Assessment of the Australian Road System: Financing

Occasional Paper

This study addresses the pattern of road expenditure in Australia and the legislative arrangements under which the Commonwealth Government provides grants to State and Local Governments for roads.

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Financing

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FOREWORD

In May 1982, the then Minister for Transport directed the Bureau of Transport Economics to undertake an assessment of the Australian Road System. The Bureau had reported previously on the subject in 1979 and similar reports were prepared by the former Commonwealth Bureau of Roads in 1969, 1973 and 1975.

In satisfying the Ministerial reference of 1982 a number of discrete but related investigations were carried out. Each investigation has been reported in separate BTE publications in support of the main BTE Report 56 'Assessment of the Australian Road System: 1984'. The papers in the series are:

- Occasional Paper 60 'Assessment of the Australian Road System: Travel Forecasts':
- Occasional Paper 61 'Assessment of the Australian Road System: Financing'
- Occasional Paper 62 'Assessment of the Australian Road System: Provision of Roads in Local Government Areas';
- Occasional Paper 63 'Assessment of the Australian Road System: Economic Assessment Model for Rural Arterial Roads'; and
- Information Paper 10 'Assessment of the Australian Road System: Operational Characteristics'.

This Paper deals with two issues. The first is the pattern of road expenditure of the three levels of government in Australia since 1972–73. Some projections to 1989–90 based on these patterns are also provided. The second issue examined is the legislative arrangements adopted by the Commonwealth Government in providing roads assistance to the states and local government. The Paper examines the objectives behind these arrangements and whether these objectives have been met. The Paper concludes with a discussion of the implications of both the road expenditure projections and the effectiveness of current legislative arrangements for future Commonwealth roads assistance legislation.

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SUMMARY

This study addresses the pattern of road expenditure in Australia and the legislative arrangements under which the Commonwealth Government provides grants to State and local governments for roads.

The importance of road expenditure in the budgets of all three levels of government has declined over the last decade. This decline began under the former Whitlam Australian Labor Party (ALP) Government which directed a greater proportion of funds towards social infrastructure (health, welfare and education). The growth in expenditure in these and other areas was arrested towards the end of the decade under the Fraser Liberal-National Country Party (L-NCP) Government, which placed emphasis on tight fiscal policy. Under the new federalism policy of that Government, specific purpose grants to the States, including roads, were cut while general revenue grants were increased. During the period of both the Whitlam and Fraser Governments, State and local governments generally followed similar expenditure policies to that of the Commonwealth Government at the time, at least until 1980.

The analysis of road funding arrangements shows that the objectives for road funding should be clearly identified before the mechanisms for that funding are selected. In general the objectives for road funding can be classified as either efficiency or equity related. There are a variety of funding mechanisms available which would assist in achieving efficiency objectives. These include benefit-cost analysis, quotas by State and category and project approval requirements. Equity can also be addressed in a number of ways including the allocation of grants using an equity based formula and quotas based on equal road expenditure effort.

There are conflicts between some of the mechanisms that could be used to achieve efficiency and equity objectives. It is apparent that in the past there has been some incompatibility in the use of various mechanisms and that the mechanisms used have not always successfully achieved the objectives sought.

The most important road funding issues identified in the paper are:

- the projected decline in road expenditure in total, and expenditure on road maintenance in particular, over the period to 1989-90 if recent trends and arrangements continue;
- possible extension of the ABRD program beyond 1988, or ways in which the transition to a lower level of funding can be easily facilitated;
- the need to establish the extent to which category and State allocations should be based on efficiency criteria:
- whether arrangements under the *Roads Grants Act* 1981 and the *Australian Bicentennial Road Development Trust Fund Act* 1982 need to be made compatible;
- use of quotas, their indexation for inflation and whether they should be set taking State road funding effort into account;
- the success of categorised grants without category quotas and project approval; and
- the appropriateness of the formulae used for distributing road grants to local governments and whether these grants should be absorbed into general revenue grants.

The projected decline in the real level of road expenditure is mainly because fuel excise hypothecated under the ABRD program is assumed to continue at two cents/litre. The projected decline in road maintenance expenditure is also partly attributable to the exclusion of this expenditure from the ABRD program. The main options open to the Commonwealth Government should it wish to reverse these trends are:

- to change the level of fuel excise hypothecated to the ABRD fund;
- to make road maintenance expenditure eligible for payment from the fund; or
- to make an appropriate adjustment to the level of funding provided under the new Roads Grants Act.

Incompatibility exists in a number of areas between the funding arrangements contained in the Roads Grants Act and those in the ABRD program. The major areas are the program approval procedures and the matching conditions under the two Acts.

Under the ABRD program there are tight project approval procedures for all road categories but under the Roads Grants Act there are no approval conditions for arterial and local roads. The resulting scope for substitution between the two programs may make the procedures in the ABRD program ineffective in meeting their objectives. These procedures need to be reassessed to determine whether the intended objectives are being fulfilled or whether similar procedures are required under the new Roads Grants Act.

There are currently no quota arrangements under the Roads Grants Act but fairly stringent quotas under the ABRD program. The current arrangements do not, however, encourage similar road funding effort among the State governments. If equality of effort is considered important then relating quotas to some measure of State effort is required.

One issue common to both the Roads Grants Act and the ABRD program is the potential for the States to counter Commonwealth category allocations by altering their own funding priorities. There is some evidence that this has occurred in the past. The introduction by the Commonwealth Government of category quotas or some form of global funding plan could stop this practice.

The absorption of funds for local roads into general revenue grants is an important consideration. Such a policy has many attractions but also has implications for the distribution of current funds among local government authorities and the extent to which they are spent on roads.

CHAPTER 1—INTRODUCTION

Over the past decade, between $2500 million and $3000 million (in 1981–82 prices) has been spent on the provision of roads annually in Australia. This far exceeds public expenditure on infrastructure for all other transport modes. The arrangements for raising and distributing road funds of this magnitude are therefore an important element in the provision of Australian transport infrastructure.

ROLE OF THE COMMONWEALTH GOVERNMENT IN ROAD FUNDING IN AUSTRALIA

The Commonwealth Government, largely through its federalism policies, has been a key element in determining the overall pattern of road financing in Australia, both through the level of its road funding and the legislative arrangements used in providing roads assistance to the States and local government.

The *Commonwealth of Australia Constitution Act* 1900 provides for a distribution of powers between the Commonwealth and the States. Specific functions were given to the Commonwealth in the Act (eg defence, immigration, excise taxation) with the States being left with all the residual functions (eg roads, health, education). The establishment of the Australian federal system embodied the concept that each level of government would have sufficient sources of revenue to enable it to be independent in regard to its own areas of responsibility. However, in practice, the manner in which intergovernment financial relations have developed in the decades since Federation has led to a reassignment of a number of responsibilities. This has come about through the High Court's interpretation of the Commonwealth's specific powers and through the enhancement of the Commonwealth's fiscal powers, chiefly its acquisition from the States in 1942 of income taxation powers.

Roads are one area that has witnessed a significant reassignment of responsibilities between the Commonwealth and the States. The Commonwealth, by utilising Section 96 of the Constitution (which relates to specific purpose payments to the States), now performs a major role in the roads area and has provided approximately one-third of total road funds in recent times (and will contribute an estimated 40 per cent for 1983–84).

