 5.4.

OBLIGATORY EXPENDITURE

In the Survey of Rural Local Government, respondents were asked to indicate the extent to which their outlays on roads in 1979-80 were considered to be obligatory[1]. Table 6.1 shows that for a majority of respondents in all States the major proportion of council road outlays were obligatory:

- The median proportion of all councils' outlays on roadworks which were obligatory was 85 per cent. Modal values were higher at 91-100 per cent in all States.
- There was a statistically significant difference among States in the distribution of councils' road outlays considered to be obligatory. In South Australia, and to a lesser extent in Western Australia, councils had a lower average proportion and a greater range of obligatory roads expenditures than in other States.
- There was no significant difference between *Town* and *Rural* categories of LGAs in this trend.

The remaining proportions of road outlays (termed discretionary) represent the amount of funds that councils chose to allocate for additional road construction and maintenance, rather than to other

1. That is, the extent to which a council was committed to spending a certain amount of funds on roadworks in the financial year ending in 1980. See Appendix I, Part II, Q4 for a definition of obligatory expenditure.

TABLE 6.1-PROPORTION OF RURAL LOCAL GOVERNMENT ROAD EXPENDITURE CONSIDERED TO BE OBLIGATORY, 1979-80

(per cent)

Obligatory outlays as a proportion of council road outlays	*NSW*		*Vic*		*Qld*		*SA*		*WA*		*Tas*		*All States*		
	Town	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Total*
0-10	10.5	-	12.5	-	-	-	20.0	11.7	-	-	-	-	8.6	2.1	3.2
11-20	-	-	-	-	-	4.2	-	7.8	-	1.7	-	-	-	2.4	2.0
21-30	-	-	-	-	-	-	-	9.8	-	1.7	-	-	-	2.1	1.7
31-40	15.8	2.6	-	-	11.1	2.1	-	5.9	-	1.7	-	9.1	6.9	2.4	3.2
41-50	-	2.6	6.3	-	-	2.1	20.0	5.9	40.0	8.3	-	9.1	6.9	3.9	4.4
51-60	-	2.6	-	1.3	22.2	8.3	20.0	13.7	20.0	11.7	-	-	6.9	7.0	7.0
61-70	-	2.6	12.5	6.4	-	10.4	-	9.8	-	11.7	-	18.2	3.4	8.8	7.9
71-80	10.5	13.2	18.8	11.7	-	10.4	-	15.7	20.0	16.7	-	18.2	10.3	13.7	13.1
81-90	5.3	10.5	6.3	19.4	22.2	16.7	20.0	3.9	-	20.0	-	9.1	10.3	14.7	14.0
91-100	57.9	65.8	37.5	61.0	44.4	45.8	20.0	15.7	20.0	26.6	100.0	36.3	46.6	42.8	43.4
Mean	74.6	87.4	71.9	88.6	77.8	79.3	54.4	52.3	61.4	73.6	99.0	74.5	73.2	76.6	76.0
Standard deviation	33.7	16.7	31.2	11.7	23.6	22.8	36.8	31.5	23.3	20.7	1.4	21.9	30.3	28.5	25.6

TABLE 6.1 (Cont)-PROPORTION OF RURAL LOCAL GOVERNMENT ROAD EXPENDITURE CONSIDERED TO BE OBLIGATORY, 1979-80

(per cent)

Obligatory outlays as a proportion of council road outlays	*NSW*		*Vic*		*Qld*		*SA*		*WA*		*Tas*		*All States*		
	Town	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Total*
Standard error	7.7	2.7	7.8	1.3	7.9	3.3	16.4	4.4	10.4	2.7	0.7	6.6	4.0	1.5	1.4
Median	91.0	94.0	77.0	91.0	88.0	85.0	50.0	55.0	53.0	78.0	99.0	74.0	87.0	84.0	85.0
Minimum	5.0	30.0	2.0	52.0	38.0	10.0	2.0	0.0	42.0	12.0	97.0	36.0	2.0	0.0	0.0
Maximum	100.0	100.0	100.0	100.0	100.0	100.0	96.0	100.0	98.0	100.0	100.0	98.0	100.0	100.0	100.0

Town and Rural Difference: $\chi^2 = 6.025$ DF = 7 $P > 0.01$ (χ^2 7, 0.01 = 18.48)

Among States Difference[a] : $\chi^2 = 94.923$ DF = 24 $P < 0.01$ ($\chi^2$24, 0.01 = 42.98)

a. Excludes Tasmania due to insufficient data.

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

services, in 1979-80. These funds were comprised largely of council general revenues.

The differences among States reflect the different sources of road funds and the purposes for which funds are used. The previous chapter indicated that road grants and reimbursements declined in real terms over the period 1969-70 to 1979-80, but that council own-source outlays on roads were generally maintained or increased in real terms. Grants and reimbursements were defined as obligatory road expenditures. The decline in real value of these sources of funds is particularly evident for New South Wales and South Australian *Rural* authorities (Table 5.13).

Similarly, council own-source funds allocated for annual maintenance are also defined as obligatory expenditures. In most States, council own-source expenditures on roads are largely allocated for maintenance, with construction activity being dependent on grants or reimbursement funds. In South Australia, however, the large average proportion of discretionary road outlays suggests that councils also finance a substantial amount of permanent works from general revenues. To some extent this is supported by the interviews with councils (see Appendix IV).

The data also suggest that *Town* councils in all States are less dependent than *Rural* councils on grant or reimbursement funds for construction works, although the differences are not statistically significant.

INFLUENCES ON ROAD EXPENDITURE

Table 6.2 and Figure 6.1 show the relative importance of the factors influencing councils in their decisions to allocate funds for additional road construction and maintenance. There is a high level of agreement among respondents on the order of importance of these influences[1]. The grouped ranking coefficients are statistically significant at the 0.01 level of confidence in all cases. This indicates that respondents within each group applied essentially the same standards to their individual rankings.

The two factors that stand out as major stimuli are:

. demonstrated needs for particular works to be done; and

---

1. This is shown by the Kendall Coefficient of Concordance, W. W may take values from 0 (no agreement among judges) to +1 (complete agreement). See Siegal (1956, pp229-239).

TABLE 6.2-RANK ORDER OF INFLUENCES FOR DISCRETIONARY RESOURCE ALLOCATION TO ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Influence	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
To meet demonstrated need for particular works	1	1	1	1	1	1	1	1	1	2	2	1	1
To meet specific demands from road users	2	2	2	2	2	2	3	2	2	1	1	2	2
To generally alleviate backlog of works	3	3	3	3	4	5	6	3	4	4	4	3	3
To achieve equity of resource allocation among groups of ratepayers	4	4	4	4	3	3	2	4	5	3	3	3	4
To maintain continuity of employment for LGA permanent workforce	6	6	6	5	5	4	4	5	6	5	6	5	5
To cater for future development of LGA area	5	5	5	6	6	6	5	5	3	6	5	6	6

TABLE 6.2 (Cont)-RANK ORDER OF INFLUENCES FOR DISCRETIONARY RESOURCE ALLOCATION TO ROADS, 1979-80

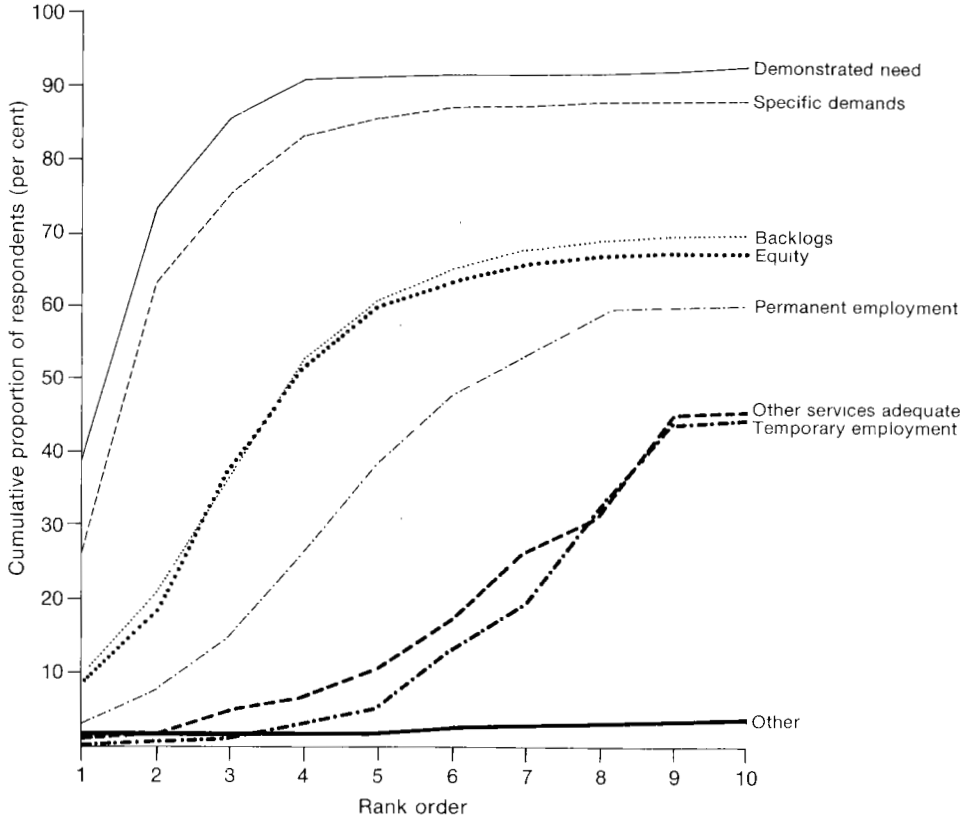
	NSW		*Vic*		*Qld*		*SA*		*WA*		*Tas*		*All*
Influence	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
To provide access to services in a regional centre	7	7	7	7	9	7	9	7	7	7	9	8	7
All other LGA services adequately provided	8	8	8	8	7	9	8	8	7	8	8	9	8
To provide temporary employment for LGA residents	9	9	9	9	8	8	7	9	7	9	7	7	9
Other	10	10	10	10	10	10	10	10	7	10	10	10	10
Kendall's W	0.60	0.54	0.66	0.60	0.65	0.51	0.65	0.52	0.89	0.56	0.88	0.52	0.55
χ^{2a}	86.49	156.52	95.45	353.92	46.87	180.76	29.29	224.66	40.06	296.64	23.66	61.37	1 541.36

a. DF = 9 in all cases (χ^2 9, 0.01 = 21.67)

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

. demands from road users for specific works.

A demonstrated need for additional works in the financial year was the main reason for councils in all groups, except Western Australian *Rural* and Tasmanian *Town* groups, allocating extra finances to roadworks rather than to other services. Approximately 49 per cent of respondents cited demonstrated needs as the primary cause of discretionary roads expenditures, ranging from 39 per cent in Western Australia to 57 per cent in New South Wales. All but 7 per cent of respondents considered this factor had some weight.



Source. BTE, Road Assessment Studies Survey, 1980.

Figure 6.1—Ranking of reasons for discretionary expenditure on roads and bridges by rural LGAs, 1979-80

Specific demands for works from road users were put forward as the second most important cause of discretionary expenditures. In the Western Australian *Rural* and Tasmanian *Town* groups this factor was ranked first, whilst the South Australian *Town* group ranked it third. More than 80 per cent of councils in each State were influenced by specific demands to some extent.

The difference in weight attached to these two influences is relatively small. Table 6.3 shows a breakdown of rank scores for each influence. Both may involve real or imagined 'needs' for works. However, response to a demonstrated need implies that the council used some evaluation procedure to decide the relative merits of a given need, whilst a response to road user demand implies a concession to ratepayer or road user 'noise' with little or no evaluation. It is possible that this distinction is not readily made in the councils' decision making, and this may account for the similar ranking scores.

Other notable features of Table 6.2 and Figure 6.1 are:

- Alleviation of a backlog of works, equity of resource allocation among groups of ratepayers, continuity of employment for the permanent workforce and future development of the LGA area are secondary reasons for discretionary expenditures. The order of importance of these factors varies among groups of respondents, with backlogs and equity considerations tending to have a generally higher priority than employment or development.
- Only a small proportion of respondents gave first ranking to any of the secondary influences. Backlogs of works were considered to be the major cause of discretionary expenditures by 15 per cent of respondents in New South Wales and 17 per cent in Victoria. No other factor was ranked first by 15 per cent or more of respondents.
- All other factors were considered to be relatively unimportant as determinants of councils' road expenditures.
- Very few respondents considered other council services to be adequately provided. Demands on other service areas are thus more likely to result in greater pressures on the roads budget instead of freeing revenues for roadworks. At the same time councils indicated that they are generally not upgrading roads in order to provide access to services in regional centres. This suggests that councils tend to consider their problems in isolation from each other, and attempt to satisfy service requirements locally.

TABLE 6.3-RANKING SCORES OF INFLUENCES ON DISCRETIONARY RESOURCE ALLOCATION TO ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Influence	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
To meet demonstrated need for particular works	36.5	56.0	22.0	132.5	13.0	100.5	5.0	102.5	5.0	156.0	6.0	32.0	667.0
To meet specific demands from road users	43.5	104.5	51.5	179.0	21.5	104.5	23.5	131.5	11.0	136.5	4.0	37.0	848.0
To generally alleviate backlog of works	57.5	142.5	62.5	262.0	35.5	197.0	28.5	220.0	19.0	293.5	15.0	59.5	1 392.5
To achieve equity of resource allocation among groups of ratepayers	80.5	150.5	80.0	295.5	34.5	170.5	21.0	229.5	31.5	254.5	9.0	59.5	1 425.5
To maintain continuity of employment for LGA permanent workforce	102.0	191.5	99.0	374.5	44.0	193.0	26.0	280.0	34.5	301.5	19.0	75.5	1 740.5
To cater for future development of LGA area	81.0	173.5	91.0	410.5	47.0	210.5	27.0	280.0	18.0	342.5	16.0	76.5	1 773.5

TABLE 6.3 (Cont)-RANKING SCORES OF INFLUENCES ON DISCRETIONARY RESOURCE ALLOCATION TO ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Influence	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
To provide access to services in a regional centre	110.0	214.0	109.0	471.5	61.0	274.0	36.5	318.5	39.0	417.5	25.0	91.0	2 167.0
All other LGA services adequately provided	115.0	217.0	117.0	479.5	57.5	295.5	35.5	335.0	39.0	424.0	23.0	92.0	2 230.0
To provide temporary employment for													
LGA residents	123.5	234.5	118.0	486.0	59.0	290.0	34.5	354.0	39.0	430.0	21.0	89.0	2 278.5
Other	130.5	267.0	130.0	538.0	67.0	314.5	37.5	383.0	39.0	498.0	27.0	103.0	2 534.5
Number of respondents	16	32	16	66	8	39	5	48	5	59	3	13	310

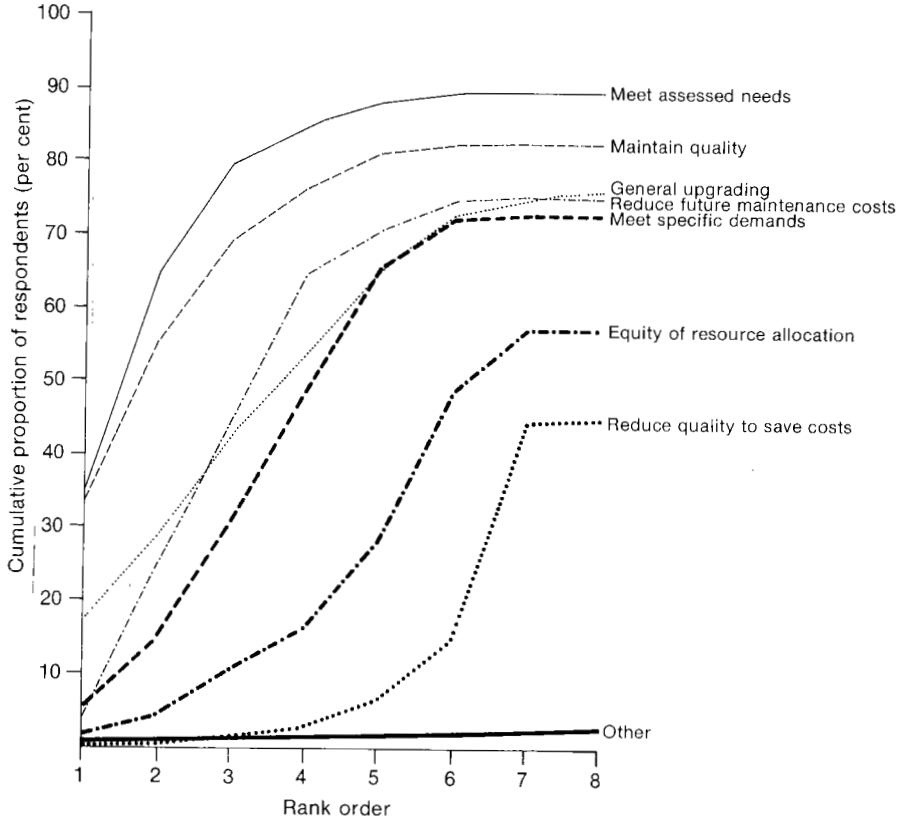
Note: Ranking scores can only be compared within a group of judges, that is down columns. Comparisons across groups of judges, that is along rows, is invalid due to the varying numbers of judges in each group. See Siegal (1956 pp229-239). The importance of factors under study is indicated by the ordering of rank scores in each column. The lowest rank score indicates greatest importance and vice-versa.

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

. The use of roadworks to temporarily alleviate local unemployment was rated as the lowest influence in all groups. Very few councils in any group gave this factor any consideration. Councils do not see themselves as having a major role in this field.

OBJECTIVES FOR ROADWORKS

The objectives of rural LGAs for their road expenditures are shown in Table 6.4 and Figure 6.2. Agreement among respondents as to the order of importance of these objectives was strong, and statistically



Source: BTE, Road Assessment Studies Survey, 1980.