It appears that the main rationale for initial Commonwealth Government involvement in road funding stemmed from the objective of fiscal balance (a matching of the revenue available to each level of government with its expenditure responsibilities). However, there are other objectives that the Commonwealth Government may wish to pursue through the provision and distribution of road finance. One important objective may be the correction of externalities or inter-jurisdictional spill-over effects. For example, major highways crossing or adjacent to State borders may provide benefits to both States, or even other States. The total benefits of a particular road expenditure may exceed the costs but the benefits to an individual State from undertaking the roadworks may be insufficient to warrant the work in the absence of financial assistance from the Commonwealth Government. Another objective of the Commonwealth Government may be horizontal equity among the States and among local government authorities. This objective, which is often termed fiscal equalisation, underlies the approach of the Commonwealth Grants Commission in its recommendations for the distribution of Commonwealth general revenue payments

to the States[1]. A further objective of the Commonwealth may simply be to provide to all Australian residents a reasonable road service. To simplify discussion in this paper the various objectives governments may pursue through road funding arrangements are referred to as either efficiency objectives or equity objectives. The term efficiency is used to refer to concerns about aspects such as the relationships between resources allocated to roads and other sectors and the relationship between the costs and benefits of particular road projects (including the benefits from developments made possible by the road). The term equity is used to refer to concerns about aspects such as providing a reasonable standard of roads in all communities and fiscal equalisation among lower levels of government.

These objectives have been addressed in different ways by various Commonwealth Governments since Federation. For example, the approach of the new federalism policy of the Fraser Liberal-National Country Party (L-NCP) Government (1975-83) differed markedly from that of its predecessor. This federalism policy placed more reliance on revenue sharing arrangements than on specific purpose grants in providing finance to the lower levels of government, whereas its predecessor, the Whitlam Australian Labor Party (ALP) Government (1972-75), had expanded specific purpose grants dramatically.

There are numerous policy responses available to address the various objectives which a Commonwealth Government may wish to pursue (Hunter 1977). For example, vertical imbalance could be corrected for by:

- the transfer of taxation powers from the Commonwealth to the States;
- Commonwealth grants (or loans) to the States;
- arrangements to share revenue from some sources; and
- Commonwealth acquisition of State responsibilities (eg take-over of responsibilities for transport facilities such as railways).

The mix of the policy options adopted by an individual Commonwealth Government largely reflects its particular federalism philosophy. Therefore, both the pattern of road expenditure by each level of government and the particular objectives which various State and local governments have pursued through road funding, should be considered against the background of the particular federalism policy of the Commonwealth Government of the day.

STRUCTURE OF THE PAPER

This Paper is structured in the following way.

Chapter 2 provides a summary of the main changes in Commonwealth and State road financing arrangements in recent years.

Chapter 3 contains a discussion of the overall budgetary situation of the three levels of government, how this has been influenced by intergovernment financial relations and the relative importance of road finance in the budgetary process. It also includes an analysis of road expenditure patterns over the last decade.

In Chapter 4 the effectiveness of the various road financing mechanisms used in meeting Stated government objectives over the past decade is examined.

Chapter 5 concentrates on one particular financing mechanism, the absorption of local roads grants into local government tax sharing grants. The analysis in this

1. The principles of fiscal equalisation as embodied in the current Commonwealth-State tax sharing arrangements, refer to the payments made to the States to '...enable each State to provide, without imposing taxes and charges at levels appreciably different from the levels of the taxes and charges imposed by other States, government services at standards not appreciably different from the standards of services provided by the other States...' (Commonwealth Grants Commission 1981, p18).

chapter is more theoretical than that contained in Chapter 4 because this particular mechanism has never been implemented in Australia.

Chapter 6 draws together the main conclusions of earlier chapters and provides a discussion of the implications for the 1985–86 road grants legislation. In addition, it provides road expenditure projections for 1989–90 and discusses the implications of these projections for future road funding arrangements.

CHAPTER 2—RECENT ROAD FINANCING ARRANGEMENTS

This chapter is primarily concerned with the recent road financing arrangements of the Commonwealth Government, although some discussion is also included of State government arrangements. The chapter sets the scene for analysis in later chapters by briefly describing the development of Commonwealth road financing arrangements since the *Commonwealth Aid Roads Act* 1969 (CAR Act). Emphasis is given to the changes in the arrangements since that Act and particularly to the changes that have occurred since the 1979 BTE Report on Roads (BTE 1979). A more general and historical discussion of Commonwealth road financing arrangements since 1922 is contained in a previous BTE Occasional Paper (BTE 1981). A summary of the main features of the major Acts since 1964 is provided in Table 2.1.

COMMONWEALTH LEGISLATION

Commonwealth Aid Roads Act 1969

The 1969 CAR Act was framed in the context of the first report from the then recently established Commonwealth Bureau of Roads (CBR). It marked a change from a formula approach to funding roads to one based, at least partly, on an economic assessment of road needs. Significant features of the legislation included:

- division of grants by specific categories of roads, in particular specific grants for urban arterial roads (with a consequent dramatic reduction in funding for rural roads);
- introduction of State quotas based on motor vehicle registrations;
- no program approval procedures; and
- no formal hypothecation of fuel excise revenues.

The allocation of grants among States contained in the 1969 CAR Act was a compromise between the CBR's recommendations and the formula approach adopted in the 1964 CAR Act.

Roads Grants Act 1974 and National Roads Act 1974

In the 1974 roads legislation the Commonwealth Government accepted the CBR's recommended allocation of total grants among the States contained in its 1973 Report (CBR 1973) but at a lower total level of grants ($1100 million compared with a recommended allocation of $1300 million[1]). There were few minor variations from a straight pro rata reduction of the total grant to all States. In contrast there was a major departure from the recommended category allocations stemming from the Commonwealth Government's acceptance of full financial responsibility for national highways. As a result of this move other categories received an allocation which was smaller than the recommended share of total funds. There were other major changes in the 1974 legislation which resulted from the then Commonwealth

1. In both cases the figures exclude grants for planning and research.

TABLE 2.1—SUMMARY OF THE MAIN FEATURES OF THE MAJOR COMMONWEALTH ROADS ASSISTANCE ACTS FROM 1964 TO 1982

Road legislation	*Arrangements*				
	Allocation procedures				
	States	*Categories*	*Categories*[a]	*Quotas*	*Program approval procedures*
CAR Act 1964 (1964-65 to 1968-69)	Formula	States free to allocate	Rural roads (c&m) Urban roads (c&m)	None on basic grant. $ for $ on supplementary grant	None
CAR Act 1969 (1969-70 to 1973-74)	50% previous formula 50% needs as per CBR 1969 report	Guided by 1969 CBR report	Urban arterial roads (c) Rural arterial roads (c) Rural roads other than arterial (c&m)	Base amount set with annual increase based on motor vehicle registrations	None
Road Grants Act 1974 National Roads Act 1974 (1974-75 to 1976-77)	Basically needs as per CBR report	Guided by 1973 CBR Report, except full funding of national roads and less for other categories	National highways (c) National highways (m) Export & major commercial roads (c&m) Rural arterial roads (and development roads) (c) Rural local roads (c&m) Urban arterial roads (c) Urban local roads (c) MITERS Beef roads (c)	Based on 1973 CBR report (mainly motor vehicle registrations)	National roads; project approval. Urban arterial roads; project approval but with controls also over State expenditure on urban arterials. All other road categories; program approval

TABLE 2.1(*Cont*)—SUMMARY OF THE MAIN FEATURES OF THE MAJOR COMMONWEALTH ROADS ASSISTANCE ACTS FROM 1964 TO 1982

Road legislation	*Arrangements*				
	Allocation procedures				*Program approval procedures*
	States	*Categories*	*Categories*[a]	*Quotas*	
States Grants (Roads) Act 1977 (1977–78 to 1979–80)	Basically pro rata increase on 1976–77 (±4 per cent)	Commonwealth Government's own announced objectives	National highways (c) National highways (*m*) National commerce roads (c) Rural arterial roads (c) Rural local roads (c&m) Urban arterial roads (c) Urban local roads (c) MITERS	Pro rata increase to increase in grants	National roads same as for 1974 Act. Establishment of planning committees as alternative to approval procedures for all categories. Alternative program of allocations for local roads
Roads Grants Act 1980 (1980–81)	Pro rata increase on 1977 Act	Pro rata increase on 1977 Act	National roads (c&m) Rural arterial roads (c) Urban arterial roads (c) Local roads (c&m)	Based on achieving equal effort per vehicle over 6 years	Procedures same as those in 1977 Act but with program of allocations only for local roads
Roads Grants Act 1981 (1981–82 to 1984–85)	Pro rata increase on 1980 RGA	Pro rata increase on 1980 RGA	National roads (c&m) Arterial roads (c) Local roads (c&m)	Abolished	Abolition of approval procedures for arterial roads. Provision for development of formula for local roads

TABLE 2.1(Cont)—SUMMARY OF THE MAIN FEATURES OF THE MAJOR COMMONWEALTH ROADS ASSISTANCE ACTS FROM 1964 TO 1982

Road legislation	*Arrangements*				
	Allocation procedures				
	States	*Categories*	*Categories*[a]	*Quotas*	*Program approval procedures*
ABRD Trust Fund Act 1982 (1982-83 to Dec 1988)	Pro rata to 1981 RGA except national highways	Commonwealth Government's own objectives	National roads (c) Rural arterial roads (c) Urban arterial roads (including UPT) (c) Local roads (c)	Annual maintenance in real terms of base amounts (based on average real expenditure over previous five years)	Detailed project approval procedures introduced

a Excluding planning and research.

c construction

m maintenance

Source: Commonwealth of Australia (1964–82).

Government's desire for more 'involvement in the planning of the functions for which it helps provide finance' (Whitlam 1973). These included:

- an increase in the number of road categories from three to nine;
- detailed Commonwealth involvement in planning national highway expenditure;
- a revised form of quotas not based solely on vehicle registrations but in line with advice from the CBR; and
- detailed program approval procedures covering projects funded from Commonwealth funds and on urban arterial projects funded largely from State funds.

In the debate on the Bill covering the 1974 legislation, national responsibility was a recurring theme of the Government. This indicates that the Commonwealth Government at that time saw these measures as a means of ensuring that funds were spent in accordance with its own national transport goals.

Roads Acts Amendment Act 1976 and Roads Acts Amendment Act (No 2) 1976

Following its election in December 1975, the L-NCP Government amended the legislation in 1976 to relax the program approval procedures for urban arterial roads as well as providing an increase in funds for 1975–76. In a second Amendment Act later in the year it provided an increase in funds for 1976–77. It used this to direct more funding to rural roads, particularly rural arterial roads. Two important concerns were expressed at that time:

- that grants to national highways (previously rural arterial roads) in the 1974 legislation had been at the expense of other arterial road categories; and
- whether local government road needs were being satisfied.

The Government waited for the introduction of new legislation in 1977, however, before making any major changes to the funding allocations and arrangements.

States Grants (Roads) Act 1977

The concerns expressed in 1976 about the need for increased expenditure on rural arterial roads and about local government road funding were addressed in the roads legislation introduced in 1977. However, the shift to rural arterial roads and local roads (chiefly urban) was at the expense of urban arterial roads not national highways.

The 1977 legislation was preceded by a report from the CBR (CBR 1975) which recommended a greater share of funds for rural local roads than was allocated in the 1976 amendment legislation. The 1977 legislation contained an increase in the share of funds going to rural local roads but at a level lower than the share recommended by the CBR. Funding for rural arterial roads was also increased in the legislation, in this case to a higher share than the CBR recommendation. Overall, the share of funds allocated to rural roads as a whole in the 1977 legislation (ie 32 per cent) was greater than that recommended by the CBR (ie 28 per cent, see Table 2.2). The level of total grants was, however, at a much lower level than recommended by the CBR. The 1977 legislation continued the decline in the real level of Commonwealth grants begun with the 1974 legislation. The allocation of total grants among the States in the 1977 legislation altered only marginally from the 1976–77 allocation.

Some of the changes in the 1977 legislation reflected a move in line with the new Government's federalism policy, for example:

- reduction in program approval procedures; and
- increased emphasis on funding for local roads.

This latter point needs explanation. The increase in road funding levels for local

TABLE 2.2—PROPORTION OF CBR 1975 RECOMMENDED ROAD PROGRAM ALLOCATED TO EACH ROAD CATEGORY COMPARED WITH ACTUAL PROPORTION FOR 1977-78 UNDER THE STATES GRANTS (ROADS) ACT 1977

(per cent)

Road category	*CBR 1975 recommended program*	*States Grants (Roads) Act 1977*
National roads		
National highways (construction)	31.7	32.2
National highways (maintenance)	3.5	5.5
National commerce roads	3.0	3.3
Total	38.2	40.9
Other roads		
Rural arterial roads	10.0	15.1
Rural local roads	18.0	16.9
Urban arterial roads	27.6	18.9
Urban local roads	2.5	5.4
MITERS	3.7	2.8
Total	61.8	59.1
Total grants	100.0	100.0

Sources: Commonwealth of Australia (1964-82). CBR (1975).

roads was accompanied by the relaxation of approval procedures for local roads so that only a list of allocations to local government authorities was required. At the same time the Commonwealth Government was introducing a scheme whereby local government received a fixed share of personal income taxation receipts. This suggests that overall concern in the roads legislation was for the financial capacity of local government and not necessarily with the efficient allocation of resources to local roads.

The quota provisions in the 1977 legislation were unchanged, with the levels simply increased pro rata to the total level of grants. It is worthwhile noting that the CBR had recommended a revised system of quotas incorporating factors such as State financial capacity, benefits from road expenditure and the size and growth rate of State road programs (see discussion in Chapter 4).

Roads Grants Acts 1980-1982

The 1980 roads legislation and its amendment in 1981 moved further in the direction of adopting the L-NCP Government's stated federalism policy with a number of changes designed to reduce Commonwealth involvement in the detailed administration of the roads program. These changes included:

- reduction in the number of road categories from eight to four (1980) and subsequently three (1981);
- removal of the requirement for program approval for arterial road grants (1981); and
- removal of the urban/rural split for local roads and the introduction of a formula approach to the distribution of funds for local roads (1980).

The reduction in the number of categories in the 1980 legislation was achieved by:

- amalgamating three national roads categories (national roads construction, national roads maintenance and national commerce roads) into one;

- amalgamating the two local roads categories (urban and rural) into one; and
- dropping the category of minor traffic engineering and road safety improvements (MITERS).

Provision was also made for the declaration of a separate category of developmental roads. There was no separate funding provision for these roads, however. They were to be funded from the allocation for national roads. In 1981 the urban/rural split for arterial roads was removed, thus leaving only three categories; national, arterial and local roads.

With this last reduction in the number of categories the program approval procedures for arterial roads were discontinued and replaced by a simple requirement for retrospective reporting (largely a statement of where the funds were spent and not project details). Provision was also made in the 1980 legislation for the distribution of local road grants among local government authorities by a formula agreed between the Commonwealth and the States. These formulae took time to be agreed to in some States but formulae had been gazetted in all States by August 1983. An additional change in the 1980 legislation enabled all local road grants to be spent on construction as well as maintenance of local roads.

The BTE's 1979 roads report (BTE 1979) had stressed that too much money was being spent in total on local roads on the basis of economic efficiency criteria. However, funding for these roads in the 1980 legislation was increased pro rata over the 1979-80 allocation along with the other (amalgamated) road categories. The only significant exception to the pro rata distribution was the allocation of the previous MITERS funds to national roads. The allocation to States was also a pro rata increase on the 1979-80 allocation. The overall increase was again less than the increase in road costs and so the decline in the real level of Commonwealth road grants continued.