Figure 6.2—Ranking of rural local government objectives for road and bridge works, 1979-80

TABLE 6.4-RANK ORDER OF RURAL LOCAL GOVERNMENT OBJECTIVES FOR EXPENDITURE ON ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Influence	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
Improving particular roads to meet assessed needs of ratepayers/ traffic	1	1	1	1	1	1	1	1	1	1	1	4	1
Maintaining LGA road network quality level	2	2	2	2	4	2	3	2	2	2	2	3	2
General upgrading of quality of LGA road network	3	3	4	4	3	3	2	4	5	4	5	1	3
Improving particular roads to reduce future maintenance costs	4	4	3	3	2	5	4	5	3	3	3	2	4
Fulfilling particular demands from ratepayers/road users	5	5	5	5	5	4	6	3	4	5	4	5	4

TABLE 6.4 (Cont)-RANK ORDER OF RURAL LOCAL GOVERNMENT OBJECTIVES FOR EXPENDITURE ON ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Influence	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
Equitable distribution of resources among groups of ratepayers	6	6	6	6	6	6	5	6	7	6	7	6	6
Reducing quality of particular road sections or road closure to reduce costs of maintenance	7	7	7	7	7	7	7	7	6	7	6	7	7
Other	8	8	8	8	8	8	8	8	8	8	8	8	8
Kendall's W	0.52	0.50	0.63	0.60	0.46	0.43	0.44	0.49	0.68	0.53	0.61	0.46	00.50
χ^{2a}	69.09	143.57	70.78	326.78	28.97	148.13	15.38[b]	183.06	23.93	245.34	17.19[b]	41.41	1 254.4

a. DF = 7 in all cases.
b. Not significant at P = 0.01 level of significance ($\chi^2_{7,\ 0.01} = 18.48$).

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

significant at the 0.01 level for all groups except South Australian and Tasmanian *Towns*.

The improvement of particular roads to meet the assessed needs of ratepayers or traffic was the most important objective for respondents in all groups except Tasmanian *Rural* councils. Approximately 36 per cent of respondents accorded this objective first priority, whilst 89 per cent gave it some weight.

Maintenance of the quality of the present road system within the LGA closely followed as the overall second objective of roads expenditure. This factor was nominated as being of prime importance by 33 per cent of respondents, and considered to be of some influence by 82 per cent of all respondents.

Objectives of lesser rank were the general upgrading of road systems, reduction of maintenance costs through specific road improvements, and the meeting of particular demands of ratepayers or road users. The order of importance of these objectives, and the relative weights attached to each, varied considerably among groups of respondents.

Very few councils in any State indicated a concern to distribute road expenditures equally among ratepayer groups. Similarly, a reduction in road standards or road closure to achieve reductions in roadworks costs received very little support from respondents. Where it was indicated that road standards had been reduced, such claims were usually associated with a lack of sufficient finance to maintain the quality of roads. Most councils appear to believe that higher standards than presently exist are warranted, as well as being expected by ratepayers, except for a few low volume farm access roads.

From these results it may be inferred that:

- The majority of rural LGAs in all States undertake some sort of evaluation procedure to determine relative assessed needs when allocating resources among road projects.
- In the main, councils resist pressures for particular works or to spread money evenly among ratepayer groups, with funds going to areas of greatest need (assessed by councils according to their particular criteria).
- Councils are giving higher priority to maintaining the present road system, with improvements where needed, rather than aiming for a general upgrading of the road network.

PROCEDURES FOR RESOURCE ALLOCATION

A major contribution to the inflexibility in council budgets may be the procedures adopted in setting budget levels. Local governments are multi-purpose institutions and councils usually have a number of programs and services which cater for the needs and demands of residents. Limited funds must be allocated among these program areas. There are high costs associated with reaching the desired levels of service for many programs (such as roads) and targets can only be reached by the application of resources over several years. To reach any given target level of service some measures are more effective than others. The procedures used by councils for allocating constrained resources can be crucial to whether or not a particular program is effective and efficient in meeting community requirements.

The process can be thought of as comprising three stages, which may or may not occur in sequence. These encompass decisions on:

- revenue levels;
- allocation of funds among budget sectors; and
- operations within budget sectors.

A generalised, and highly simplified, description of the annual budget setting procedure used by councils follows[1].

Officers prepare a recommended program of expenditure for each budget sector. This usually includes estimates of predictable fixed commitments such as loan repayments, grant matching contributions and administrative overheads as well as amounts needed to maintain or expand services and to meet recommended works requirements. At the same time, staff also prepare estimates of likely receipts from charges, loans approvals and grants and calculate the size of rate receipts required to match the balance of expenditure estimates[2]. All estimates are then presented to councillors for consideration and a decision is made on the appropriate level of rates for the year.

---

1. The interviews with councils in Appendix IV present more detailed examples of individual council approaches to this task.
2. Under the various Local Government Acts, councils are required to achieve approximately balanced budgets each year. Deficits or surpluses may occur, but councils are supervised by their respective State's Local Government Department to ensure that large discrepancies between income and expenditure do not occur frequently.

Expenditure estimates are then adjusted (usually downwards) to meet the available revenues.

Obviously, there are many variations on this basic procedure. Officers may present the council with a range of service and works proposals that could be achieved with different levels of rate income or increases. Decisions on 'fine tuning' budget estimates may be made by the Council, or left to officers to achieve expenditure cuts within the overall revenue limit. Estimates and recommendations for the level of works and services may be prepared initially by staff, by council committees, by the full council or by a combination of each.

This process has developed over a long period of time as a means of achieving some form of workable consensus among groups who often have diverse, vaguely specified but strongly held views on what are appropriate areas and levels of action (or inaction). These political values permeate every phase of decision-making, from the identification of 'needs' or objectives through the various means of satisfying them, to the level and form of financing considered to be necessary and acceptable. Some form of trade-off mechanism is necessary in the process so that consensus may be reached and the process may proceed.

Studies of budgetary procedures indicate that decision makers tend to simplify the tasks they are presented with in order to accommodate these political trade-offs and to make the tasks manageable. This is so for both political (councillor) and bureaucratic (staff) decision-makers. As a result, each stage tends to be considered separately and usually sequentially, with the results of each stage being taken as a constraint to subsequent stages. This is the basis for the 'incremental strategy' that appears to be a fundamental feature of much of local government decision-making.

Incrementalism entails treating existing levels of expenditure and commitments as a base which is not questioned in its fundamentals. Reviews of the budget only examine those items where changes (usually increases) from the previous year are requested, and are based on comparison with last year's allocation rather than being a reassessment of either the program's worth or the decisions on which the base year allocation was arrived at (Schultze 1968). There is little or no examination of basic program structures or performance. Alternative program objectives and strategies are not identified or evaluated and priorities for different budget sectors are not considered in relation to each other. Revenue and expenditure levels

are expected to be relatively stable[1] over time and only rarely interrupted by some 'shock' (Painter 1972). The traditional management policy stresses workflows and activities with little or no reference to precise objectives. Decisions made in previous years are not challenged, leading to a belief in the 'essential', 'irrevocable' and 'uncontrollable' nature of past expenditure commitments. Major innovations are avoided unless easily reversed. There is a preference for short-term (last year/next year) perspectives rather than long run development and policies evolve by trial and error in small steps over long time periods (Jones 1977). Debate focusses on physical details rather than on policy matters, with financial and budgetary practices confined to accounting and stewardship roles and not used as aids to policy formulation. Modern management methods, such as Planned Programming and Budgeting (PPB) or Management by Objectives (MBO), are rarely used (Purdie 1976).

Many of these features are common to LGAs of all sizes. In part this is due to the institutional systems within which all councils must operate (ie the Local Government Acts and associated State government controls) which impose certain limits on councils' revenue raising and financial management practices. Additionally, detailed planning, analysis and review of program options requires a pool of expertise and staff resources which are not generally available within the small scale of operations of many rural local authorities. Councillors are mainly elected from narrow and conservative occupational and age groups, and rely heavily on staff for professional and technical advice. However, staffs are small in number, there are few full-time specialists and the focus on day-to-day outputs of local government activity leaves them with little time or inclination to question roles or to evaluate program effectiveness (Bowman 1976 and ACIR 1981b). In the larger, more affluent town and city authorities the expertise and staff resources may be available, but the complexities introduced to decision-making by the wider range and levels of services, with associated political pressures, make radical changes to budget allocation procedures difficult to achieve (Painter 1972 and Jones 1977).

---

1. In more recent years, following a period of relatively high annual inflation, this has translated into expectations for relatively stable *increases* in revenue and expenditure levels. It is politically acceptable for councils to increase rates in line with inflation (usually as measured by the CPI) but expenditure levels are expected to keep pace with cost rises (usually greater than the CPI). Grants are expected to at least maintain their values in real terms (see Appendix IV).

Revenue decisions

The interviews with selected councils (in Appendix IV, on microfiche), tend to support the claims of Painter (1972) and McPhail (1979) that revenue decisions are the major (local) political influence on local government budgets. They are largely made prior to and independently of assessments of expenditure requirements and act as a constraint to expenditure approvals.

Councils' ability to maximise receipts from each of the four major sources of council revenues[1] is subject to a number of constraints. These constraints may result from institutional arrangements or be self-imposed political constraints.

Transfers

Councils have received an increasing proportion of their funds from intergovernmental transfers in recent years. However, the composition of these transfers has undergone change since the early 1970s. Prior to about 1973 rural local government received transfers mainly in the form of specific purpose road grants and reimbursements for works done in approximately equal proportions. Other grants comprised a relatively small amount, particularly for the most rural of LGAs. Between 1973 and 1976 the Commonwealth Government offered a wide range of specific purpose grants to councils and introduced a small scale untied general revenue assistance scheme. Since 1976, the Commonwealth Government has favoured a considerable expansion of general revenue grants at the expense of many specific purpose grant programs, other than roads. State governments have traditionally used specific purpose grants, subsidies and reimbursements as the basic method of financial assistance to councils. In New South Wales, Queensland and Western Australia State Governments also provide general purpose grants to councils from the Local Government Assistance Funds. However, compared to specific purpose transfers and the Commonwealth untied grant, funds from this source have always been small.

By accepting reimbursements and specific purpose grants, councils become policy instruments of the donating government in the provision of certain services. This form of funding may benefit local areas by

---

1. These sources are council rates and charges, borrowings and intergovernmental transfers. The latter comprise reimbursements for works done, general purpose grants, specific purpose road grants and other specific purpose grants, including subsidies on capital works.

assisting the provision of particular amenities that may otherwise not be provided and, perhaps, by adding income to a local economy.

However, their acceptance imposes a number of constraints on the recipient authority. Apart from the initial decision to accept the funds, councils often have little or no influence on how the funds are spent. Funds are expended according to the conditions set by the donating agency and their use can be tightly controlled. Many grants for purposes such as sport and recreation, and even some SRA road grants have matching contribution requirements. This means that these grants usually are taken up by financially stronger councils, whereas financially weak councils, which may have a greater need for grant funded services, are unable to meet matching conditions. Further, acceptance of the grant ties the council to the function. Where a program has become institutionalised into council's operations and where council resources are also committed, significant limits are placed on the local authority's autonomy and ability to decide its own priorities. More importantly, since the early 1970s specific purpose grants, subsidies and reimbursements have been an unstable source of funding because of their close policy relationship to other government agencies. Programs are subject to unpredictable changes in purpose, distribution patterns or funding levels due to changes of government or altered economic circumstances. Councils which have made service commitments on the basis of specific purpose assistance have frequently been left with ongoing operating costs and debt commitments if the service is continued in order to meet expectations generated by the grant program.

Commonwealth general purpose grants represent the fastest growing source of transfers to local government and now provide about 10 per cent of ordinary services revenues to rural councils. However, the growth in this source has not offset the declining value of other specific purpose transfers or of the financial capacity of local authorities. Councils have complete autonomy in determining local priorities for allocating these funds among service areas, for expanding the range or quality of services or for providing a measure of relief to the local revenue base.

There has been little research in Australia into the actual uses of untied grants by local government. American and Canadian experience is that a substantial portion of unconditional grants is substituted for local rate increases or used to preserve traditional service priorities. In this way councils reduce their flexibility to allocate relatively large sums to different service 'needs'. Preliminary Australian studies (eg Hansen 1978 and Blackburn 1978 and 1979) and

the revenue analysis in Chapter 5 offer tentative support to similar behaviour by Australian local governments. However, in interviews with some councils, it was claimed that untied grants presented the opportunity for councils to acquire some 'new' capital facilities that would not otherwise have been provided.

The main feature common to both tied and untied transfers is that councils have no control over the *level* of funds received from those sources. Aggregate funding levels and distribution among individual councils are determined by external agencies. Even where subsidies are offered as a proportion of council expenditure, there are usually upper limits to the size of grant any one council may receive. Thus an increasing proportion of councils' revenues at the margin has become unpredictable. This in turn results in a certain conservatism within council decision-making and to pressures on other sources of finance when transfers fall short of the costs of maintaining service levels.

Loans

Borrowings by rural LGAs have declined as a proportion of their total receipts from 13.8 per cent in 1969-70 to 11.2 per cent in 1977-78. In real terms, aggregate loan fund receipts increased by only 2.2 per cent over this period. For many rural councils borrowings have declined in real terms. The Secretariat to the Local Government Ministers' Conference (1980) indicated that rural council's ability to increase their use of loan funds is limited. A number of reasons were suggested for this:

- Debt is serviced chiefly from rate income. Councils are wary of commitments to long term debt when real rate income is declining.
- Rural councils and staffs have a generally conservative attitude towards debt and, perhaps, limited knowledge of, or access to, the various sources of loan funds.
- The lack of debt repayment guarantees on local authority borrowings, the short term and high interest rate conditions attached to private sector loans and councils' generally declining financial positions inhibit councils' access to loan funds.

The interviews with councils suggest that the limited use of loan funds is not related to difficulties in gaining access to funds. Where 'traditional' lenders have failed to accommodate councils' requirements, councils have still managed to fill their loan programs

from other sources, albeit with substantial effort in some cases. The main areas of concern were the high interest rates, the capacity to finance debt payments from the local rate base, a reluctance to commit future councils to debt repayment, the perceived (un)suitability of loans as a source of finance for particular works and regulations restricting the levels of loan raising.

Statutory or regulatory provisions govern the levels and terms of local government borrowing in all States. In some States, regulations limit the aggregate indebtedness of an authority to a proportion of its rateable value (eg South Australia) or to a multiple of rate income or previous borrowings averaged over a number of years (eg Western Australia and Tasmania)[1]. All councils must submit loan proposals to their respective State governments for approval of the purpose, terms and amount of the loan. In part this is a supervisory role over councils' financial management practices.

However, it also reflects a desire by State and Commonwealth governments to control the level of public sector borrowing as part of their macro-economic policies. Councils wishing to borrow more than $1.5 million new monies per annum (1982 limit) are included in their State's aggregate loan program limit as set by the Loan Council. As such these councils are competing for rationed funds against other State government agencies within State government priorities, and may have an (arbitrary) upper limit set on loans for the year[2]. Those councils wishing to borrow less than this amount are free of Loan Council controls, but are still subject to State government approval procedures. In some instances, councils have been required to trim their loan bids to below the Loan Council limit, so that demands on the States' larger authority allocation are reduced. However, there are few rural local authorities that wish to borrow this amount. The traditional reluctance of small rural councils to borrow and the

---

1. This is a precaution against councils' committing themselves to debt beyond their capacity to repay. Councils with low rateable values and/or low rate income will therefore be permitted only very low indebtedness. However, this does not take account of the recent introduction of general revenue grants which enhance councils' financial capacity and may be used for debt servicing.
2. In practice the State governments, either through the Treasury or Department of Local Government, advise applicant councils of their absolute limits of new borrowing for the year. The State governments do not reject or approve specific program proposals, although these may be used in deciding each council's 'ration' of funds. Councils themselves are required to undertake any necessary pruning of projects and to bear the political consequences. See interviews with Shoalhaven City (NSW) and Tweed Shire (NSW) in Appendix IV for examples.

increased Loan Council limit for larger authorities have combined to reduce the number of councils in this category. Only in New South Wales and Queensland, where councils have greater responsibilities for utility functions, is there a substantial number of rural councils in this category. These are usually the larger provincial towns and cities.

A further problem resulting from regulatory controls on borrowing relates to the timing of approvals. Most approvals to raise loans are received after the start of the financial year. If there are difficulties in raising the loan, funds for particular projects may not become available until much later in the financial year. In some cases, councils may have difficulties in commencing works and spending the funds within financial year constraints. A change to the system to allow councils to arrange loan funds in advance of the financial year, or to discount loan funds approved for works in the previous year from the current year's program approval, may overcome this constraint on the use of loan funds. However, these institutional features are likely to be a much less significant constraint than councils' own attitudes towards borrowing.

The decision whether to finance works from loans or current revenues is important to the level and range of services that can be provided to ratepayers. Many councils have accepted that loans spread the costs of an asset over the communities that use the asset during its life and release other current funds to meet current costs. Yet there is still widespread reluctance to undertake debt financing, particularly in times of high interest rates and short term loans, due to doubts about the continuing capacity of the rate base to service the loans and a reluctance to limit the financial flexibility of future councils. There is also considerable divergence of opinion as to the suitability of loans to finance road construction. Some councils view roads as a totally inappropriate capital asset to be financed by loans, and expressed concern about debt commitments continuing long after the asset has deteriorated[1].

These factors have resulted in rural local government having a low ratio of borrowing to fixed capital formation and a preference to fund capital expenditures from current receipts. The declining contribution of loans to total receipts of rural authorities suggests

---

1. Also the ability of the facility to generate finances to repay the debt. Much of the benefits of roads are non-pecuniary and so councils prefer to direct loan funding to water supply and sewerage works or plant acquisition (See Appendix IV).

that many councils are substituting grants for loan funding. This restricts the range and level of services that councils can undertake, and places pressures on other sources of finance.

Charges

Local government is able to impose charges for the provision of particular services, such as garbage collection or use of sporting or welfare facilities. The Joint Study of Local Government Finances (Joint Steering Committee 1976) argued that councils have not made sufficient use of this source of funds. As a proportion of total rural local government receipts for ordinary services, charges have declined marginally from 15.1 per cent in 1969-70 to 14.4 per cent in 1977-78. This represents an increase in the amount raised in real terms of 5.3 per cent, although this was entirely due to increased charges by *Town* LGAs. *Rural* LGAs recorded a decline of 9.1 per cent in real terms in charges over this period.

Jones (1977) argued that the beneficiaries of many 'new' services provided by councils, particularly community development and recreation services, are more easily identifiable than for the traditional service functions such as roads and perhaps these services are more appropriately financed from user charges than by the general taxpayer. However, the costs of many services, particularly those involving capital outlays, are not generally covered by charges and some form of subsidy has to be provided from general revenues. Proportionally large increases in charges for individual amenities may discourage users (perhaps leaving councils with under-utilised capital facilities and ongoing maintenance) whilst contributing little to operating costs, as well as being politically unpopular. Nonetheless, many of the councils interviewed indicated that increases in charges would be seriously considered as a means of increasing revenues, although at present the existence of general revenue grants appears to be one factor restraining such increases.

Rates

Rates comprise local governments' only independent tax base and are the largest single source of revenue for most councils. Councils have considerable discretion in their use of rating powers and it is the rate which councils decide to strike that ultimately determines the balance of works and services that can be provided.

Nonetheless, a number of externally imposed constraints affect the rating capacity of an LGA. These include legislative controls such as minimum and maximum rates, the valuation base to be used, rate exemptions or concessions for certain classes of property and limits

on the application of certain funds. Councils may not be able to fully utilise the ability of landowners to pay due to these controls. For example, those with the major part of their area exempt from rates, such as Bright Shire (Vic), have very little flexibility in raising their own revenues. Unbalanced or outdated valuations, or inappropriate valuation bases in rapidly developing areas, may mean a council is unable to fully exploit the taxable capacity in all sectors of its rate base without unduly burdening other sectors (eg Busselton Shire (WA) in Appendix IV). Where the requirement exists that rural rates be not more than town sector rates it can also result in under-utilisation of the tax base where the rural sector has a higher capacity to pay than urban areas (eg Ayr Shire in Queensland).

An additional external constraint applies in New South Wales, where the State Government has introduced legislation 'pegging' council rate increases to a certain limit each year. Although councils may apply to the Minister for Local Government for higher increases if desired, in practice few councils pursue this course. The 'pegging' acts as a 'target' increase for councils to achieve and many councils appear to aim to be 'just under' the limit as a political measure of responsible performance[1]. However, as the limit was apparently arbitrarily set, with little or no consideration of service cost rises or the disparate 'needs' of various councils, the across-the-board application to all councils seems to have had the effect of reducing real rate effort over time.

Modifications to the rating base of councils, and the resulting anomalies and constraints, have led to frequent calls for restructuring of local governments' tax base or alternative means of taxation. Many of these issues have been discussed at length by the Joint Steering Committee (1976) and the Advisory Council for Intergovernmental Relations (1981a). The Department of Environment, Housing and Community Development (1979) examined various changes to the valuation and differential rating systems that may help to overcome some of these difficulties.

---

1. It is not clear whether this is a result of externally or internally imposed constraints, but is probably a mixture of both. While the political kudos of a lower rate increase than 'the rest of the State' may appeal to councillors, it is also apparent that there exists considerable ignorance among councils of the detailed provisions of this and other State legislation. There may be a tendency to assume the limit is absolutely mandatory, or the conditions for exception to be granted are severe. Whatever the reason, the effect of the legislation is clearly that of reducing councils' receipts from their own sources in real terms.

There are also several ways in which local councils themselves influence the level and distribution of rate income. Due to its highly visible and generally regressive nature[1], the rate is an unpopular tax and its levying is seen to be politically difficult. The general psychology of elected representatives is thus to argue for the lowest possible rate increases. Increases in line with the rise in the CPI are apparently accepted by the ratepayer, whereas higher increases invoke complaints or demands for justification. Similarly, rural councils often respond to the capacity of farmers to pay in poor seasons, and reduce rate levels accordingly. The Secretariat (1980) indicated that, while rate effort is quickly depressed in poor agricultural seasons, there appears to be a considerable time lag, as farm profitability picks up, before rate effort is increased. As the same rate in the dollar is often applied to all properties, lower rate effort to accommodate a depressed farm sector also results in lower effort on other properties.

Further, councils may see the large annual increases in general revenue grants as justification for a means of holding down rate increases. There is some evidence that rate effort has declined since the introduction of this form of intergovernmental transfer, although the data are not conclusive.

The net effect is for councils to accept rate increases somewhat lower than cost increases for many services, and without regard to constraints on other funding sources or rational cases for certain expenditures. Although there are exceptions to this generalisation, large rate increases usually only result as a 'desperate' attempt to catch up on backlogs resulting from previous years of low rate increases. Any such gain in revenues from rate increases is often eroded by cost rises in committed expenditures, and there is little in the way of additional discretionary capacity.

Overall, the result appears to be that the external and self-imposed political decisions on revenue raising have constrained local governments' revenue procedures, despite continuing requirements for basic council services and expanding demands for other services. Councils are having to impose demand controls through their budgetary procedures on the expenditure side. The manner in which this is done

1. In economic terms, a tax is regressive if its application takes a greater proportion of income as income declines and progressive if the tax proportion rises as income rises. It is neutral or proportional if the proportion is similar across all income groups. The terms imply no moral judgment.

is therefore important in determining whether or not reasonable priorities are established across all budget sectors and whether particular levels of service can be achieved.

Allocation of resources among budget sectors

The incremental system of budgetting presented in the literature indicates a certain inflexibility in allocating constrained resources to program areas. The Survey of Rural Local Government revealed a number of procedures used by councils to allocate resources to roadworks:

- An arbitrary proportion of the LGA annual budget may be allocated to roadworks. For example, one council in South Australia set its road budget to approximately half the rates revenues, another devoted 30 per cent of its total budget to roads and a further 10 per cent to plant.
- Roadworks may be given first priority for available funds over all other services.
- Roads may be used as the balancing item in council budget, that is after essential services requirements have been met all remaining funds are allocated to roadworks. Road maintenance may or may not be considered an essential service.
- The same dollar amount may be specified each year for roadworks. In this case an LGA would rapidly lose its ability to undertake works through inflation in costs of roadworks.
- Alternatively, a similar dollar amount may be specified each year, but allowance made for inflation in roadworks inputs. However, unpredictability of cost increases can significantly upset roadworks budgetting.
- LGA 'own source' revenues allocated to roads may be tied (by council policy) to the level of grants received. For example one Tasmanian council matches grant funds on a dollar for dollar basis.

The interviews with councils (Appendix IV) indicate that such simplified expressions of procedures are tempered by a number of factors. These include a perceived need to provide sufficient funds to maintain employment of staff and plant, the need to allocate council funds to offset variations in grants or reimbursements for particular service areas, and unpredictable variations introduced into works programming by weather or traffic conditions.

However, in the main, these factors have a relatively small influence

on the absolute level of funds allocated to each sector, once overall revenue estimates are finalised. Budget sector allocations of general revenues are largely made according to previous years' shares within an overall revenue constraint, rather than revenues being raised to meet a demonstrated requirement for works. Several councils commented, in both the survey and in interviews, that the roads budget, due to its size, almost always attracts attention for reductions from estimates despite staffs' best efforts to demonstrate a 'need' (generally recognised by councillors) for works.

Allocation within the roads budget

The limited funds and limited flexibility in the allocation of funds to the roads sector mean that councils are required to ration the available funds among projects. The manner of rationing and priority setting will affect the distribution of actual works undertaken within the LGA, and the pace at which the road system develops (if at all).

Some procedures for allocating resources among projects identified by the Survey of Rural Local Government are:

- Priority given to roadworks which will attract financial assistance. Several LGAs indicated that the only construction works undertaken were those attracting grants.
- Roads with heavier traffic volumes receive priority. In some instances, LGAs indicated that the main road users, and hence beneficiaries, were either tourists or heavy trucks originating from outside the LGA area.
- Allocation of funds in equal amounts among electoral wards. However, LGA officers were not overly concerned with this political influence, since some 'necessary' works can be found in all wards in any given year.
- A preference for works in and around townsites, due to the greater number of persons benefitting from improved access to town services.
- Improvement works undertaken in accordance with a particular objective, for example a sealing program which may reduce maintenance costs or to provide all road users with similar standards of access.
- Generally roadworks were preferred to bridgeworks due to the greater immediate benefits from longer lengths of roads that can be built for the same funds. Residents in rural areas are used to occasional delays or separations caused by flooding of low level water crossings.

- Some LGAs work to a plan of roadworks, either based on a technical road needs study or on some arbitrary target. For example one Shire in Western Australia is working to a five-year plan to extend bitumen seal to within eight kilometres of each property. Another in Queensland has a policy of upgrading all roads, radiating from the town centre.
- Some LGAs in remote areas of northern Western Australia and Queensland indicated that funds were so limited that all available road funds went to rebuilding low quality roads after flood damage in the wet season. Funds for improvements to reduce future flood damage were not available.

The interviews with councils in Appendix IV provide more detailed examples of individual councils' approaches to this task.

A notable feature of this phase of decision-making is the emphasis on meeting assessed 'needs', that is, a reactive stance. Many councils have adopted quite arbitrary targets for road upgrading or simply react to the greatest demand every year. Generally councils lack formal medium-to-long term plans for road development, unless there is a requirment by the relevant SRA[1]. Where plans do exist the objectives (eg seal every road to within some distance of each farm) and priorities appear to be assessed by subjective rather than objective means. Programmed projects do not necessarily get undertaken in any one year's budget, and deferred projects may never gain increased priority.

Nonetheless, some form of formal forward programming appears to be necessary to achieve an objective strategy for application of limited funds over a long time period. The size of the roadworks task facing many councils means that funds have to be applied over many years to achieve visible progress. In this time, the composition of councils and staff will change, particularly in remote areas, and some continuity of objectives is necessary to avoid frittering away limited resources. This is particularly important in the less affluent, remote areas where road standards are presently very low, costs high and the bulk of the funds available go to repairing, to the same low standards, damage caused in wet seasons. Similarly, councils in New South Wales and Victoria often face considerable tasks in replacing old bridges. The costs of new structures are such that any one

---

1. For example, in Victoria the SRA requires councils to prepare a 3-5 year rolling priority program of works proposals for the purpose of scheduling financial assistance.

project will absorb the major part of available construction funds for several years. It may be that there are implicit long-term strategies in the pattern of work carried out by councils, but this did not become obvious during the study, nor was the sentiment articulated by officers interviewed.

STANDARDS OF ROADWORKS

The engineering standards to which works are carried out can significantly affect the costs of works (BTE 1980a). As rural LGAs have experienced declining real road budgets, the choice of standards is an important factor affecting the amount of works that can be carried out in any given financial year.

Under constrained budgets, councils must trade-off quality against quantity of works. On the one hand, there are pressures to improve the road system to meet the demands of growing traffic volumes and greater vehicle speeds, weights and dimensions. All classes of roads are now being subjected to heavier, larger vehicles. Additionally, rising community expectations add to the demands for higher standard roads to reduce travel times and driver stress. These demands are such that some rural local roads (particularly those subject to heavy truck traffic) are being rebuilt to standards similar to rural main roads in the same area. Conversely, the rising costs of works and declining real road budgets argue for the lowest feasible standards in order to stretch funds over a similar amount of works each year. Councils have to consider the serviceability of all roads in their area and to try to ensure all are maintained in at least a traffickable condition, whilst making necessary improvements in the longer term. Where the overall standard of a road is low, funds in short supply and, perhaps, unit costs of works high, a large part of each year's budget can be consumed in maintaining or restoring the system to a low standard, with little if anything remaining for improvements. In these cases, (re)construction and maintenance work is aimed at undertaking the maximum length of works at the minimum acceptable (or maximum achievable) standards. Higher quality works would be rarely undertaken[1].

In some cases the effort to spread funds as widely as possible may have led to a gradual reduction in an area's road standards, or at least in pavement life, with resulting diseconomies and lack of

1. See interviews with Bogan Shire (NSW), Boulia Shire (Queensland) in Appendix IV.

foreseeable progress with road improvement. Other councils, under similar budget pressures, have opted to carry out shorter lengths of works to a higher standard. This position recognises the low probability of funds for reconstruction of these roads for many years and hence they are built to last. Some improvement to the system is achieved, albeit at a very slow rate and at the cost of poor standards or uneconomic maintenance for the rest of the road system (See Appendix IV for examples).

Sources of standards

Councils have a choice between applying (more or less) uniform standards to their works or to vary standards according to assessed project requirements. Uniform standards have the advantage of (gradually) providing a relatively high standard of road access over most of a council's area. However, this may impose higher costs than strictly necessary to cope with traffic, particularly where traffic volumes are low and few people are served by the road. Variable standards enable councils to make the most of available funds by only building roads to the standard appropriate to the traffic using them. The disadvantage of varying standards are those of the short life of some works or later reconstruction required to meet changing volumes and patterns of traffic. In summary, uniform standards may be thought of as catering for longer-term requirements, whereas variable standards may generally be considered to be a short- to medium-term approach.

Table 6.5 shows the proportions of respondents to the Survey of Rural Local Government that chose uniform or varying standards as their principal practice in designing rural arterial and local roads, as well as the principal source of those standards.

Arterial roads

In all States, except possibly Tasmania[1], the majority of respondents design their arterial roadworks using uniform standards. In total, 81 per cent of respondents select uniform standards, ranging from 96 per cent in New South Wales to 43 per cent in Tasmania.

For the most part, arterial road construction undertaken by councils is done on behalf of SRAs and financed by grants or reimbursements. The insistence on minimum standards by the funding authority as a

---

1. Few Tasmanian councils responded to this question (7 out of 45) and the proportions in Table 6.5 should be interpreted cautiously.

TABLE 6.5-PRINCIPAL SOURCES OF ENGINEERING STANDARDS FOR RURAL LOCAL GOVERNMENT WORKS ON ARTERIAL AND LOCAL ROADS, 1979-80

(per cent of respondents)

State	Road type	Uniform standards		Variable standards, selected by				Number of respondents
		NAASRA[a]	Other	LGA engineer[b]	Other LGA officers	Elected representatives	External authority	
NSW	Arterial	48.1	48.1	1.9	-	-	1.9	52
	Local	35.8	34.0	30.2	-	-	-	53
Vic	Arterial	64.6	25.6	3.7	-	-	6.1	82
	Local	46.8	24.1	25.3	-	1.2	2.5	79
Qld	Arterial	34.9	30.2	20.9	-	2.3	11.6	43
	Local	13.6	15.9	52.3	6.8	6.8	4.5	44
SA	Arterial	64.1	12.8	-	5.1	-	17.9	39
	Local	21.3	2.1	44.7	27.7	2.1	2.1	47
WA	Arterial	54.5	15.9	13.6	4.5	-	11.3	44
	Local	43.2	11.4	27.3	9.1	4.5	4.5	44
Tas	Arterial[c]	28.5	14.3	28.5	-	-	28.5	7
	Local	12.5	12.5	37.5	6.3	6.3	12.5	16
Total	Arterial	53.9	27.0	7.8	1.5	d	9.4	267
	Local	33.1	18.5	34.9	7.5	2.8	3.2	281

a. NAASRA 'Policy for design of rural roads' and 'Specifications for bridge design'.
b. Includes contract or consulting engineers.
c. Based on small sample size, so should be interpreted carefully.
d. Less than 0.1 per cent.

\- equals no response or not significant

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

condition of providing funds may account for the high adherence to uniform standards.

NAASRA design guidelines were more often used than 'other' uniform standards, although the difference in New South Wales and Queensland was small. 'Other sources' were indicated by respondents to be predominantly the guidelines prepared by the SRA in each State. The NAASRA standards represent a synthesis of the design policies and experience of the six SRAs.

The higher proportions of respondents in New South Wales and Victoria using uniform standards for arterial roadworks may be due to:

- the legislative requirement in these two States for all LGAs to employ professionally qualified engineers;
- the more developed network of arterial roads in these two States;
- greater populations, population densities and council receipts which spread costs and enable more work to be carried out; and/or
- greater insistence by SRAs that particular standards should be adhered to on arterial road construction.

In Queensland, South Australia and Western Australia a substantial proportion of rural councils indicated the predominant use of variable standards chosen according to project requirements. The proportions of respondents using variable standards ranged from 35 per cent in Queensland to 4 per cent in New South Wales. The majority of these respondents cited the LGA engineer as the arbiter of appropriate standards. However, in South Australia variable standards were almost exclusively set by an external authority (usually the Highways Department) as most South Australian rural councils do not permanently employ qualified engineers. Other LGA officers and elected representatives influenced the choice of arterial road standards for only 1.5 per cent of respondents.

Local roads

The selection of standards for rural local roads is much more flexible than for rural arterial roads. This reflects the greater responsibility that LGAs have for local roads.

Nonetheless, the majority (52 per cent) of respondents indicated the use of uniform standards. The largest proportions of these were from New South Wales and Victoria (70 per cent and 71 per cent respectively), perhaps again reflecting the universal employment of professional engineers and the attendant philosophy of adhering to

generally accepted engineering practices. In Western Australia, 55 per cent of respondents used uniform standards, as did small minorities in other States.