A major change in the State quotas was also initiated in the 1980 legislation. While the total level of quotas was increased in line with the increase in the level of grants, the quota for each State was set with a view to bringing all States to a common level of expenditure per registered motor vehicle within six years. The new quotas were still, however, below actual State road expenditure over this period so they served no meaningful purpose. Presumably this was the primary reason why they were abolished in 1981.

Other important changes in the 1980 legislation included:

- the introduction of the Northern Territory into the legislation for the first time;
- the requirement for tenders to be called for national roads projects; and
- removal of the Minister's power to approve transfer of expenditure from national roads to other categories.

Finally, grants for transport planning and research ceased in 1981.

Australian Bicentennial Road Development (ABRD) Program

The most significant initiative in road financing in recent years has been the ABRD program. This program was introduced in 1982-83 to 'upgrade the road system to a high standard by 1988', and as a 'special 'one-off' effort' which will terminate on 31 December 1988 (Minister for Transport and Construction 1982). The program was funded from the receipts of a one cent/litre fuel excise surcharge in 1982-83 which was raised to two cents/litre from July 1983. Total revenue is expected to amount to about $2500 million (current prices). This revenue is being directed to roads through a trust fund established under the legislation for this purpose.

Purpose

The essential nature of the ABRD program is the funding of specific road projects

which could be considered socially desirable and fitting for the Australian bicentennial. The announced objectives of the ABRD program were more specific than the objective contained in the *Roads Grants Act* 1980 and did not make any reference to efficiency or new federalism aims. They were to:

- complete the national highway system to acceptable standards by 1988 so that it provides for the safe, reliable and efficient carriage of traffic between Australia's main centres—includes a sealed, dust-free surface on the total system;
- assist the development of major urban and rural arterial roads and, where desired, by the States, to assist with approved urban public transport projects;
- accelerate the construction of current developmental road projects, including roads of national tourism importance; and
- enable local government authorities to upgrade their local road systems (Minister for Transport and Construction 1982b).

While the stated objectives do not indicate that there was an explicit policy of moving from the allocations under the Roads Grants Act towards a more efficient allocation of grants among categories, the actual allocations made under the ABRD program were more in line with the BTE's 1979 warranted program. Table 2.3 shows the differences in shares allocated to categories between the ABRD program and the Roads Grants Act. Under the ABRD program there was a major boost to arterial roads, a large cut in funds to local roads and a small decline in the share of funds to national roads.

This move towards efficiency may have been the result of a number of factors. However, it is likely that the emphasis on the construction of larger arterial and national projects rather than small local road projects is a result of the nature of the program, its link to Australia's bicentennial and the aim of supporting projects that are both socially desirable and noticeable.

Changes in arrangements

One of the most notable aspects of the ABRD legislation was that it reintroduced some features of road financing arrangements that had been dropped under the various Roads Grants Acts in the previous few years. There were four major areas in the new Act where this occurred.

The program approval conditions under the ABRD legislation are in marked contrast to the changes made in the *Roads Grants Act* 1981. As noted above, program approval procedures for arterial road grants under the *Roads Grants Act* 1981 were dropped in 1981 in line with the then federalism policy. Approval procedures for local road grants had been modified earlier and finally replaced by a formula approach. The

TABLE 2.3—COMPARISON OF ALLOCATIONS TO ROAD CATEGORIES UNDER THE ROADS GRANTS ACT 1981 AND THE ABRD PROGRAM

(per cent)

Road category	*Roads Grants Act*	*ABRD Program*	
	1982-83	*1982-83*	*1983-84*
National	44	40	42
Arterial	32	45	46
Local	24	15	12
Total	100	100	100

Source: Commonwealth of Australia (1964-82).

ABRD Program reintroduced these procedures. In fact the legislation provided for project approval for all categories of roads. This goes much further than the program approval procedures under the 1977 legislation.

A second area was the increase in the number of road categories by the reintroduction of the urban/rural split for arterial roads. This split had been removed from the legislation only a year earlier. With the reintroduction of the two categories of arterial roads the ABRD legislation also provided that a share of the funds for urban arterial roads could be spent on urban public transport projects.

The reintroduction of quotas is a third area where the ABRD legislation changed recent trends. As noted above, quotas were abolished in the *Roads Grants Act* 1981. In addition, the new quotas in the ABRD legislation were much more stringent than the previous quotas. The ABRD legislation requires each State to maintain from year to year the equivalent in real terms of a base quota of road expenditure. The base amounts are to be calculated using the average, in real terms, of each State's own road expenditure over the five years immediately preceding the introduction of the ABRD legislation. The actual level of the base amounts for each State had not been announced at the time this Paper was prepared. However, based on BTE expenditure figures (excluding interest payments) the real level of road expenditure of most State governments over this period was declining, in most States the base amounts may be higher than their 1981–82 road expenditure in real terms. Accordingly, these States will need initially to increase their real level of road expenditure if they are to receive the full amount of ABRD grants allocated to them and thereafter maintain this higher level of expenditure. This could prove difficult in some cases. As well, there are some signs that some States may have difficulty, at least in the short run, in spending all the increased funds provided in 1983–84 because of a shortage of road projects that are fully planned and drawn up ready to start.

Another effect of these new quotas concerns the relative road funding effort of the States. Since 1973–74, when quotas were last tied rigidly to motor vehicle registrations, the level of State road expenditure per vehicle among the States has changed markedly. On this measure of effort, or indeed other similar measures (eg expenditure per capita), some States have dramatically increased their road funding effort while others have not. The new quota requirement may result in these relativities being maintained at least until December 1988.

The fourth major area where the ABRD legislation reintroduced previous features of road funding arrangements is the hypothecation of fuel excise. The formal tie between fuel excise receipts and road expenditure had been abandoned in 1959. Successive Commonwealth governments had argued against the reintroduction of hypothecation on the grounds that it would reduce budget flexibility.

STATE LEGISLATION

The major change affecting State road financing arrangements in recent years has been the progressive introduction of State business fuel franchise schemes by all States except Queensland.

Following the truck blockades of April 1979 all States abolished road maintenance charges (except Tasmania which did not levy them). In 1979–80 Victoria, South Australia and Western Australia introduced business fuel franchise schemes. In all cases the revenue from the taxes were largely or wholly allocated to roads expenditure. Tasmania and New South Wales have since introduced similar schemes but in New South Wales the revenue from the tax on motor spirit is not hypothecated to road works. Similar schemes have not, as yet, been introduced in Queensland and the Northern Territory or the Australian Capital Territory. All schemes except the one in Tasmania provide for a higher excise on automotive distillate than on motor spirit (see Table 2.4).

TABLE 2.4—COMPARISON OF STATE GOVERNMENT (FUEL) FRANCHISE SCHEME FEES, FEBRUARY 1984

(cents per litre)[a]

State	*Motor spirit*		*Automotive distillate*
	Super	*Standard*	
New South Wales	3.53	3.45	3.57
Victoria	3.47	3.39	5.02
South Australia	2.51	2.51	3.49
Western Australia	2.10	2.10	3.85
Tasmania	2.71	2.65	2.69

a. Calculations for *ad valorem* rates based on capital city wholesale prices (all States except Western Australia which has fixed fees per litre).

Source: Petroleum Products Pricing Authority (1984).

CHAPTER 3—ANALYSIS OF RECENT ROAD FINANCING DATA

In this chapter the pattern of road financing in Australia over the last decade is examined. This examination also includes a short analysis of Commonwealth, State and local government budgets because the full picture of road financing requires consideration of the financial constraints on the overall budgets of the three levels of government. The effect on road funding levels of these general budget constraints throws light on the importance that the three levels of government place on roads.

It is shown in this chapter that the last decade of road financing divides into two distinct periods: pre- and post-1975–76. The former was marked by an expansion of Commonwealth spending and involvement in public expenditure areas through specific purpose grants. The latter period was marked by the development of the Fraser Government's new federalism policy with tight fiscal policies and a shift from Commonwealth specific purpose grants to general revenue assistance to the lower levels of government. After 1979–80 there was a relaxation of some of the constraints and road finance again showed signs of expansion. The first section of this chapter examines these two periods, in particular the changes introduced after 1975–76 and the responses of State and local government to them. It includes an analysis which focuses on the effects of these policy changes on the budgets of the three levels of government and on roads in particular, roads funding being one of the more significant specific purpose grants. This is followed by a discussion of the pattern of road expenditure of the three levels of government over the decade 1972–73 to 1981–82. Tables containing the detailed information on which these analyses are based are presented in Appendix I.

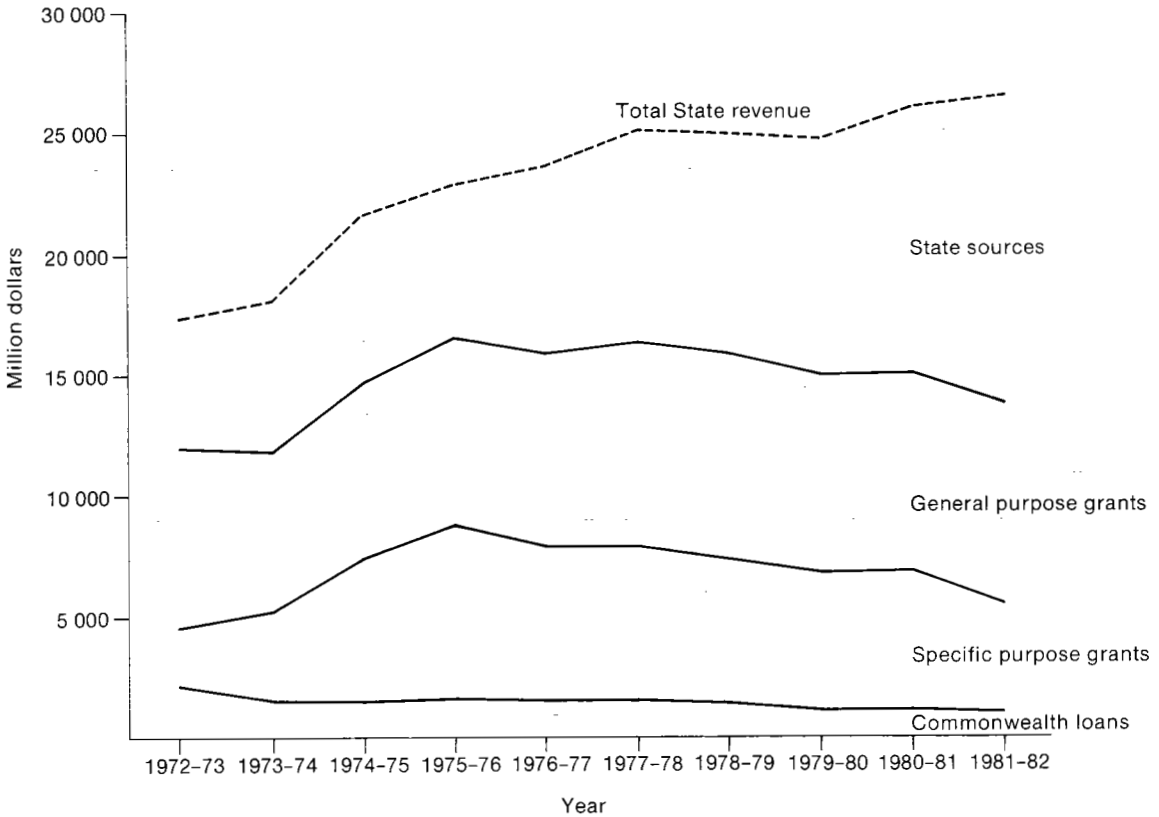
IMPORTANCE OF ROAD EXPENDITURE IN GOVERNMENT BUDGETS

Commonwealth

The dominant partner in the fiscal federalism arrangements is the Commonwealth Government. This is a result of the Commonwealth Government gaining control during World War II over income taxation, by far the largest source of public revenue. Currently, Commonwealth transfers to the other levels of government, through specific and general purpose grants and loans, comprise a large share of the budget revenue of both State and local government. In recent years Commonwealth transfers to State governments have represented in excess of 50 per cent of State budget receipts, while Commonwealth transfers to local governments have constituted up to 15 per cent of local government budget receipts (see Figures 3.1 and 3.2). Consequently, Commonwealth budget decisions on the level of, and conditions attached to, these grants and loans have an important bearing on State and local government resource allocation decisions, including the level of funds allocated to road works.

The period from 1972–73 to 1975–76 saw a large increase in the real level of the Commonwealth budget. Over this period Commonwealth revenue increased by 27 per cent and total expenditure increased by 36 per cent. The main increases in revenue were from customs and excise duty and personal income taxation, while education and health shared the greatest increase in proportion of total expenditure. These changes are depicted in broad aggregate terms in Figure 3.3.

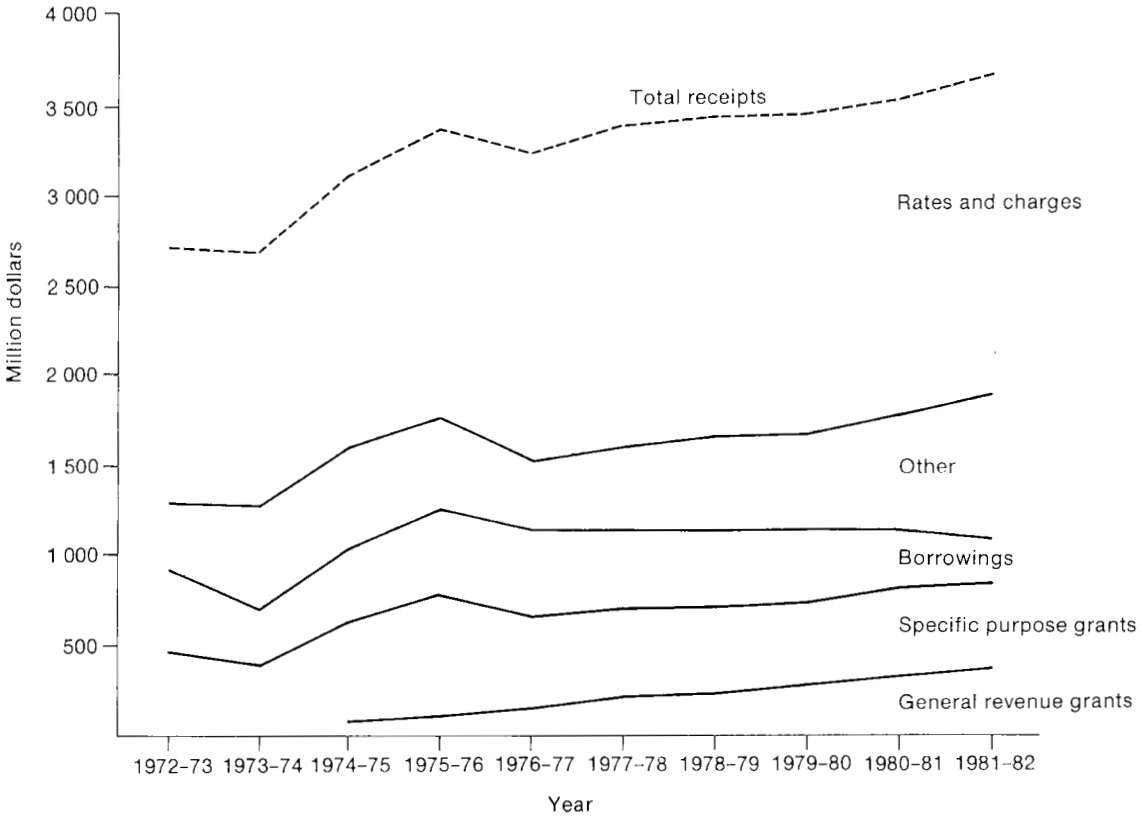
The 'new federalism policy' which was adopted by the L-NCP while in Opposition



Note: Price deflator used was the ABS implicit price deflator for expenditure on Gross Domestic Product.