NAASRA standards were the preferred source of uniform standards for most respondents in Victoria, South Australia and Western Australia. In the other States, preference was evenly divided between NAASRA and 'other sources'. 'Other sources' were mainly comprised of SRA guidelines, but two Tasmanian councils reported using standards outlined in the *Local Government Act 1962* and two New South Wales councils used the State Housing Commission design manual.

Of those respondents preferring variable standards for local roads, the majority indicated the LGA engineer as the deciding authority. Only in South Australia were 'other LGA officers' responsible for standards choice for a substantial proportion (28 per cent) of councils. Elected representatives and external authorities formed the primary source of standards for local roads for only a small proportion of councils in each State. However, many respondents qualified their answers, indicating that for particular projects standards were usually recommended by the LGA engineer following consultation with other officers and, in some cases, elected representatives.

Imposition of standards

It has been claimed by some local government representatives (Rogers 1980) that councils may not be able to achieve the best possible use of the available road funds to meet local priorities due to the detailed control over their activities by SRAs. This control results from the mix of responsibilities for particular roads and road classes, as well as the administrative arrangements for disbursing the road grants and reimbursements that form a large proportion of rural councils' receipts. Because of their control over the roads 'purse strings', SRAs have considerable power to impose conditions, priorities and standards on councils' annual works programs.

It is difficult to ascertain the extent to which SRAs actually invoke their powers. There are conflicting claims from councils of 'excessive' and 'detailed' control over their road programs on the one hand and of close co-operation and assistance on the other. Most of the council representatives interviewed claimed good working relationships with local SRA engineers and that the SRA usually accepted council works proposals (those receiving financial assistance) without change. However, these representatives also

indicated several circumstances of SRA control which affect their behaviour. For example, some councils ensure that all projects nominated for assistance comply with SRA design guidelines. Another indicated that its road designs took account of SRA requirements for financial assistance for possible future improvements.

Table 6.6 shows the number of respondents indicating that engineering standards were imposed on their roadworks:

- as a condition of financial assistance;
- by an external authority on roads that are a shared responsibility; and
- for other reasons.

The table refers to works nominated and undertaken by the local authority as a (theoretically) autonomous body. Works undertaken on behalf of other authorities, and for which councils were fully reimbursed, are excluded. The main features of the table are:

- Seventy-nine per cent of respondents indicated that engineering standards are imposed on arterial roadworks and 77 per cent reported imposed standards on local roadworks.
- Conditions attached to financial assistance accounted for 51 per cent of cases of imposed standards for both arterial and local roads.
- Where councils shared responsibility for certain roads, external authorities imposed standards in 25 per cent of cases for arterial roadworks and 20 per cent for local roadworks. (As this is exclusive of cases of financially assisted works, it relates only to council-funded projects on these roads.)
- 'Other' factors 'imposed' standards in only 6 per cent of cases for local roads and 2 per cent for arterial roads. 'Other' factors were cited as being due to terrain, climate, scenic value of the area, availability of suitable materials and nature of traffic.
- Councils in New South Wales and Victoria reported much greater incidence of imposed standards than in other States for both arterial and local roadworks.

These variations may reflect the differences in:

- Responsibility sharing between SRAs and LGAs for different functional classes of roads and different road classifications used by each State. Chapter 3 indicates considerable differences

TABLE 6.6-NUMBER OF RURAL LGAs INDICATING IMPOSITION OF ENGINEERING STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION[a], 1979-80

	NSW		Vic		Qld		SA		WA		Tas		Total	
Reason for imposition	*No*	*Per cent*	*No*	*per cent*	*No*	*Per cent*	*No*	*Per cent*	*No*	*Per cent*	*No*	*per cent*	*No*	*Per cent*
Arterial roads														
As a condition of financial assistance	42	70.0	56	61.5	24	40.0	27	46.6	30	41.7	5	29.4	184	51.4
By external authority on roads that are shared responsibility	12	20.0	34	37.4	18	30.0	11	19.0	13	18.1	3	17.6	91	25.4
Other	0	-	1	1.1	3	5.0	1	1.7	3	4.2	1	5.9	9	2.5
Total	54	90.0	91	100.0	45	75.0	39	67.3	46	64.0	9	52.9	284	79.3
Local roads														
As a condition of financial assistance	39	65.0	52	57.1	28	46.7	21	36.2	33	45.8	10	58.8	183	51.1
By external authority on roads that are shared responsibility	10	16.7	24	26.4	12	20.0	7	12.1	16	22.2	2	11.8	71	19.8
Other	4	6.7	5	5.5	6	10.0	2	3.4	4	5.6	1	5.9	22	6.1
Total	53	88.4	81	89.0	46	76.7	30	51.7	53	73.6	13	76.5	276	77.1
Number of cases	60	100.0	91	100.0	60	100.0	58	100.0	72	100.0	17	100.0	358	100.0

a. For LGA roads only. Excludes fully reimbursed works done by LGA as an agent for other authorities.

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

among States in these arrangements. Additionally, the terms 'arterial' and 'local' roads used here do not correspond closely with SRA classifications, and the actual functional use of these two classes of road may vary considerably among States. Also, individual LGA and SRA perceptions as to responsibilities and funding obligations for certain roads can differ markedly.

- Institutional arrangements for handling financial assistance between SRAs and LGAs. Again, Chapter 3 shows some quite major differences in approach to this task among States.
- The amount of works undertaken by councils in each State during 1979-80 which received financial assistance or were undertaken on shared-responsibility roads, particularly in the 'arterial' class. Not all councils have arterial roads for which they are fully or partially responsible. Assistance funds for these roads are distributed among councils according to SRA priorities. It may be that some rural LGAs did not undertake or contribute funds to works on these roads in 1979-80, and so had no conditions imposed.
- Relationships between councils and State SRA divisional engineers. Personalities may be such that in some cases there is an impression of inflexibility or 'imposing' standards, whilst in others standards might be 'agreed'. This may be related to the professional expertise available to councils. Councils without permanent professional staff may be prepared to accept standards preferred by SRAs without question due to lack of knowledge, inability to argue alternatives successfully or feelings of powerlessness when dealing with SRA professionals. Where councils have professional staff, institutionalised standards may be taken as an affront to their ability, and so seen as 'imposed'[1].

---

1. One of the justifications for formulating centralised, prescriptive standards was to enable the limited expertise in design to be more broadly applied (McLean 1980). Even in the immediate post-war years, few rural councils employed professional engineers. Design guidelines prepared by SRAs were a means of enabling designers of lesser experience to produce designs which satisfied performance and safety objectives. This position has since changed, and the number of experienced designers in local government has increased considerably. In New South Wales and Victoria, all councils are required to employ professional staff. Prescriptive standards tend to be conservative to cope with 'worst case' conditions or shortage of local data. Under present financial constraints, local government engineers are under pressure to meet performance and safety objectives in the most cost effective manner and may consider 'worst case' design to be inappropriate to local conditions.

Chapter 3 indicates that financial assistance for roadworks to councils is almost totally controlled by the SRA in each State, and responsibility for works is shared between LGAs and SRAs. The absence of unanimity in reporting imposed standards as a condition of assistance or on shared responsibility roads in any State suggests that dictation of standards for works done by LGAs is not necessarily an institutional feature of SRA-LGA relations.

Comparability of standards

The large variations within each State in the reporting of imposed standards suggest that 'imposition' is more attributable to perceptions of relationships between SRAs and LGAs than due to institutionalised features. LGAs may not necessarily be coerced to apply certain standards of works, but nevertheless some councils might feel an imposition on their autonomy or ability caused by the requirement to have some works proposals approved by the SRA.

Table 6.7 shows the relationship between the standards that councils consider to be imposed upon them and those they would prefer to use. In all States and for both classes of roads, the majority of respondents indicated they would have chosen the *same* standards as those imposed. However, many respondents qualified their answers by stating that, while this applied generally, in some circumstances they would prefer to use alternative (usually lower) standards. The circumstances cited as examples predominantly included:

- reduced horizontal and vertical alignments, design speeds and shoulder and seal widths for roads with low traffic volumes and for non-through roads;
- reduced standards for bridges and other water way crossings on local access roads; and
- reduced widths of road reserves for arterial roads.

Imposed standards on arterial roads were higher than preferred for 24 per cent of South Australian and 22 per cent of Tasmanian respondents and on local roads for 16 per cent and 13 per cent of New South Wales and Queensland respondents. Claims of higher standards than preferred were strongly related to projects receiving financial assistance, councils appear content to accept (or agree with) SRAs judgments on appropriate standards, for shared responsibility works.

Only a relatively small number of respondents indicated that standards imposed were lower than the councils would wish. By way of example one Tasmanian council indicated that it would prefer bridges being

TABLE 6.7-COMPARABILITY OF RURAL LGA DESIGN STANDARDS WITH IMPOSED STANDARDS, 1979-80

(Number and proportion of respondents)

State	Road type	Imposed standards are: Higher than LGA preferred standards — No	Higher than LGA preferred standards — Per cent	The same as LGA preferred standards — No	The same as LGA preferred standards — Per cent	Lower than LGA preferred standards — No	Lower than LGA preferred standards — per cent	No of LGAs indicating imposed standards
NSW	Arterial	5	9.1	49	89.1	1	1.8	55
	Local	9	16.1	44	78.6	3	5.4	56
Vic	Arterial	2	2.3	82	95.3	2	2.3	86
	Local	6	6.9	76	87.4	5	5.7	87
Qld	Arterial	3	7.3	35	85.4	3	7.3	41
	Local	6	12.5	39	81.3	3	6.3	48
SA	Arterial	9	23.7	28	73.7	1	2.6	38
	Local	4	8.2	40	81.6	5	10.2	49
WA	Arterial	3	6.5	43	93.5	-	-	46
	Local	5	8.9	50	89.3	1	1.8	56
Tas	Arterial	2	22.2	7	77.8	-	-	9
	Local	1	7.1	12	85.7	1	7.1	14
Total	Arterial	24	8.7	244	88.7	7	2.5	275
	Local	31	10.0	261	84.2	18	5.8	310

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

replaced by the DMR in timber to be constructed of concrete. A council in New South Wales believed roads carrying very high volumes of tourist traffic should have bridge and sealed pavement widths higher than specified by NAASRA guidelines.

Thus there appears to be general agreement between councils and SRAs on what are appropriate standards for roadworks. The accompanying reported 'imposition' of standards seems to result from perceptions of relationships rather than from fundamental disagreements on technical or financial grounds. The ACIR (1981c) has suggested that SRAs adopt a paternalistic attitude towards councils. SRAs may tend to be prescriptive in setting conditions on grant assistance or for works on classified roads. However, several respondents noted that SRA representatives were prepared to negotiate alternative standards where councils could present convincing arguments on technical or economic grounds.

Disputes between councils and SRAs over standards are apparently related only to specific projects and seem to stem from funding constraints. Councils tend to limit their concerns to local problems and solutions and to design accordingly. SRAs, on the other hand, hold a wider responsibility and may wish to ensure:

- the application of more uniform standards across larger areas;
- continuity of priorities over administrative boundaries; and
- that funds are not 'mis-spent' on inappropriate designs or works.

These differences in priorities and perceptions of project requirements can lead to differences of opinion in choosing appropriate standards to meet performance criteria with limited funds. For example, councils may have low priorities and would prefer low standards on roads and bridges near their boundaries or for roads which are extensively used by external traffic, whereas SRAs may allocate a higher priority and hence higher standards to these projects.

Additionally, SRAs have a rationing role for distributing limited reimbursement and/or grant funds among councils. Pressures on these resources may induce SRAs to prescribe standards that exclude some projects from receiving grants assistance, or which limit the size of approved projects. For example, councils may wish to design to meet high peak traffic volumes occurring during tourist seasons, whereas SRAs would use annual average daily traffic (AADT) counts as a guideline. Similarly councils may prefer to seal roads with very low

traffic volumes, which may be under limits set by SRAs. This difference of opinion is frequently aggravated by differing perceptions of responsibilities for financing and/or administration of particular roads or road classes as well as the extent of autonomy councils should have in setting priorities. SRAs may be willing for projects to be built to the higher standard, provided councils' funds are used to make up the difference. Councils, however, view works on major roads as properly the financial burden of SRAs (although LGAs should have autonomy for deciding works priorities and standards) and are reluctant to provide additional council funds.

These differences of opinion on standards are of significance where councils only undertake improvement works using grants or reimbursements. There can be considerable over-design of some projects to meet the conditions of grants approvals. Alternatively, some projects may never be undertaken as the costs of meeting design standards are assessed to be very high in relation to the number of beneficiaries, despite a 'need' for the works to be done.

Factors influencing choice of standards

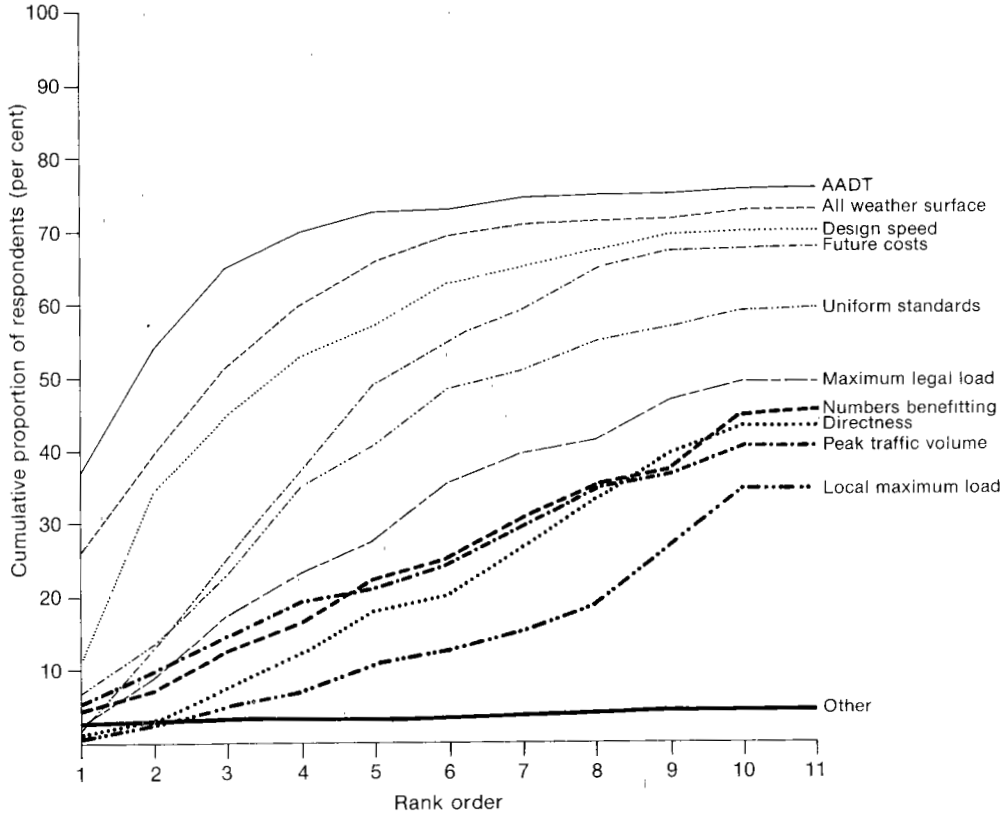
A large proportion of rural councils apply uniform standards when constructing roads. The standards most often used are NAASRA or SRA guidelines. In addition to terrain and other environmental factors, these guidelines express road design parameters in terms of traffic volume and composition. The number of large, heavy, slow-moving vehicles affects geometric design as well as structural design. Altogether, these factors determine the design speed of a road section, which in turn determines the physical dimensions of road layout.

However, the values derived from these design guidelines often have to be modified to meet a number of other factors. While AADT can be low, some roads may be subjected to very high peak volumes, for example during tourist or harvesting seasons. Similarly, maximum axle loads encountered in practice may vary locally from those normally accepted over a wider area, such as the State maximum legal load limit. All design decisions are subject to economic considerations. The costs of implementing desirable standards may be very high in relation to the expected benefits attributed to users, for example on long, farm access roads serving few residents. Alternatively, the costs of some improvements may simply be beyond the financial capacity of the council despite considerable user benefits. Examples of this are the resultant use of culverts or floodways on major routes where bridges might be more appropriate. Additionally, there are social and

political considerations which may dictate alternative standards regardless of cost implications. These may include improvements to reduce driver stress or travel times to urban centres, sealing to provide an all-weather surface and so on.

Application of these factors has resulted in disparate development of road systems among LGAs. Some areas have roads of higher standards than dictated by engineering guidelines, whilst others are considerably below these standards.

Tables 6.8 and 6.9 and Figures 6.3 and 6.4 show the relative importance of a number of design factors which influence councils' decisions on road standards for arterial and local roads. Agreement among respondents was statistically significant at the 0.01 level of



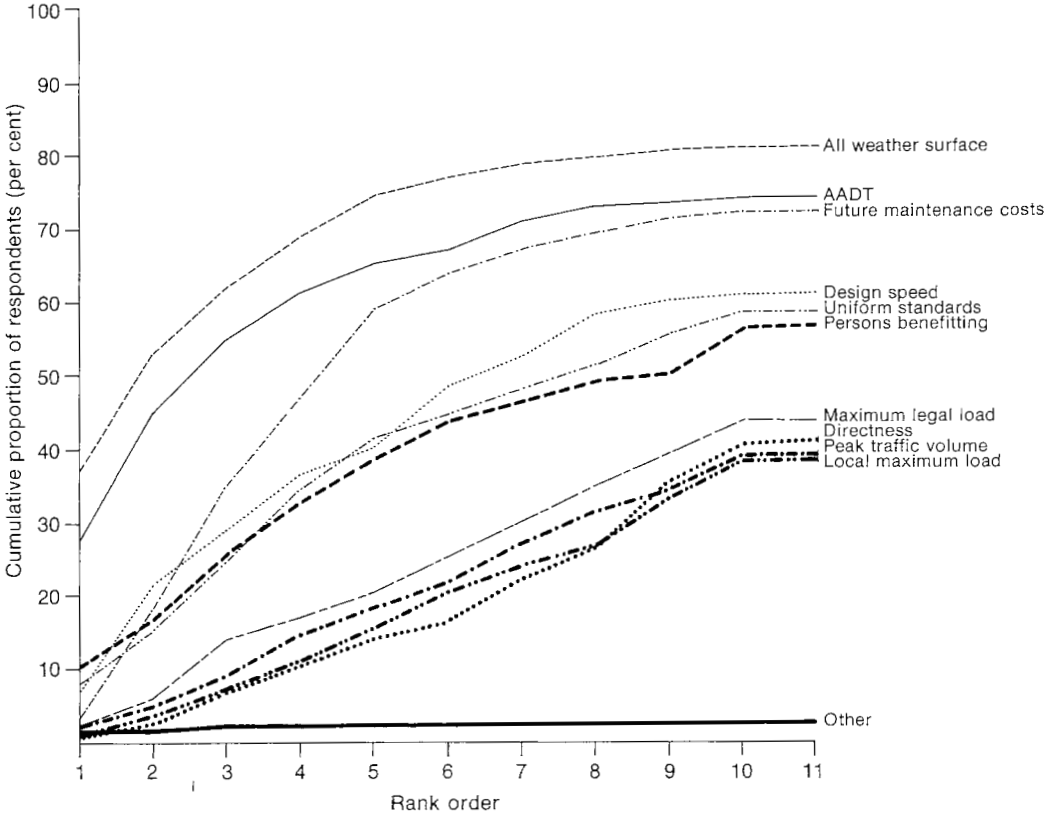
Source: BTE, Road Assessment Studies Survey, 1980.

Figure 6.3—Ranking of design elements for rural arterial roads, 1979-80

confidence within all groups except Queensland, South Australia and Tasmanian *Town* groups for arterial roads and within South Australian and Tasmanian *Town* groups for local roads.

The generally low coefficients of concordance (W) in each group indicate that, despite statistically significant levels of agreement, there are still considerable variations in the way individual councils determine standards of roadworks. This may reflect differences in the:

- stages of development of road networks;
- physical and climatic features of LGA areas; and
- settlement patterns, priorities and financial capacities of councils.



Source: BTE, Road Assessment Studies Survey, 1980.

Figure 6.4—Ranking of design elements for rural local roads, 1979-80

TABLE 6.8-RANK ORDER OF DESIGN INFLUENCES FOR RURAL ARTERIAL ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Design element	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
Annual average daily traffic	3	3	1	1	2	2	2	2	1	1	1	3	1
All-weather surface	2	1	2	3	1	1	5	1	2	2	3	5	2
Design speed	1	2	4	2	4	3	1	3	4	5	4	9	3
Future maintenance costs	6	4	5	4	5	4	4	5	3	3	9	1	4
Uniformity of standards for roads in the same class	4	5	3	5	3	5	2	4	4	4	9	4	5
Maximum legal load limit	7	6	6	6	9	6	8	8	6	8	7	2	6
Peak traffic volume	5	9	7	7	7	10	9	6	8	7	1	7	7
Costs related to number of persons benefitting	8	7	8	9	8	7	6	7	8	6	11	6	8

TABLE 6.8 (Cont)-RANK ORDER OF DESIGN INFLUENCES FOR RURAL ARTERIAL ROADS, 1979-80

Design element	NSW		Vic		Qld		SA		WA		Tas		All
	Town	Rural	Town	Rural	Town	Rural	Town	Rural	Town	Rural	Town	Rural	respondents
Directness of alignment between connecting centres	9	8	9	8	6	9	7	9	6	9	8	10	9
Local maximum gross load	10	10	10	10	10	8	10	10	10	10	5	8	10
Other	11	11	11	11	11	11	11	11	11	11	6	11	11
Kendall's W	0.43	0.37	0.40	0.40	0.39	0.30	0.31	0.28	0.55	0.30	0.74	0.38	0.30
χ^{2a}	73.22	132.72	63.60	277.22	23.11[b]	100.69	15.65[b]	100.46	27.41	133.82	14.82[b]	22.97[b]	829.40

a. DF = 10 in all cases.
b. Not significant at P = 0.01 level of significance ($\chi^2$10, 0.01 = 23.21).

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE 6.9-RANK ORDER OF DESIGN INFLUENCES FOR RURAL LOCAL ROADS, 1979-80

	NSW		Vic		Qld		SA		WA		Tas		All
Design element	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*Town*	*Rural*	*respondents*
All-weather surface	1	1	2	2	1	1	4	1	1	1	1	3	1
Annual average daily traffic	3	2	1	1	2	2	5	2	2	2	1	2	2
Future maintenance costs	4	3	4	4	4	3	3	3	4	3	10	1	3
Design speed	2	4	6	3	8	4	1	6	6	5	5	10	4
Uniformity of standards for roads in the same class	5	6	3	6	3	6	2	4	5	4	9	5	5
Costs related to number of persons benefitting	6	5	8	5	6	5	6	5	3	5	11	4	6
Maximum legal load limit	7	7	7	7	7	8	8	10	10	8	3	6	7
Peak traffic volume	8	9	5	9	5	10	9	7	8	7	3	6	8
Local maximum gross load	10	10	10	8	9	7	10	9	9	10	7	9	9

TABLE 6.9 (Cont)-RANK ORDER OF DESIGN INFLUENCES FOR RURAL LOCAL ROADS, 1979-80

Design element	NSW		Vic		Qld		SA		WA		Tas		All
	Town	Rural	Town	Rural	Town	Rural	Town	Rural	Town	Rural	Town	Rural	respondents
Directness of alignment between connecting centres	9	8	9	10	10	9	7	8	7	9	6	8	10
Other	11	11	11	11	11	11	11	11	11	11	7	11	11
Kendall's W	0.38	0.39	0.31	0.33	0.40	0.27	0.29	0.36	0.61	0.31	0.43	0.38	0.30
χ^{2a}	60.07	157.87	49.62	244.92	31.77	136.64	14.50	182.49	30.40	186.87	12.78[b]	49.88	1 022.30

a. DF = 10 in all cases.
b. Not significant at P = 0.01 level of significance ($\chi^2 10$, 0.01 = 23.21).

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

Arterial roads

For most groups, choice of standards for arterial roads is generally dictated by the traditional engineering design parameters of AADT and design speed, but tempered by a (socio-political) desire for an all-weather surface.

Overall, AADT was considered to be the most important design element for arterial roads. Thirty-seven per cent of respondents rated this as the most important factor, and 76 per cent gave it some weight in design consideration. However, not all groups rated AADT so highly. Respondents in Queensland and South Australia rated AADT in second place, and in New South Wales and in the Tasmanian *Rural* group it was rated third.

The other factors rating highly in arterial road design were an all-weather surface and design speed. All-weather surface was given primary importance by *Rural* groups in New South Wales, Queensland and South Australia and the *Town* group in Queensland, for a total of 26 per cent of respondents. Design speed was rated as the most important factor by the New South Wales and South Australian *Town* groups, but only by 11 per cent of respondents in total.

Of secondary importance in choosing standards is the economic consideration of future maintenance costs. Much less importance is attached to the other factors in most cases. In particular, the costs of projects in relation to the number of persons 'benefitting' is given a low ranking by most groups.

Only in the Tasmanian *Rural* group is the order of ranking markedly different from other groups. This group allocated highest weight to future maintenance cost considerations and maximum legal loads. All-weather surface and design speeds were attributed relatively low priority. This may reflect the state of development of arterial roads designed by *Rural* Councils in Tasmania, where development has progressed beyond considerations of sealed surface and traffic volume capacity, with attention now being devoted to upgrading to meet heavy truck loads and reducing current costs.

Local roads

All-weather surface requirements are the most important factor influencing design of local roads for all groups of respondents, except in Victoria and for South Australian *Town* and Tasmanian *Rural* groups. Thirty-seven per cent of respondents weighted an all-weather surface as the primary influence on standards, and 81 per cent gave it some consideration.

AADT, future maintenance costs and design speeds were of secondary importance. The order of importance varied among groups, although future maintenance costs tended to have greater priority.

All other design elements had somewhat lower influence on standards. However, peak traffic volumes and load limits were a relatively high priority for the Tasmanian *Town* group.

CHAPTER 7-CONCLUDING REMARKS

This study has revealed a wide variation in the role and activities of local government in the construction and maintenance of roads. Because of this variety it is difficult to draw general conclusions, but some trends are apparent and some points have a general validity.

Between 1969-70 and 1979-80, in real terms, spending on roads by *Town* LGAs increased by 20.9 per cent and *Rural* LGAs declined by 23.9 per cent. However, *Rural* LGAs continued to devote a greater proportion of total ordinary service expenditure to roads than did *Town* LGAs, and in 1979-80, 10 per cent of *Rural* LGAs spent more than 60 per cent of total expenditure on roads.

The factors underlying these trends in LGA road expenditure involve a complex web of local and national developments. One fundamental influence was the decline in the aggregate population of the *Rural* LGAs over the study period. Population falls reduced the local demand for road use, and the potential revenue base for maintaining and upgrading roads.

On the revenue side, *Town* and *Rural* LGAs experienced quite different trends in their budgets in the period 1969-70 to 1979-80. While *Town* LGAs in all States generally experienced increases (in real terms) to their overall budgets, *Rural* LGA budgets were stagnant or declining.

The principal reasons for this difference were:

- falls in road grants and reimbursements were more severe for *Rural* LGAs where four of the six States suffered falls in real terms. For *Town* LGAs only two States experienced falls in this revenue category;
- in all States except Tasmania *Rural* LGAs reduced real revenue from rates and charges (ie from LGAs' own sources). By contrast, only in Western Australia did *Town* LGAs experience similar falls; and
- the large increase in General Purpose Grants from the tax sharing arrangements introduced in 1976 initially more than adequately

covered decreases in road grants and reimbursements (where these occurred) but did not cover additional falls in revenue from LGAs' own sources.

The introduction of general purpose grants to local government by the Commonwealth in 1974-75 and the PITS arrangements in 1976 led to a short-term increase in relative expenditure on roads, but these funds were quickly diverted to other uses. *Town* LGAs gained most from the introduction of tax sharing and, significantly, combined this with an increase in income from rates. Australia-wide, *Town* LGAs experienced a 64 per cent increase in total real revenues between 1969-70 and 1979-80. Over the same period purely *Rural* LGAs experienced an overall decline of about 9 per cent. One reason for this decline was a reluctance by *Rural* councils to increase rates. Indications are that many councils have been reluctant to fully exploit the available rate base. This is partly because of a judgement of ability of ratepayers to increase contributions and partly because Councillors saw pegging of rate increases to less than CPI as a 'responsible' action. This is in spite of the fact that council costs generally have risen faster than the CPI.

The net effect of reducing road grants and reimbursements has been that the overall level of funds spent on all rural roads has declined in real terms between 1970-71 and 1979-80. A subsidiary effect was that because of the particularly sharp drop in the level of road grants provided to rural roads the proportion of funds provided by each level of government has changed with the Commonwealth now providing 22 per cent of funds compared with 50 per cent for State and 28 per cent from local sources.

A further factor has been the decline in the share of budgets going to roads in both Rural and Town LGAs. This reflects the general tendency for local government to become more involved with the supply of other (social) services in their areas.

Part of the reason for this was the provision of capital grants to the councils in the 1970s to assist in the construction of facilities such as community centres, libraries and sports facilities, etc. This has tended to leave local government 'locked-in' to the upkeep and operation of these activities varies from council to council, but by and large those with significant urban centres have found it most easy to adapt to the changed conditions. At the other extreme some small councils in remote areas provide services because they see themselves as the only possible source of such services.

Whatever the reasons, however, the fact remains that councils are spending a smaller proportion of their budgets on road works, reflecting an increase in alternative priorities.

Despite the lower priority given to it, provision of roads remained, in terms of expenditure and manpower, the dominant function of rural local government.

- $459 million was spent on roadworks by rural local government in 1979-80;
- this represented 38.6 per cent of total ordinary service expenditure; and
- about 59 per cent of the time of full-time council staff was spent on road related matters in 1979-80.

The maintenance of work continuity for these council employees is a constant concern of local government. Furthermore, for some rural councils it is only road grant monies from State and Commonwealth governments which keep them afloat financially.

Councils vary widely in their use of loan funds for roadworks. Some regard roads as a long life capital item appropriate for loan funding. Others do not favour this course because of the inability of roads to generate revenue, and doubts about the continuing capacity of the rate base to service the debt. Concerns are also held about the possibility that roads will require significant work before a loan can be paid off. A fairly general pattern is to use grant monies for construction and rate revenue for maintenance.

By and large councils do not have established strategic plans for road improvements. The size and nature of roadworks make it a suitable item for budget balancing and an incrementalist approach to fund allocation is adopted. Expectations of continually rising standards place considerable pressure on councils as they do on other levels of government.

Institutional rigidities present problems also. Some councils feel that the formulae used to allocate grant monies does not take sufficient cognizance of traffic loads generated by developments and the need to reclassify some roads. Rigidities do not work all one way, however, and the reluctance of councils to put 'local' money into 'State' roads has led in some cases to council roads of a higher standard than arterial roads in the same area.

The standard of roads aimed for by 'Rural' LGAs varied greatly depending on the population and industrial base of the area, and also on terrain and weather conditions. Accordingly in some areas, unsealed roads and flood interuptions were accepted as the norm, while in other areas, five metre asphalt roads were viewed as appropriate.

'Town' LGAs were generally concerned with providing sealed roads with kerbing in the urban parts of their areas.

APPENDIX I-SURVEY OF RURAL LOCAL GOVERNMENT AUTHORITIES

INTRODUCTION

In order to obtain data that were not available from published sources, a questionnaire was sent to all rural LGAs in the six States in November, 1980. Local authorities in the Northern Territory were not included in this survey, as:

- the bulk of the Northern Territory is not incorporated under any form of local government. The four local authorities that have been established[1] are wholly urban in nature; and
- in the rest of the Territory roadworks in both town and rural areas are carried out by the Department of Transport and Works, which is the road authority for the Territory.

Of the 664 survey forms despatched, a total of 361 (54.4 per cent) were returned. Table I.1 shows the number of returns from LGAs in each State by Harris category. Figures I.1-I.7 indicate the geographic distribution of returns. It is evident that the (self-selecting) sample is uneven in its distribution among states (from 37.8 per cent of *Rural* LGAs in Tasmania to 66.4 per cent in Victoria), between *Town* and *Rural* categories (46.0 per cent and 55.4 per cent respectively) and, in some cases, within states (Table I.2).

The survey was designed in three parts, each part examining a different area of LGA roading activities. Part I requested information on the involvement of LGAs in providing a range of services, other than roads, the resource costs of providing these services relative to roads, and the role of LGAs' roading activities in providing access to these services. Part II sought details of the components of rural LGAs expenditure on roads and bridges, the various influences on allocation of resources to roadworks, and LGA objectives in providing roads. Part III relates to the sources and choices of engineering standards of roadworks used by rural LGAs.

---

1. Darwin, Katherine, Tennant Creek and Alice Springs.

TABLE I.1-DISTRIBUTION OF SURVEY SAMPLE BY STATE AND HARRIS CATEGORY

Harris[a] *category*	*NSW*		*Vic*		*Qld*		*SA*		*WA*		*Tas*		*Total*	
	Sent	*Returned*	*Sent*	*Returned*	*Sent*	*Returned*	*Sent*	*Returned*	*Sent*	*Returned*	*Sent*	*Returned*	*Sent*	*Returned*
Town														
3	4	4	na	na	8	6	1	1	na	na	5	2	18	13
4	17	7	12	6	4	2	5	1	7	4	2	1	47	21
5	24	8	15	9	12	2	3	3	5	1	2	1	61	24
Total	45	19	27	15	24	10	9	5	12	5	9	4	126	58
Per cent		(42.2)		(55.6)		(41.7)		(55.6)		(41.7)		(44.4)		(46.0)
Rural														
6	25	10	23	14	18	5	7	4	11	8	5	0	89	41
7	42	16	39	26	30	16	25	13	17	12	8	4	161	87
8	34	16	51	38	51	29	56	36	73	47	23	9	288	175
Total	101	42	113	78	99	50	88	53	101	67	36	13	538	303
Per cent		(41.6)		(69.0)		(50.5)		(60.2)		(66.3)		(36.1)		(55.4)
Total	146	61	140	93	123	60	97	58	113	72	45	17	664	361
Per cent		(41.8)		(66.4)		(48.8)		(59.8)		(63.7)		(37.8)		(54.4)

a. For definition of Harris categories see Chapter 2.

na not applicable.

Sources: BTE, Road Assessment Studies, Survey of Rural Local Government, 1980.

TABLE I.2-RESPONSES FROM *TOWN* AND *RURAL* LGAS AS A PROPORTION OF TOTAL RESPONSES IN EACH STATE

	Town		*Rural*		*Total*	
State	*Number*	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
NSW	19	31.1	42	68.9	61	100.0
Vic	15	16.1	78	83.9	93	100.0
Qld	10	16.7	50	83.3	60	100.0
SA	5	8.6	53	91.4	58	100.0
WA	5	6.9	67	93.1	72	100.0
Tas	4	23.5	13	76.5	17	100.0
Total	58	16.1	303	83.9	361	100.0

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

Several questions were subjective and the response depended on the person answering the questionnaire and may vary according to LGA policy changes over time.