Sources: ABS 1983. Commonwealth of Australia (1973-82).

Figure 3.1—State government receipts, 1972-73 to 1981-82 (constant 1981-82 prices)



Note: Price deflator used was the ABS implicit price deflator for expenditure on Gross Domestic Product.

Sources: ABS (1983). Commonwealth of Australia 1973–82).

Figure 3.2—Local government receipts, 1972–73 to 1981–82 (constant 1981–82 prices)

in September 1975 asserted that many Section 96 specific purpose grants 'could be transferred to general purpose revenue reimbursement and ultimately absorbed in the States' income tax revenue' (Liberal and National Country Party 1977, p62). This was part of a broader aim of making each level of government accountable for its own revenue and expenditure decisions. After 1975 the L-NCP Government also adopted a fiscal policy aimed at reducing public spending and expanding the private sector. Both of these elements had implications for road funding. The first implied possible changes to the Commonwealth arrangements for funding roads through specific purpose grants. The second implied a restraint on all government spending including roads.

Figure 3.1 shows the marked change in direction which occurred after 1975–76 as a result of these policies being put into practice. It also shows that the Commonwealth Government was largely successful in reducing the emphasis on specific purpose grants to the States. As is indicated in Figure 3.3, social security and welfare payments were one area that escaped the cutbacks but these did not include areas of specific purpose payments to the States.

Overall, however, as shown in the latest Commonwealth Budget Statements (Commonwealth of Australia 1983, p34), the Commonwealth budget position has changed only marginally as a share of National Gross Domestic Product, indicating that there has not been any significant change in the relationship between public and private expenditure over the period to May 1983.

The greatest reduction in real expenditure occurred in the area of economic services which declined by 24 per cent from 1975–76 to 1981–82. Some of this decline was a result of the formation of the Australian Postal Commission and the Australian Telecommunications Commission and the movement of these economic services from sub-category 'other' of 'Transport and Communication' out of the Commonwealth Budget Statements. However, the transport sub-categories road, rail, sea and urban public transport recorded a 6 per cent decrease in real terms between 1975–76 and 1981–82 (see Table I.3).

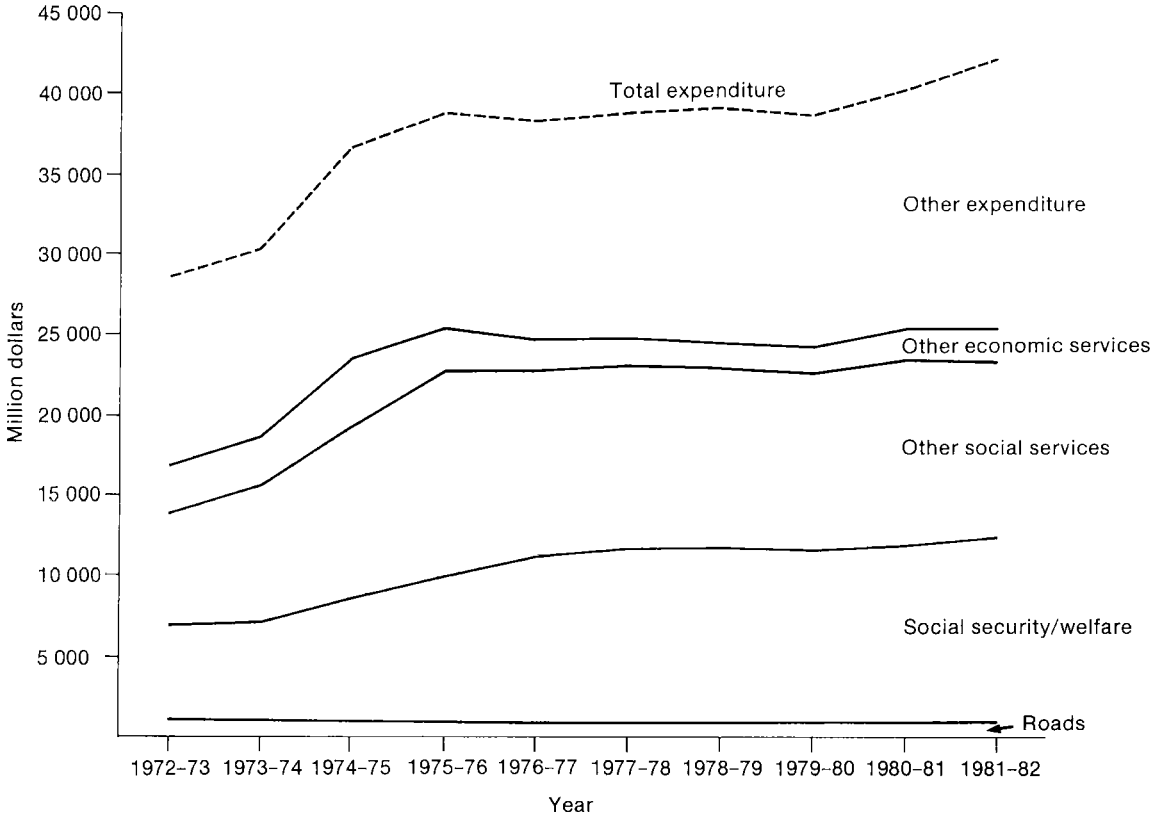
State Government

As the L-NCP Government's new federalism policy developed it placed an increased responsibility on the State governments for their own expenditure decisions. This was achieved by a gradual reduction in the ratio of specific purpose grants to general revenue grants. The former fell in real terms from 1975–76 to 1983–84 while the latter increased. There was a small decrease in the total level of payments to the States over the period (see Figure 3.1).

State government expenditure from all sources is illustrated in Figure 3.4. A comparison of this figure with Commonwealth expenditure patterns in Figure 3.3 shows that between 1975–76 and 1980–81 State government expenditure increased while Commonwealth expenditure levelled off or declined in most of the major expenditure categories. This trend included State expenditure on transport, and in particular, expenditure on roads, which appear to have been increased to compensate for Commonwealth cuts. The greatest increase in State expenditure was, however, in the area of utilities, which can be traced to the expectation of a mining boom in the late 1970s.