RESPONDENTS TO SURVEY BY STATE

New South Wales

Of 146 LGAs surveyed, 61 (41.8 per cent) responded to the questionnaire. 42.7 per cent of *Town* LGAs and 41.6 per cent of *Rural* LGAs responded. Significant regions of *Rural* LGAs not responding are the far west and North West and the irrigation areas of the Murray and Murrumbidgee regions. In addition at the time the survey was carried out, a large number of amalgamations took place of *Town* LGAs with their surrounding *Rural* LGAs (see Figure I.1). Of the 40 LGAs amalgamated, only 6 responded to the survey.

Victoria

This state showed the best overall response, with 93 of the 140 (66.4 per cent) LGAs returning survey forms. Fewer *Town* LGAs (55.6 per cent replied than *Rural* LGAs (69.0 per cent). LGAs in the south eastern part of the state had a lower response rate than other areas.

Queensland

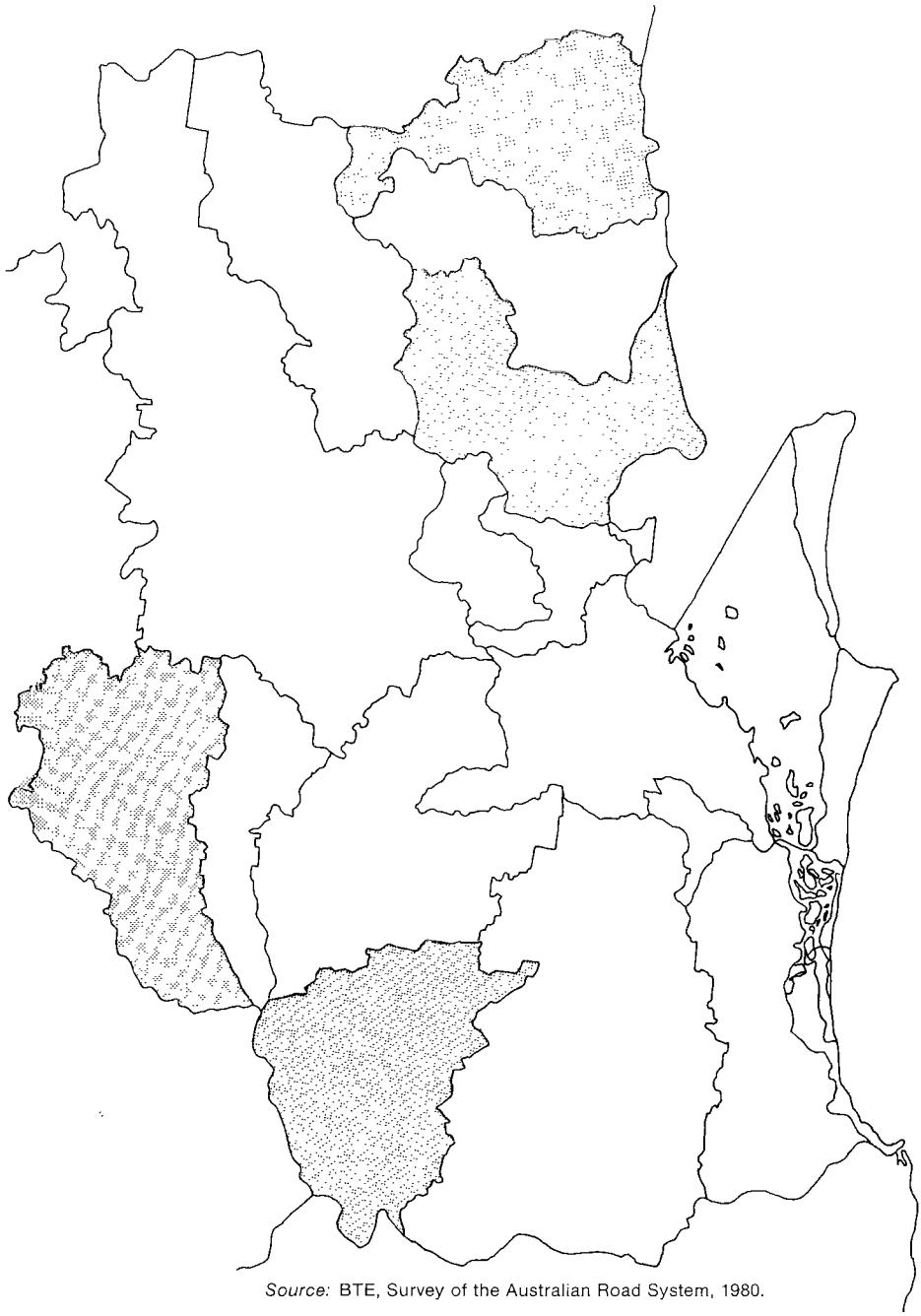
60 of 123 (48.8 per cent) LGAs replied to the questionnaire. Fewer *Towns* (41.7 per cent) than *Rural* (50.5 per cent) LGAs responded. There was no significant geographical imbalance.

Source: BTE, Survey of the Australian Road System, 1980.

Figure I.1—Geographic distribution of returns in New South Wales

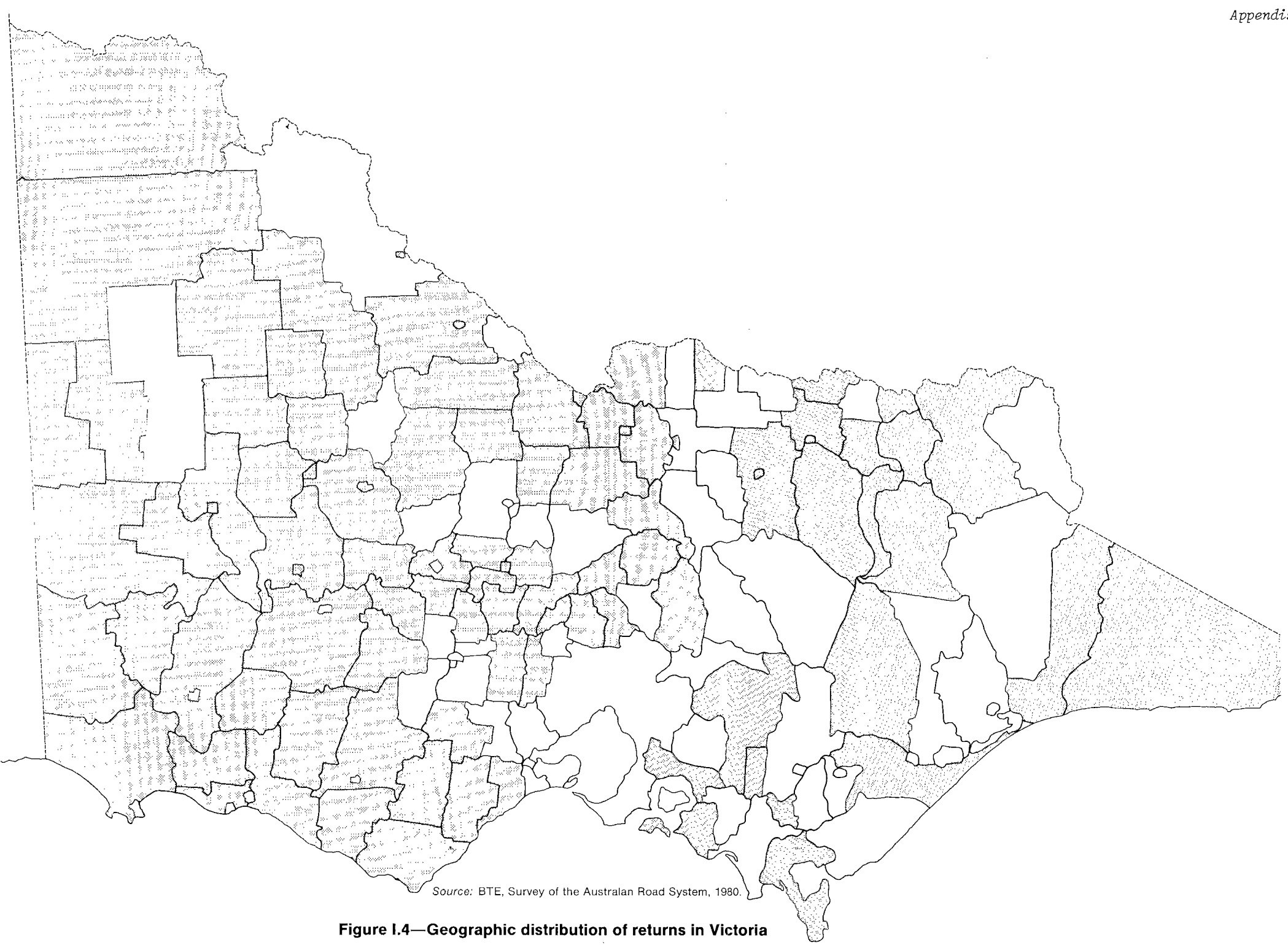
Source. BTE. Survey of the Australian Road System, 1980.

Figure I.2—Geographic distribution of returns in Queensland



Source: BTE, Survey of the Australian Road System, 1980.

Figure I.3—Geographic distribution of returns in Queensland; insert for Figure I.2

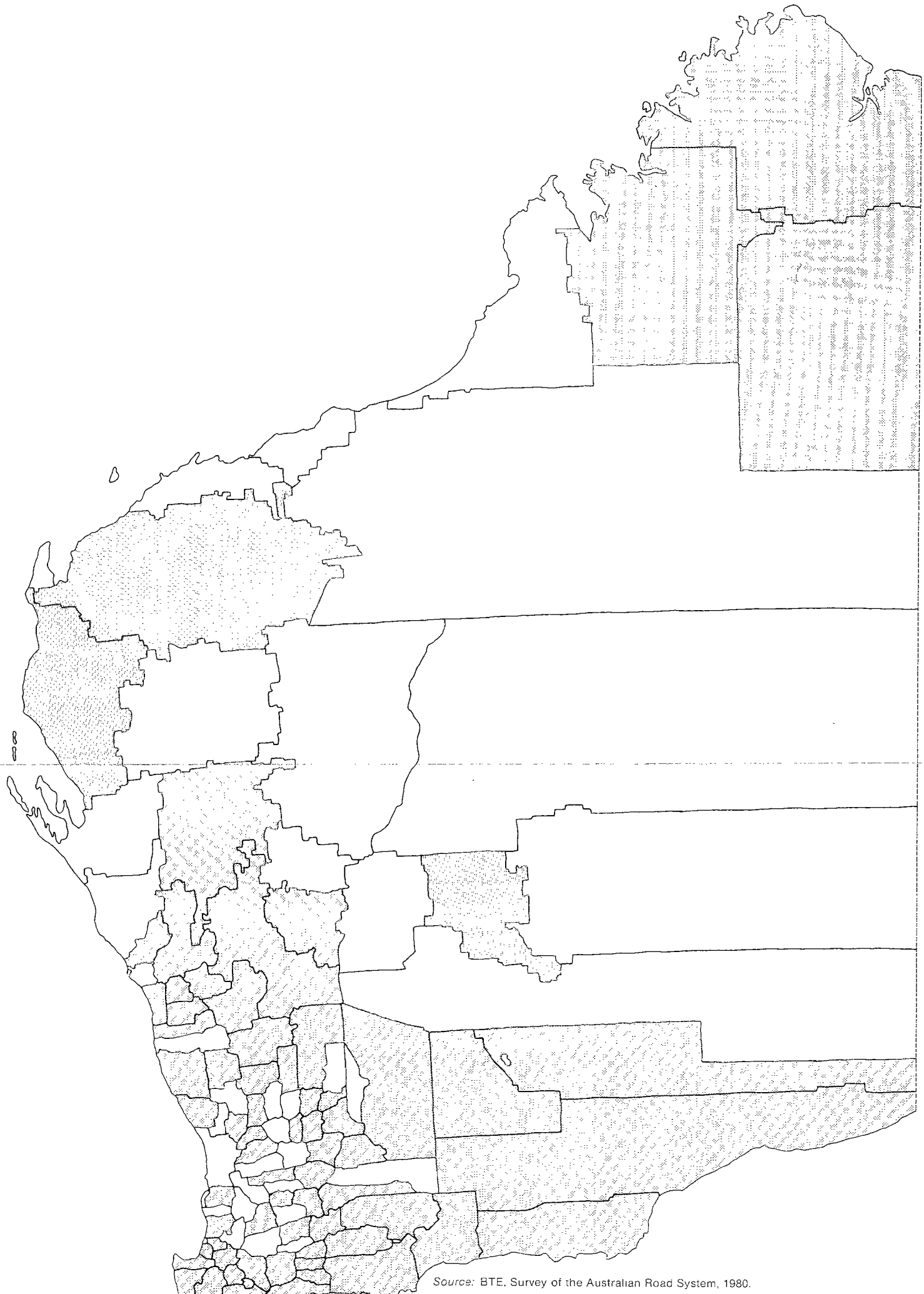


Source: BTE, Survey of the Australan Road System, 1980.

Figure I.4—Geographic distribution of returns in Victoria

Source: BTE, Survey of the Australian Road System, 1980.

Figure I.5—Geographic distribution of returns in South Australia



Source: BTE, Survey of the Australian Road System, 1980.

Figure I.6—Geographic distribution of returns in Western Australia

Source: BTE, Survey of the Australian Road System, 1980.

Figure I.7—Geographic distribution of returns in Tasmania

South Australia

More *Rural* LGAs (60.7 per cent) than *Town* LGAs (55.6 per cent) replied. The overall response rate was 59.8 per cent or 58 of 97 LGAs. There was no significant geographical bias.

Western Australia

With a response rate of 63.7 per cent (72 of 113 LGAs) WA had the second highest response rate of the six states. Significantly more *Rural* LGAs (66.3 per cent) responded than *Town* LGAs (41.7 per cent) , although Figure I.5 shows that the Central and Pilbara Regions of the state were underrepresented, due to the vast areas covered by a small number of non-responding LGAs.

Tasmania

With only 17 of 45 LGAs (37.8 per cent) responding, Tasmania had the lowest response rate of all States. Proportionally, more *Town* LGAs (44.4 per cent) than *Rural* LGAs (36.1 per cent) replied. Geographically, responding LGAs were widely scattered, with a slight bias towards the Northern and Eastern parts of the State, and with the larger, less populated LGAs being marginally underrepresented. The low number of total responses (17) has presented some difficulties in obtaining meaningful results for several questions in the survey, particularly where non-response to some questions has meant a much reduced sample size.

VALIDITY OF SAMPLE

The sample obtained for the survey of Rural Local Government was tested against the total population of *Rural* LGAs in terms of distribution amongst States, statistical divisions and Harris categories. There was no statistical differences between the sample and the population in any of these characteristics.

Tables I.3 and I.4 show results of the chi-square tests used to test these differences.

COLLECTED RESULTS

Tables I.5 to I.8 shows proportions of councils which provide selected services for ratepayers. Councils provided this information in response to question 1 of the questionnaire and the results are collected here for ease of reference. Results for other parts of the survey are discussed in detail in the body of the report.

TABLE I.3-CHI-SQUARE TESTS OF SAMPLE AGAINST TOTAL POPULATION: DISTRIBUTION BY STATE

	NSW	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*All States*
Sample	62	95	61	58	72	17	365
Whole population	146	140	123	97	113	45	664

$\chi^2 = 8.88$, DF = 5, $P < 0.1$

($\chi^2 5, 0.01 = 15.09$)

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE I.4-CHI-SQUARE TESTS OF SAMPLE AGAINST TOTAL POPULATION: DISTRIBUTION BY HARRIS[a] CATEGORY

	MF	*SC*	*LT*	*MT*	*ST*	*R*	*Total*
Sample	13	22	24	40	88	178	365
Whole population	18	47	61	89	161	288	664

$\chi^2 = 5.53$, DF = 5, $P < 0.1$

($\chi^2 5, 0.01 = 15.09$)

a. See Table 2.1 for the definition of Harris classifications.

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE I.5-PROPORTION OF *TOWN* AND *RURAL* LGAs PROVIDING SELECTED HEALTH AND WELFARE SERVICES, 1979-80

(per cent)

Service		*Town*			*Rural*		
		In one centre only	*In several centres*	*On mobile basis*	*In one centre only*	*In several centres*	*On mobile basis*
Ambulance	a	-	-	-	0.6	-	1.0[c]
	b	3.4	3.4	8.6[c]	10.6	6.6	8.3[c]
Doctor/dentist	a	-	-	-	4.6	0.6	-
	b	3.4	3.4	-	14.3	7.0	0.6
Nurse	a	1.7	-	-	0.6	0.3	1.0
	b	1.7	1.7	3.4	4.0	4.3	4.3
Immunisation	a	36.2	22.4	1.7	22.6	22.0	1.0
	b	5.1	3.4	-	9.6	12.0	1.3
Social worker	a	15.5	12.0	-	2.0	2.0	1.0
	b	5.1	3.4	-	3.3	3.3	0.3
Home help	a	13.7	6.8	3.4	3.0	13.0	3.6
	b	1.7	3.4	-	2.6	3.3	2.6
Meals on wheels	a	17.2	1.7	3.4[c]	5.0	6.0	[c]
	b	8.6	1.7	-	11.6	5.3	3.0[c]
Hospital	a	1.7	-	na	1.6	-	na
	b	12.0	-		14.0	5.6	
Senior citizens Centre	a	39.6	3.4	na	18.0	5.3	na
	b	6.8	5.1		16.0	3.6	
Kindergarten/ Creche	a	22.4	5.1	na	11.0	9.6	na
	b	13.7	8.6		19.6	11.0	
Maternity/ Infant welfare	a	20.6	1.7	na	6.6	10.0	na
	b	3.4	3.4		7.0	6.0	
Shelter							
Emergency Shelter	a	5.1	1.7	na	1.3	0.3	na
	b	3.4	-		1.6	-	
Housing	a	5.1	8.6	na	17.0	8.6	na
	b	5.1	6.8		6.0	2.6	

a. LGA is sole provider of service.
b. LGA shares or supports service.
c. Service not provided over whole of LGA area.