Local Government

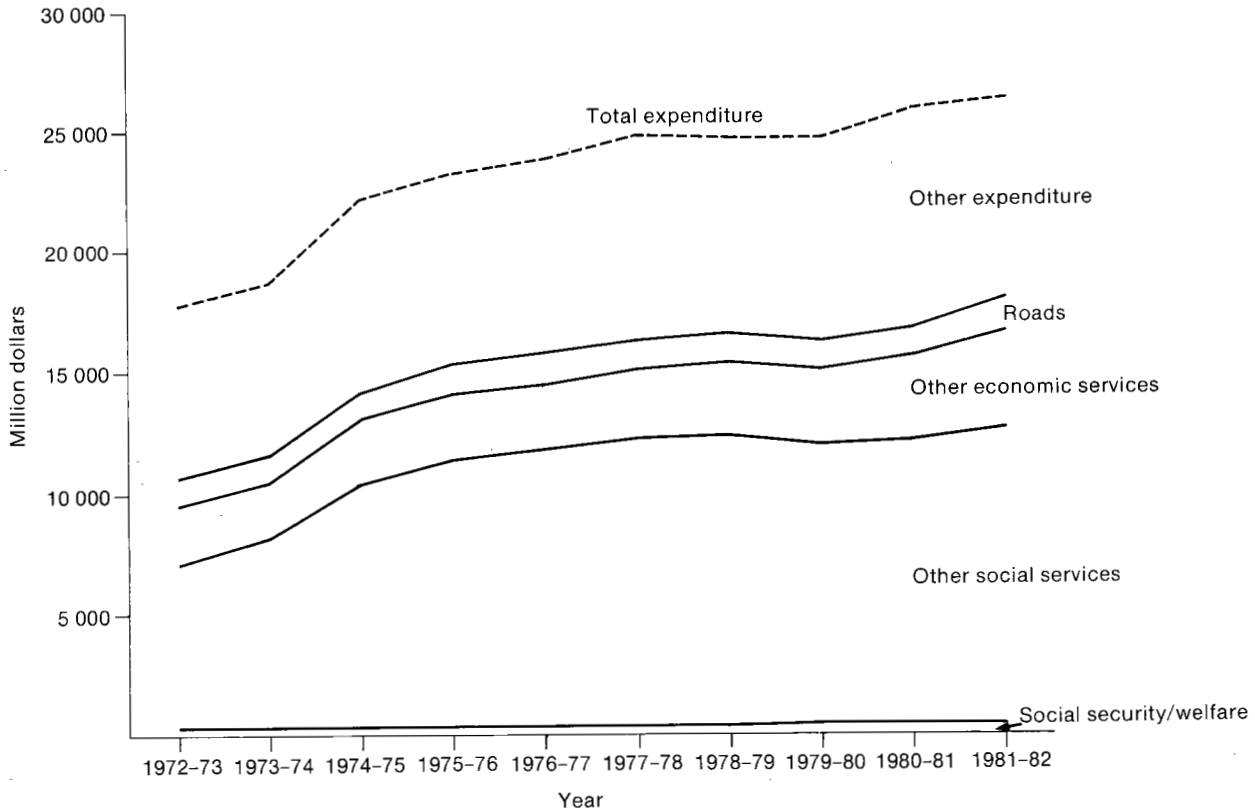
While the financial role of local government in the Australian economy is small and has been declining in relative terms, nevertheless it has a major role in particular areas of public expenditure such as roads and recreation and culture. This concentration of activity was identified by Power, Wettenhall and Halligan (1981, p69) who also noted that the general structure and activity of local government has not changed significantly since the end of World War II.



Note: Price deflator used was the ABS implicit price deflator for Gross National Expenditure.

Source: Commonwealth of Australia (1973-82).

Figure 3.3—Commonwealth Government expenditure, 1972-73 to 1981-82 (constant 1981-82 prices)



Note: Price deflator used was the ABS implicit price deflator for Gross National Expenditure.

Source: ABS (1983).

Figure 3.4—State government expenditure, 1972–73 to 1981–82 (constant 1981–82 prices)

The three major sources of local government revenue are shown in Figure 3.2. This indicates that the rate of increase in local government revenue from its own sources has been similar to that of total receipts. Thus own revenue sources comprised a similar share of total receipts in 1980–81 to that in 1972–73. Figure 3.2 also shows that Commonwealth grants to local government increased rapidly to 1975–76, declined dramatically in 1976–77 and have since increased gradually to a peak of $619.2 million in 1982–83.

Local government expenditure patterns are depicted in Figure 3.5. These show that expenditure on social security, welfare, other social services and other economic services (which includes services such as electricity, water and sewerage) all increased in real terms over the decade to 1980–81 at a moderate rate. Road expenditure, in contrast, was one of the few local government expenditure items to decrease in real terms from 1975–76 to 1980–81.

The 1975–76 peak in local government road expenditure corresponds to the peak in Commonwealth grants to local government. It is likely that the Regional Employment Development Scheme (REDS) grants of that year were largely spent on roads, thereby contributing to this peak. The scheme was abolished in 1976. REDS grants are reflected in the item direct payments in Table 3.1. That table also shows that Commonwealth specific purpose payments other than roads declined dramatically after 1975–76 while general purpose payments rose significantly. This change in Commonwealth contributions to local government was directly in line with the Fraser L-NCP Government's new federalism policy.

Commonwealth roads grants paid to local government reached a plateau in 1977–78 following a large boost under the *States Grants (Roads) Act* 1977. However, as shown in the following section, Commonwealth grants for local roads declined in real terms after 1977. It appears, therefore, that the States may have attempted to cushion this decline by passing on a growing share of these grants to local government.

It is apparent from the foregoing that road financing policies of the three levels of government are closely bound to their overall budgetary policies and that the policies of State and local government are, in turn, closely bound to the particular federalism policy of the Commonwealth Government of the day. This relationship is important for road financing questions because the balance of financial forces between each of the three levels of government will affect not only the overall road expenditure programs but also the relative importance placed on particular road categories.

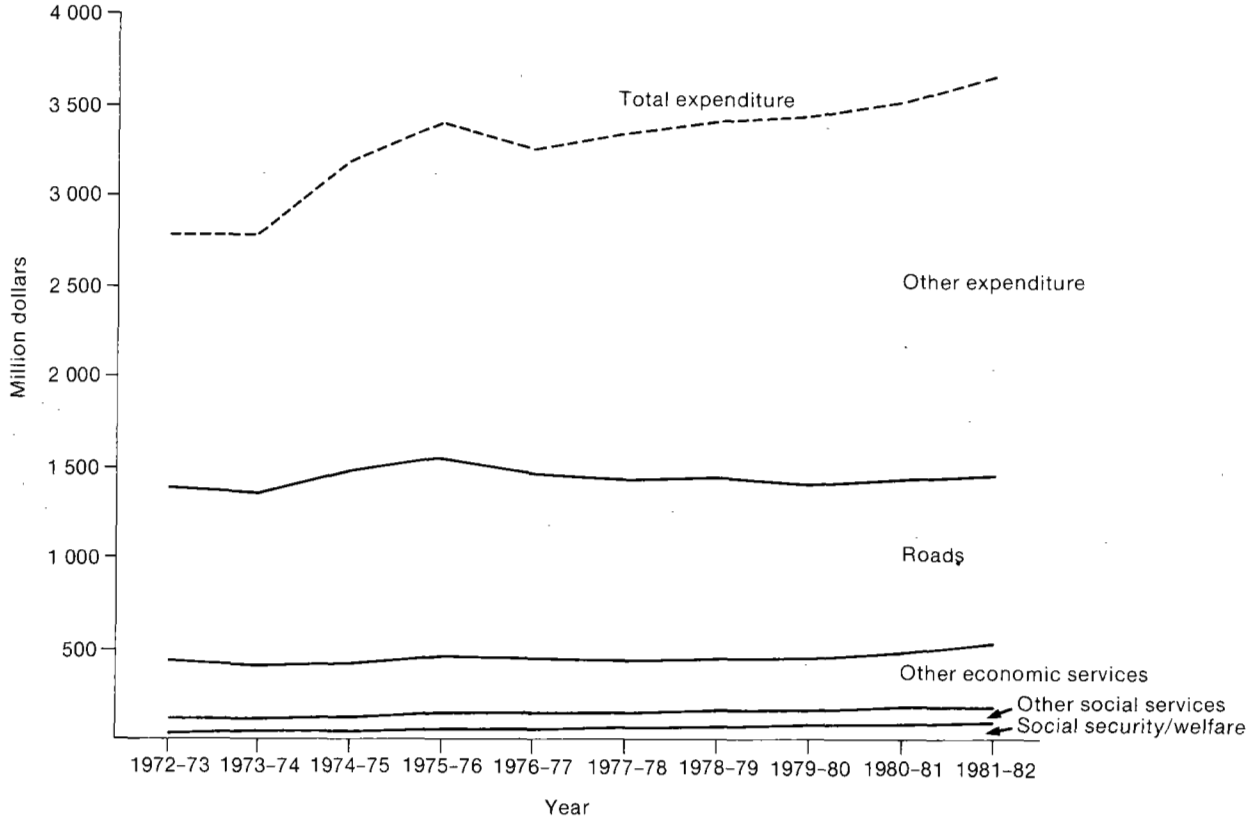
FINANCIAL BALANCE OF THE ROAD PROGRAM

This section discusses in more detail the changes that have occurred over the past decade in the financial balance of the road program, both on the revenue and on the expenditure side. It focusses on the responses of State and local government to changes in Commonwealth policies.