\- nil or rounded to zero

na not applicable

Source: BTE, Road Assessment Studies, Survey of Rural Local Government, 1980.

TABLE I.6-PROPORTION OF *TOWN* AND *RURAL* LGAs PROVIDING SELECTED COUNCIL PROPERTIES AND RECREATION FACILITIES, 1979-80

(per cent)

		Town			*Rural*		
Service		*In one centre only*	*In several centres*	*On mobile basis*	*In one centre only*	*In several centres*	*On mobile basis*
Town hall	a	68.5	12.0	na	51.0	27.6	na
	b	-	6.8		3.0	9.6	
Aerodrome	a	20.6	1.7	na	23.6	9.6	na
	b	13.7	1.7		13.6	3.0	
Camp site	a	41.3	25.8	na	31.6	26.6	na
	b	6.8	5.1		6.0	3.3	
Car park	a	43.1	31.0	na	18.3	14.3	na
	b	3.4	-		1.0	1.3	
Cemetery/ Crematorium	a	25.8	39.6	na	29.3	41.6	na
	b	8.6	-		3.6	3.6	
Community Centre	a	25.8	15.5	na	20.6	13.3	na
	b	10.3	6.8		6.0	8.0	
Sportsgrounds	a	25.8	56.8	na	24.0	49.3	na
	b	6.8	8.6		5.6	25.3	
Swimming pool	a	46.5	34.4	na	40.6	13.6	na
	b	1.7	1.7		11.6	5.0	
Parks/reserves	a	25.8	72.4	na	22.3	63.6	na
	b	-	1.7		1.3	14.0	
Gymnasium	a	12.0	-	na	4.3	-	na
	b	5.1	1.7		3.6	1.0	
Art gallery/ museum	a	24.1	3.4	-	13.0	1.6	-
	b	12.0	3.4	-	10.6	0.3	0.6
Theatre/cinema	a	20.6	1.7	-	8.6	1.3	-
	b	1.7	3.4	-	3.6	-	-
Library	a	27.5	27.5	3.4	35.6	13.6	7.6
	b	22.4	20.6	20.6	15.0	15.0	10.0

a. LGA sole provider of service.
b. LGA shares or supports service.

\- nil or rounded to zero
na not applicable

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE I.7-PROPORTION OF *TOWN* AND *RURAL* LGAs PROVIDING SELECTED PUBLIC WORKS AND SERVICES, 1979-80

(per cent)

Service		*Town*			*Rural*		
		In one centre only	*In several centres*	*On mobile basis*	*In one centre only*	*In several centres*	*On mobile basis*
Water supply	a	17.2	32.7	3.4	15.0	22.6	-
	b	3.4	3.4	1.7	3.3	7.0	0.3
Sewerage	a	34.4	29.3	1.7	27.6	11.0	0.3
	b	1.7	5.1	-	4.6	2.0	-
Electricity	a	-	1.7	na	2.0	2.3	na
	b	-	1.7		1.6	3.3	
Gas	a	3.4	6.8	1.7	-	-	-
	b	-	-	-	-	-	0.3
Garbage collection/ disposal	a	39.6	43.1	13.7[c]	32.3	58.0	3.3[c]
	b	3.4	1.7	-	1.3	0.6	-

a. LGA is sole provider of service.
b. LGA shares or supports service.
c. Service provided over whole of LGA area.

\- nil or rounded to zero
na not applicable

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

TABLE I.8-PROPORTION OF *TOWN* AND *RURAL* LGAs PROVIDING SELECTED 'OTHER' SERVICES, 1979-80

(per cent)

		Town			*Rural*		
Service		*In one centre only*	*In several centres*	*On mobile basis*	*In one centre only*	*In several centres*	*On mobile basis*
Trading enterprises							
Forestry/ sawmill	a	-	-	na	0.6	-	na
	b	-	-		-	-	
Abattoir	a	6.8	-	na	1.0	-	na
	b	6.8	-		2.0	0.3	
Quarry	a	3.4	10.3	na	8.6	9.6	na
	b	3.4	1.7		1.6	1.0	
Weighbridge	a	3.4	1.7	na	7.0	2.0	na
	b	-	-		2.3	2.3	
Bus service	a	-	-	3.4[c]	0.6	0.3	1.6[c]
	b	-	-	-	1.3	0.3	1.0[c]
Licensing & inspection							
Food	a	34.4	31.0	20.6[c]	14.6	40.6	17.3[c]
	b	1.7	5.1	1.7[c]	3.3	9.0	5.6[c]
Buildings	a	37.9	34.4	20.6[c]	16.0	44.0	21.3[c]
	b	-	1.7	-	2.3	4.0	2.3[c]
Weights & measures	a	3.4	3.4	3.4[c]	2.6	7.3	4.0[c]
	b	5.1	5.1	5.1 [c]	1.0	7.0	3.3[c]
Noxious weeds/ Animals	a	15.5	20.6	18.9[c]	6.6	22.6	13.6[c]
	b	1.7	12.0	1.7[c]	5.6	12.3	9.6[c]
Vehicles	a	3.4	3.4	na	8.3	8.0	na
	b	-	3.4		3.3	1.0	
Other services							
Fire prevention	a	3.4	8.6	3.4[c]	6.0	17.0	13.3[c]
	b	10.3	31.0	5.1[c]	8.6	22.3	11.6[c]
Civil defence	a	3.4	5.1	5.1 [c]	10.6	10.3	7.0[c]
	b	29.3	15.5	8.6[c]	15.0	12.0	9.3[c]
Land use planning	a	34.4	27.5	15.5[c]	12.0	31.0	15.0
	b	1.7	3.4	1.7[c]	1.6	2.6	3.6[c]

a. LGA is sole provider of service.
b. LGA shares or supports service.
c. Service provided over whole of LGA area.

\- nil or rounded to zero
na not applicable

Source: BTE, Road Assessment Studies: Survey of Rural Local Government, 1980.

REFERENCES

Abelson, P.W. (1981), *The role and size of local government authorities in New South Wales*, Occasional Paper 19, Centre for Research on Federal Financial Relations, Australian National University, Canberra.

Advisory Council for Intergovernment Relations (1981a), *Additional revenue sources for local government*, Discussion Paper No 4, ACIR, Hobart.

_____ (1981b), *Local government systems in Australia*, Information Paper No 7, AGPS, Canberra.

_____ (1981c), *Provision of roads: Report on the relations between governments in Australia*, Report No 4, ACIR, Hobart.

Affleck, F. (1978), *The economics of regulation of road haulage in Western Australia from the 1920s to the 1970s*, Director-General of Transport Western Australia, Policy Research Paper No 4, Perth.

American City and County (1979a), *Deferred maintenance robs taxpayers*, September, pp111-114.

_____ (1979b), *Preventative maintenance beats pothole patching*, September, pp111-114.

American Society of Civil Engineers (1980), How Texas got a new highway plan and more construction dollars, *Journal of the American Society of Civil Engineers - Civil Engineering Division*, November, pp59-61.

Attorney-General's Department (1980), *The Australian constitution annotated*, AGPS, Canberra.

Australia (1980), House of Representatives, *Debates*, 27 November, p128.

Australian Bureau of Statistics (various years), *Consumer price index - March quarter,* Catalogue No 6401.0, ABS, Canberra.

_____ (various years), *Survey of motor vehicle usage,* Catalogue No 9202.0, ABS, Canberra.

_____ (1980a), *Australian Municipal Information System,* Catalogue No 1103.0, ABS, Canberra.

_____ (1980b), *Australian national accounts - national income and expenditure 1978-79,* Catalogue No 5204.0, ABS, Canberra.

_____ (1981), *Quarterly estimates of national income and expenditure, Australia June Quarter 1981,* Catalogue No 5206.0, ABS, Canberra.

_____ (1982a), *Standardised Local Government Finance Statistics User Manual,* Catalogue No. 1212.0, ABS, Canberra.

_____ (1982b), *Local government finance Tasmania 1979-80,* Catalogue No 5501.6, ABS, Hobart.

Australian Council of Local Government Associations (1979), *Roads and road funding,* Issue Discussion Paper No 1, ACLGA, Canberra.

Australian Population and Immigration Council (1980), *Population Report No 4,* AGPS, Canberra.

Beesley, M. (1981), *The future of road financing,* in *Road policy financing administration,* TS1, IXth International Road Federation Meeting, Stockholm.

Bentley, P, Collins, D.J., Drane, N.T. and Rutledge, D.J.S. (1974), *The net fiscal impact of roads,* Proceedings of 4th Conference of Economists, August, Canberra.

Bentley, P., Collins, D.J. and Rutledge, D.J.S. (1977), *The distributional impact of road expenditure and finance in Australia,* Research Paper No 140, School of Economic and Financial Studies, Macquarie University, Sydney.

_____ (1979), *Urban and rural benefits from Australian road expenditure,* Proceedings of 8th Conference of Economists, La Trobe University, Melbourne.

Bhatt, K., McGillvray, R., Beesley, M. and Neels, K. (1977), *Congressional intent and road user payments*, The Urban Institute, Washington DC.

Blackburn, V.C. (1978) *An Analysis of the Impact of Commonwealth and State governments on Local Government Fiscal Behaviour*, Seminar Paper, 18 September, Urban Research Unit, Australian National University, Canberra.

_____ (1979), *A generalised adjustment model of State and local government budgets in Australia*, La Trobe University, Melbourne.

_____ (1980), *The intergovernmental dimension of evaluation research - an agenda for Australia*, Proceedings of Evaluation Research Symposium, 50th ANZAAS Congress, May, Adelaide.

Blair, J. (1973), *Anticipated useful lives of rural roads*, Paper No 11, Symposium on Roads and Tourism and Road Management, Mt Gambier, South Australia, Australian Road Research Board.

Board of Review of the Role, Structure and Administration of Local Government in Victoria (1979), *Final Report*, Government Printer, Melbourne.

Both, G. (1980), *Updating of economic evaluation parameters to March 1980 prices for use in CRB-RURAL and NIMPAC computer programs*, Country Roads Board, Melbourne.

Bowman, M. (1976), *Local Government in the Australian States*, Department of Environment, Housing and Community Development, AGPS, Canberra.

Bowyer, D.P. (1981), *Road investment planning under constraints and uncertainties*, Proceedings of the 3rd Conference of the Road Engineering Association of Asia and Australasia, vol. 1, April, Taipai.

Brady, C.N. (1980), *The benefits of good roads - the US experience*, Australian Automobile Association Symposium on Roads - A National Asset or Liability?, 13-14 March, Canberra.

Bureau of Transport Economics (1977a), *History of Commonwealth Government Legislation relating to roads and road transport 1900-1972*, Occasional Paper 8, AGPS, Canberra.

_____ (1977b), *The impact of roads and road transport in the Australian economy,* Staff paper (unpublished).

_____ (1978), *National Highways linking Hobart, Launceston and Burnie: appraisal of Penguin to Burnie section, 1978,* Report 37, AGPS, Canberra.

_____ (1979), *An assessment of the Australian road system: 1979,* Parts I and II, AGPS, Canberra.

_____ (1980a), *Proceedings of the workshop on the economics of road design standards,* vols. I and II, AGPS, Canberra.

_____ (1980b), *The long distance road haulage industry,* Report 41, AGPS, Canberra.

_____ (1981a), *Road Grants Legislation in Australia: Commonwealth Government involvement 1900-1981,* Occasional Paper 48, AGPS, Canberra.

_____ (1981b), *National travel survey 1977-78: general overview and assessment,* Report 48, AGPS, Canberra.

_____ (1982a), *Australian road financing statistics: 1970-71 to 1979-80,* Information Paper 3, AGPS, Canberra.

_____ (1982b), *Evaluation parameter investigation program: a discussion paper,* Reference Paper 27 (unpublished).

_____ (1982c), *Road construction price indexes 1969-70 to 1980-81,* Report 49, AGPS, Canberra.

_____ (1982d) *Survey of the Australian Road System - Local Government Authorities, Preliminary Statistical Summary,* Reference Paper 33, (unpublished).

Calmfors, H. (1977), The State and local authorities, *Local Government Bulletin,* vol. 32(3), June.

Campana, J. (1979), The economics of regulation: a critique, *American Journal of Agricultural Economics,* Part II, November.

Caputo, D.A. and Cole, R.L. (1975a), General revenue sharing expenditure decisions in cities over 50 000, *Public Administration Review,* March/April, pp136-142.

_____ (1975b), *Policy implications of general revenue sharing,* in R.L. Lineberry & L.H. Masotti's, *Urban problems and public policy,* Lexington Books.

Carnemark, C., Biderman, J. and Bovet, D. (1976), *The economic analysis of rural road projects,* World Bank Staff Working Paper No 241.

Cho, Y.H. (1967), The effect of local government systems on local policy outcomes in the United States, *Public Administration Review,* vol. 27, March, pp31-38.

Commonwealth Bureau of Census and Statistics (1966), *South Australian Year Book 1966.* No 1, Adelaide.

_____ (1971), *Western Australian Year Book 1971,* No 10, Perth.

_____ (1973), *Victorian Year Book 1973,* No 87, Melbourne.

Commonwealth Bureau of Roads (1972b), *Report on arterial roads of national importance,* CBR, Melbourne.

_____ (1973), *Report on roads in Australia 1973,* CBR, Melbourne.

_____ (1975a), *Hume Highway corridor study, Report No 2 - socio-economic analysis,* Working Paper, CBR, Melbourne (unpublished).

_____ (1975b), *Report on roads in Australia 1975,* CBR, Melbourne.

_____ (1975c), *Socio-economic issues in the Hume Highway corridor: Hume Highway corridor study, Report No 1,* Working Paper, CBR, Melbourne (unpublished).

_____ (1976), *Report on a North-South Highway connecting Darwin to Melbourne via Mt Isa and Broken Hill,* CBR, Melbourne.

Commonwealth of Australia (1980), *Payments to or for the States, the Northern Territory and local government authorities 1980-81,* Budget Paper No 7, 1980-81, AGPS, Canberra.

Courchene, T.J. and Beavis, D.A. (1973), Federal-Provincial tax equalisation - an evaluation, *Canadian Journal of Economics,* vol. 6(4), pp483-502.

Court, C. (1980), *The State view - getting on the right road,* Symposium on Australia's Roads - A National Asset or Liability?, 13-14 March, Australian Automobile Association Canberra.

Crecine, J.P. (1969), *Government problem solving,* Rand McNally, Chicago.

Crowley, R.W. (1971), Provincial-Municipal grants - estimates of inter-county income redistribution through Ontario grant programs in 1961, *Canadian Journal of Economics,* vol IV(1), pp61-77.

Cuthbertson, K., Foreman-Peak, J.S. and Gripaios, P. (1981), A model of local authority fiscal behaviour, *Public Finance,* vol. 32(2), pp229-243.

Department of Environment, Housing and Community Development (1976a), *Off-road vehicles, A submission to the House of Representatives Standing Committee on Environment and Conservation*, DEHCD, Canberra.

_____ (1976b), *The attraction of manufacturing employment to decentralised locations,* Report 21, Studies Bureau, DEHCD, Canberra.

_____ (1979), *Differential rating in Australia and New Zealand,* AGPS, Canberra.

Department of Transport Australia (1977), *State Grants (Roads) Act 1977: notes on administration,* DoTA, Canberra.

_____ (1980a), *Transport pricing and cost recovery seminar,* Papers and proceedings, July, AGPS, Canberra.

_____ (1980b), *Waratah Highway - cost benefit study*, DoTA, Canberra.

_____ (1981a), *Commonwealth to fund Bourke-Narrabri road upgrading,* New Release by the Minister for Transport, No 81/701, 1 October, DoTA, Canberra.

_____ (1981b), *Government and the travel industry - recent developments,* Speech by the Secretary for the Department of Transport Australia, Mr C.C. Halton, to the 1981 Convention of Australian Federation of Travel Agents, Surfers Paradise, 7 July, DoTA, Canberra.

_____ (1982a) *Roads Grants Act 1981 - Notes on Administration*, AGPS, Canberra.

_____ (1982b) *Roads Grants Act 1981 - Information Paper*, AGPS, Canberra.

Eckersley, D. (1980), *Roads and road funding - the rural industry view*, Symposium on Australia's Roads - A National Asset or Liability?, 13-14 March, Australian Automobile Association, Canberra.

Egan, W.P. (1981), *Domestic freight transport*, in Bureau of Transport Economic's *Transport Outlook Conference 1981 - Market Segment Papers*, AGPS, Canberra.

Everingham, P.A.E. (1980), *Transport problems in the North*, Symposium on Australia's Roads - A National Asset or Liability?, 13-14 March, Australian Automobile Association, Canberra.

Farrow, C.P. (1980), *Roads and road funding - the Australian Road Federation View*, Symposium on Australia's Roads - A National Asset or Liability?, 13-14 March, 1980, Australian Automobile Association, Canberra.

Follain, J.R. (1979), Grant impacts on local fiscal behaviour - full information maximum likelihood estimates, *Public Finance Quarterly*, vol. 7(4), pp479-501.

Ford, W.G. (1981), *Pleasure motoring and the view from the road*, Transport and Road Research Laboratory Report, No LR1009, Department of the Environment and Department of Transport, Berkshire, England.

Foster, C.D. (1975), *The transport problem*, Croom Helm Ltd, London.

Fotea, F. (1981) *The Implication of Resource Development for Local Government: The Hunter Region*, Report to the Commonwealth Department of Finance and the NSW Local Government and Shires Association, (unpublished).

Francis, E. (1977), Rates - some relief, but for how long?, *Local Government Bulletin*, vol. 32(1).

Gallop, A.E. (1979), *The bush engineer*, A.E. & R.D Gallop, Cairns, Queensland.

Gessaman, P.H. and Sisler, D.G. (1976), Highways, changing land use and impacts on rural life, *Growth and Change*, vol. 7(2), pp3-8.

Gibson, J.G. (1980), The effect of matching grants on local authority user charges, *Public Finance*, vol. XXXV(3).

Gramlich, E. and Galper, H. (1973), *State and local fiscal behaviour and Federal grant policy*, Brookings Paper on Economic Activity, vol. 1, Brookings Institute, Washington DC.

Gregson and Associates (1975), *Feasibility study for the provision of a pool of earthmoving plant and bituminous concrete batching plant for the Northern Spencer Gulf Regional Organisation*, Adelaide.

Hansen, G.J. (1978), *Objectives of general revenue assistance grants to local government*, Department of Environment, Housing and Community Development (unpublished).

Harris, C.P. (1975), *The classification of Australian local authorities*, Centre for Research on Federal Financial Relations, Research Monograph No 9, Australian National University, ANU Press, Canberra.

_____ (1978a), *Local government in Australia*, Proceedings of a Symposium on West German and Australian Federalism, 10-13 December, Australian National University, Canberra.

_____ (1978b), *Local government and regionalism in Queensland, 1859-1977*, Centre for Research into Federal Financial Relations, Australian National University, ANU Press, Canberra.

Hassan, M.U. and Said, G.M. (1982) *Management of Highway Investment in a Low Population Density Environment: The Sascatchewan Endeavour*, Roads and Transportation, Association of Canada Forum, vol. 4, no. 2, pp56-65.

Historical Records of Australia (1914 to 1923a), *Series I: Governor's despatches to and from England*, vol. 1-26, 1788-1848, Parliamentary Library Committee, Melbourne.

_____ (1914 to 1923b), *Series III: Despatches and papers relating to the settlement of the States*, vols. 1-6, 1803-1830, Parliamentary Library Committee, Melbourne.

Hogg, T.M. (1978), *Resource allocation and road funding in Australia*, International Road Federation, Australasian Road Conference, Melbourne, 2-5 April.

Holmes, J.H. and Brown, J. (1978), *Travel behaviour and contact systems in isolated populations in southern Queensland,* Proceedings of a Seminar on Present and Future Settlement Systems in Sparsely Populated Regions, Flinders University, 12-15 July, South Australia.

Hudson, J.F., Bennett, J.H. and Nieuwhof, F.W.N. (1974), *Effects of heavy vehicles on Council roads,* Paper No 7, Symposium on Management of Road Maintenance, Launceston, Australian Road Research Board, 5 April, Tasmania.

Huxtable, E.A. (1981), *The funding of roads in NSW,* Annual Conference of the NSW Branch of the Chartered Institute of Quarrying, 18 July, NSW.

Johinke, A.K. (1979), *Australian road development,* Proceedings of a Symposium on National Highways Progress and Future Development Plans, Road Engineering Association of Asia and Australasia, Kuala-Lumpur, February.

Johnson, M.B. (1975), Recognising the competitive nature of General Revenue Sharing Grants, *Communications,* pp143-147.

Joint Steering Committee for the Local Government Ministers Conference (1976), *Joint study into local government finances in Australia and New Zealand,* AGPS, Canberra.

Jones, M.A. (1977), *Organisational and social planning in Australian local government,* Heinemann Educational Australia, Melbourne.

Kidder, A.E. (1979) *Usage of Revenue Sharing for Public Transportation,* North Carolina Agricultural and Technical State University, Greenboro.

Kiefer, D. (1980), *The dynamic behaviour of public budgets: an empirical study of Australian local government,* Proceedings of the 9th Conference of Economists, Brisbane, 25-29 August, Queensland.

Kolsen, H.M., Ferguson, D.C. and Dowcra, G.E. (1975), *Road user charges: theories and possibilities,* BTE Occasional Paper 3, AGPS, Canberra.

Lay, M.G. (1981), *Source book on Australian roads,* Australian Road Research, Vermont, South Victoria.

Le Grand, J. (1975), Fiscal equity and central government grants to local authorities, *Economic Journal*, vol. 85, pp531-547.

Liew, C.K. and Liew, C.J. (1980), *Use of a multi-regional input-output model to analyse the economic impacts of transportation costs*, in Transportation Research Board, *Economic and Social Aspects of Transportation*, Washington DC. Local Government Bulletin (1980), *Roads or ruts - which is it to be?*, April, p5.

_____ (1981) *Policy Statement on Local Government Finance Adopted by the Shires Association*, July, p17.

Loxton, H.J. (1968), *Australian roads*, Proceedings of the International Roads Federation, Pacific Regional Meeting, Sydney.

McLean, J.B. (1980, *Review of Rural Road Geometric Standards*, Proceedings of the Workshop on Economics of Road Design Standards, Bureau of Transport Economics, vol. 2, p130-132, AGPS, Canberra.

MacNicoll, I.H. (1977), The impact of local government activity on a small rural economy - an input-output study of Shetland, *Urban Studies*, vol. 14, pp339-345.

Marsh, J.G. (1981), *Loads on road bridges*, Proceedings of a Conference of the Institution of Engineers Australia, Canberra, 23-27 March.

Marshall, A.H. (1974), *Financial management in local government*, Allen and Unwin, London.

McGuire, M. (1973), Notes on Grants-in-Aid and economic interactions among governments, *Canadian Journal of Economics*, Vol 6(2), pp136-142.

McPhail, I.R. (1968), The characteristics of a rural shire in NSW, *Australian Geographer*, vol. 10(6), pp488-507.

_____ (1978), *The provision of public services to isolated areas in South Australia*, Proceedings of a Seminar on Present and Future Settlement Systems in Sparsely Populated Regions, Flinders University, 12-15 July, South Australia.

_____ (1979), Issues critical to local government: an investigation of the resources available to local government in relation to community needs, Proceedings of a Workshop, 15th Biennial Congress,

Sydney, August, *Royal Australian Planning Institute Journal,* vol. 17(1), pp13-15.

Mitchell, W.E. and I. Walter (eds) (1970), *State and local finances,* Ronald Press Co, New York.

Morris, P.O. and P.A. Meyer (1974), *A study of existing and new construction on a main road subject to heavy log traffic,* Paper No. 6, Symposium on Management of Road Maintenance, Australian Road Research Board, Launceston, 5 April.

Murphy, J.C. (1975), General revenue sharing's impact on county government, *Public Administration Review,* March/April, pp131-135.

Musgrave, R.A. and P.G. Musgrave (1973), *Public finance in theory and practice,* McGraw-Hill-Kogakusha Ltd, Tokyo.

National Association of Australian State Road Authorities (1978), *Australian roads,* NAASRA, Sydney.

_____ (1980), *Road Legislation and practice,* 6th edition, NAASRA, Sydney.

National Population Inquiry (1978), *Population and Australia - recent demographic trends and their implications,* AGPS, Canberra.

New South Wales Commission of Enquiry into the NSW Road Freight Industry (1980), *Report,* vols. I-VI, G.G. McDonell, (Chairman), Government Printer, Sydney.

New South Wales Department of Main Roads (1976), *The roadmakers - a history of main roads in New South Wales,* John Sands Pty Ltd, Sydney.

_____ (1979), *General conditions of assistance to councils for works on rural and urban local roads,* Commissioner for Main Roads, NSW.

_____ (1981a), *General conditions of assistance to councils for works on Main Secondary, Tourist Roads and Developmental Roads and works,* Commissioner for Main Roads, Sydney.

_____ (1981b), *Annual Report,* Commissioner for Main Roads, Sydney.

Nicholas Clark and Associates (1981), *Transport Funding Discussion Paper,* Report to the Department of Transport, South Australia, (unpublished).

Nie, N.H., Hadai-Hull, C., Jenkins, J.G., Steinbrenner, K. and D.H. Bent (1975), *Statistical package for the social sciences,* 2nd edition, McGraw-Hill Book Company, New York.

OECD (1976), *Road Research Program - Report of the Working Group on Rural Road Transport Planning in Developing Countries*, Part II State of the Art Report, Draft Working Document, Paris.

Painter, M. (1972), *Local government budgetary decision making,* Seminar Paper, Urban Research Unit, Research School of Social Sciences, Australian National University, 8 May, Canberra (unpublished).

Purdie, D.M. (1976), *Local government in Australia: reformation or regression?* Law Book Co, Sydney.

Queensland Main Roads Act of 1920 (amended).

Queensland Main Roads Department (1963), The road plan of Queensland, *Queensland Roads,* vol. 2(4), pp41-57.

_____ (1970), *Queensland Roads,* vol. 9(18), 50th Anniversary Issue,

_____ (1980), The history of federal road funding, *Queensland Roads,* vol. 19(38), pp1-3.

_____ (1981), *61st Annual Report,* Government Printer, Brisbane.

Quirin, G. (1967), *The capital expenditure decision,* R.D. Irwin Inc, Homewood, Illinois.

Robinson, A.J. (1980), *Federalism and efficiency,* The Australian National University Centre for Research on Federal Financial Relations, Occasional Paper No 14, Canberra.

Robinson, T.R. and Courchene, T.J. (1969), Fiscal Federalism and economic stability - an examination of multi-level public finance in Canada 1952-1965, *Canadian Journal of Economics,* vol. 2(2), pp165-189.

Rogers, F.A. (1980), *The local government view,* Symposium on Australia's Roads - a National Asset or Liability?, 13-14 March, Australian Automobile Association, Canberra.

Schultze, C.L. (1968), *The politics and economics of public spending,* Brookings Institute, Washington DC.

Scott, A.R. (1974), *The South Australian road maintenance charge,* B.Ec(Hons) Thesis, School of Social Sciences, Flinders University, South Australia.

Searle, G.H. (1974), A re-examination of the case for decentralisation, *Royal Australian Planning Institute Journal,* April, pp58-62.

Secretariat to the Joint Officers' Committee of the Local Government Ministers Conference (1980), *The rural local government study: An analysis of the functions and finances of rural authorities,* AGPS, Canberra.

Sheflin, M.J.E. (1980), Good roads *do* cost less, *Rural and Urban Roads,* October, pp22-23.

Siegal, S. (1956), *Non-parametric statistics for the behavioural sciences,* McGraw-Hill Book Co, Tokyo.

South Australian Highways Department (1971), A link with the past, *Highway,* vol. 10(6), p207.

_____ (1981a), *Accident rates for rural roads, 1977,* Adelaide.

_____ (1981b), *64th Annual Report,* Government Printer, Adelaide.

South Western Australia Transport Study Group (1977a), *History and development of Western Australia's road system,* Technical Paper No 24, Director-General of Transport Western Australia, Perth.

Spahn, P.B. (1979), The financial behaviour of State and local governments in Australia, *Australian Economic Papers,* vol. 18(32), pp200-205.

_____ (1981), *Economic efficiency and road expenditures - the case of rural arterials,* Department of Economics, Working Paper 81-1, University of Adelaide.

Stevens, S. (1972), *Local government authority road expenditure and the effect of intergovernmental transfers of funds for roads,* Working Paper, Commonwealth Bureau of Roads, Melbourne (unpublished).

Taplin, J.H.E. (1981), *Is there a case for increased spending on roads?* University of Tasmania (unpublished).

Tasmania Department of Main Roads (1980), *Report for the year ending 1980*.

Thompson, R.K. and Cox, B.E. (1979), *Policy investigation for the sealing of unsealed roads*, Bulletin No 39, Road Research Unit, National Roads Board, Wellington, NZ.

Thomson, N. (1981), The revenue raising capacity of local government: the ratepayers or their property, *The Australian Quarterly*, vol. 53(3), pp343-351.

Targovnik, E. and Barcel, Y. (1979), Block grant allocation in Israel: relationships between self-government and redistribution, *The Political Quarterly*, vol. 57 (Spring), pp87-102.

Transportation Research Board (1980), *Decision methodology for maintenance and upgrading: costs, traffic and benefits*, Compendium 11, Transport Technology Support for Developing Countries, National Academy of Sciences, Washington DC.

United Nations (1980), *Study on rural roads - construction and maintenance*, Economic and Social Commission for Asia and the Pacific, United Nations, Bangkok.

University of Tasmania (1981), *Pricing Tasmania's Roads*, Transport Economics Centre, University of Tasmania.

Urban Institute and International City Management Association (1974), *Measuring the effectiveness of basic municipal services, Initial Report*, Washington, DC.

Uren, M.J.L. and Parrick, F. (1976), *Servant of the State - the history of the Main Roads Department 1926-1976*, Commissioner of Main Roads, Western Australia.

van Dugteren, T. (ed.) (1978) *Rural Australia - The Other Nation*, Proceedings 43rd Summer School, Australian Institute of Political Science, Canberra, 29-31 January, Hodder & Stoughton, Sydney.

Victoria Country Roads Board (1981a), *68th Annual Report*, Government Printer, Melbourne.

_____ (1981b), *The Country Roads Board*, Government Printer, Melbourne.

Victorian Transport Study (1980a), *Country Roads*, Ministry of Transport, Melbourne.

_____ (1980b), *Land transport in Victoria - historical background*, Ministry of Transport, Melbourne.

_____ (1980c), *Report*, W.M. Lonie (Chairman), Ministry of Transport, Melbourne.

Walzer, N. and Stablein, R. (1979), *Conditions and financing of rural roads and bridges in Illinois*, in Bunker A.H. and T.Q. Hutchinson (eds), *Roads of Rural America*, Economics, Statistics and Cooperative Service, US Department of Agriculture, Washington D.C.

Western Australia Main Roads Act, 1930 (as amended).

Western Australia Main Roads Department (1981), *54th Annual Report*, Government Printer, Perth.

Working Party on Road User Charges (1979), *Report to the New Zealand Parliament*, Wellington.

Legislation

Commonwealth

Commonwealth of Australia Constitition Act 1900
Loan Act 1922
Main Roads Development Act 1923
Local Government (Personal Income Tax Sharing) Act 1976
Road Grants Act 1980
Road Grants Act 1981

New South Wales

Parish Roads Act, 1840
New South Wales Constitution Act, 1842
Municipalities Acts, 1858
Local Government Act, 1906

Victoria

Municipal and Land Corporations Act 1863
Local Government Act 1874-1936
Country Roads Act 1912-1958

Queensland

Municipal Institutions Acts, 1858 to 1864
Local Authorities Act of 1902
Main Roads Act of 1920

South Australia

District Roads Act, 1852
Road Improvement Act, 1921
Local Government Act, 1934
Highways Act, 1962

Western Australia

Towns Improvement Act, 1838
General Trust Act, 1841
Municipal Institutions Act, 1871
Road Districts Act, 1871
Main Roads Act, 1926

Tasmania

Rural Municipalities Act 1858
Roads and Jetties Act 1935

ABBREVIATIONS

AADT	Annual Average Daily Traffic
ABS	Australian Bureau of Statistics
ACIR	Advisory Council for Intergovernment Relations
ACLGA	Australian Council for Local Government Associations
AGPS	Australian Government Publishing Service
AMIS	Australian Municipal Information System
ARS	Australian Road Survey
ATRF	Australian Transport Research Forum
B	Borough
BTE	Bureau of Transport Economics (Commonwealth)
C	City
CBR	Commonwealth Bureau of Roads
CPI	Consumer Price Index
CRB	Country Roads Board (Victoria)
DC	District Council
DMR	Department of Main Roads (New South Wales or Tasmania)
DoT	Department of Transport (Commonwealth or State)

GDP	Gross Domestic Product
GFCE	Government Final Consumption Expenditure
GRA	General Revenue Assistance
HD	Highways Department (South Australia)
HEC	Hydro-Electricity Commission (Tasmania)
LGA	Local Government Authority
M	Municipality
MRD	Main Roads Department (Queensland or Western Australia)
NAASRA	National Association of Australian State Road Authorities
NSW	New South Wales
PGFCE	Public Gross Fixed Capital Expenditure
PITS	Personal Income Tax Sharing
Qld	Queensland
S	Shire
SA	South Australia
SLGFS	Standardised Local Government Finance Statistics
SRA	State Road Authority
SWATSG	South Western Australia Transport Study Group
T	Town
Tas	Tasmania
Vic	Victoria
WA	Western Australia

df	degree of freedom
p	probability
W	Kendall's Coefficient of Concordance
X^2	Chi-square Coefficient

Bureau of Transport Economics

Our Reference:

EXTENDED SUMMARY OF BTE OCCASIONAL PAPER 69

ROLE OF RURAL LOCAL GOVERNMENT IN THE PROVISION OF ROADS: A REVIEW

The provision of roads is the dominant function of rural local government in terms of expenditure and manpower.

The share of budgets going to roads declined in the 1970s, reflecting the general tendency for local government to become involved in the supply of other services such as community centres, libraries and sports facilities.

Rural local government spent $459 million on roadworks in 1979-80, representing about 40 per cent of total ordinary service expenditure.

The Bureau of Transport Economics today released Occasional Paper 69 "Role of Rural Local Government in the Provision of Roads: A Review".

The study aimed to examine the significance of the road function, funding arrangements and the decision-making procedures of rural local government. The study results are based on a review of data sources, a special survey and detailed discussions with 41 local government authorities.

Rural local government authorities with population centres exceeding 5000 were found to have generally experienced real increases in their budgets. Those without such population centres had budgets that were stagnant or declining.

This was partly attributable to the reluctance of Councils in rural areas to set rate increases of at least the consumer price index (CPI), despite costs rising faster than the CPI.

The standard of roads aimed for by rural local government authorities varied greatly depending on the population and industrial base of the area and also terrain and weather conditions. Accordingly, in some rural areas, unsealed

Cnr Cooyong Street and Northbourne Avenue, Braddon, ACT 2601
Correspondence to GPO Box 501, Canberra, ACT 2601. Australia
Telex: 61733
Telephone: (062) 67 9811

roads and flood interruptions were accepted as the norm, while in other rural areas, five metre asphalt roads were viewed as appropriate.

For further information please contact: Dr G. King
Special Studies Branch
Bureau of Transport Economics
Phone: (062) 679828