Sources of Information

In 1982 the BTE released an information paper containing data on road expenditure for the period 1970–71 to 1979–80 by road category and by level of government, along with some information about State government road revenue. More recent data in this series are presented in a later publication (BTE 1984). These papers provide most of the road financing statistics referred to below (BTE 1982, 1982a and 1984).

The major sources of information on Commonwealth road expenditure are the Commonwealth budget papers and advice from the Department of Transport. An additional source of information is State road authorities, particularly for the urban/



Note: Price deflator used was the ABS implicit price deflator for Gross National Expenditure.

Source: ABS (1983).

Figure 3.5—Local government expenditure, 1972-73 to 1981-82 (constant 1981-82 prices)

TABLE 3.1—COMMONWEALTH ASSISTANCE TO OR FOR LOCAL GOVERNMENT, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

	1972–73	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*	*1983–84*	*Average annual growth rate (per cent)* *1972–73 to 1975–76*	*1975–76 to 1981–82*
General purpose payments	..	..	112.7	139.0	218.9	240.0	241.5	269.1	331.6	350.9	382.4	379.6	23.3	16.7[a]
Direct payments	6.0	14.1	98.4	185.2	21.0	20.6	23.5	19.3	23.9	27.2	53.3	72.5	213.7	-27.3
Roads	na	166.7	136.1	130.9	136.0	169.8	167.2	159.5	156.4	167.3	160.4	na	-11.4	4.2[b]
Other payments via the States	133.4	63.6	135.7	142.2	57.5	28.5	20.6	18.9	17.9	14.2	19.7	na	2.2	-31.9
NT roads	..	..	..	..	..	..	..	0.6	0.8	0.8	0.8	na	..	..
Other NT	3.5	4.5	2.4	3.5	3.1	3.7	0.0	1.7	1.9	2.0	2.6	na	0.0	-8.9
Total	142.9	248.9	485.3	600.8	436.5	462.6	452.8	469.1	532.5	562.4	619.2	na	61.4	-1.1

a Growth rate from 1974–75 to 1975–76.
b. Growth rate from 1973–74 to 1975–76
.. not applicable
na not available

Notes: 1. Price deflator used was the ABS implicit price deflator for expenditure on Gross Domestic Product.
2. Figures may not add to totals due to rounding.

Source: Commonwealth of Australia (1973–84).

rural and the construction/maintenance split for Commonwealth grants from 1980–81 when these distinctions were formally abolished in the legislation. The Commonwealth figures compiled from these sources should reflect actual expenditures fairly accurately.

Information on State road expenditure at the aggregate level was derived largely from State Auditors General's reports and the annual reports of State road authorities. Care was taken to ensure consistent definitions were used as this has been a problem with most previously published sources of information on State road expenditure. Additional advice was provided by State road authorities on the road expenditure of other authorities and Government Departments in their State. State road authorities also provided information on the allocation of State road expenditure among categories.

Road expenditure figures for local government to 1978–79 were derived using the Australian Bureau of Statistics collection entitled Australian Municipal Information System (AMIS), while figures from 1979–80 onwards were obtained using its replacement, the Standardised Local Government Finance Statistics (SLGFS) series. Although these series contain the best information currently available on road expenditures by local government it is recognised that they were not designed specifically to report road finance information and definitions and level of detail are not fully consistent with the data sources used for Commonwealth and State road expenditure. There is also a problem with the changeover between the two series in 1979–80. In particular, the local government road expenditure figure for New South Wales in 1979–80 appears too low compared with previous figures and the construction/maintenance split post-1978–79 does not accord with the pre-1978–79 data. The figures for local government road expenditure should, therefore, be treated with more caution than those of Commonwealth and State road expenditure. It should also be noted that these road expenditure figures are considerably lower than those contained in the last major BTE assessment of roads (BTE 1979), largely as a result of different definitions of road expenditure.

Revenue

There is currently an important relationship between the taxes levied by the Commonwealth Government on automobile fuel and roads expenditure at the Commonwealth level. Under the ABRD program introduced in 1982–83, a two cents per litre excise on motor spirit and automotive distillate is formally tied to road expenditure. The remaining Commonwealth excise tax on fuel, currently 7.397 cents per litre, is not formally hypothecated. As a matter of interest Commonwealth road expenditure under the Roads Grants Acts has risen over the years and was around 80 per cent of the revenue received from fuel excise taxes in 1982–83. This percentage was the highest since 1926 when the Commonwealth government first linked fuel excise receipts to road expenditure. In BTE (1981) it was shown that the level of road grants as a proportion of fuel excise receipts was higher after the formal nexus was broken than it was from 1931 to 1959.

State road revenue in most cases has been formally hypothecated to road works. The main sources of revenue have been traditionally vehicle registration and drivers' licence fees. Since 1979 an increasingly important source of revenue has been business fuel franchise fees which have now been introduced in all States except Queensland (and the Northern and Australian Capital Territories). In New South Wales the revenue from fees levied on motor spirit is not hypothecated but loans of a similar order are made available to the Main Roads Department for road works.

Details of State government road revenue over the decade to 1981–82 are presented in Table 3.2. This shows that there was an increase of around 11 per cent in State road revenue in real terms from 1977–78 to 1981–82. Within the item 'net motor taxation' the traditional registration and licence fees have declined significantly, with

TABLE 3.2—TOTAL AUSTRALIA: STATE GOVERNMENT ROAD REVENUE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

Categories	*1972–73*	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
SRA										
Gross motor taxation	850.2	792.2	778.5	797.1	825.7	859.1	866.7	829.4	849.7	946.0
Less collection costs	91.1	89.5	98.6	105.7	109.2	112.2	111.8	104.9	108.9	104.0
Net motor taxation	759.0	702.5	679.9	691.4	716.5	747.0	754.8	724.6	740.8	842.0
Loans	32.6	25.7	33.6	44.0	66.5	62.6	90.0	161.0	157.4	113.4
Other	33.8	28.4	43.2	45.1	37.3	59.8	40.6	35.8	33.7	32.9
Other authorities	104.6	103.0	135.1	134.1	144.2	168.9	146.1	140.7	178.5	159.0
Total road revenue	930.1	859.8	892.1	914.7	963.6	1 038.3	1 032.2	1 062.2	1 110.2	1 147.4

Notes: 1. Figures may not add to totals due to rounding.
2. Figures for the Northern Territory following self-government in 1978 have been excluded to enable consistent comparisons with earlier years.

Source: BTE (1984).

fuel franchise scheme revenue essentially maintaining motorists taxes in real terms. The only loans of significance are those for New South Wales, although prior to 1978-79 there were substantial borrowings by the West Gate Bridge Authority (included in the item 'other authorities').

Local government does not have any hypothecated road revenue sources. Roads are funded from discretionary budget revenue such as rates, loans or general revenue grants. Collectively these sources of revenue grew considerably to 1975-76 but have remained constant since then.

Commonwealth Road Expenditure

Details of Commonwealth expenditure on roads over the period 1972-73 to 1981-82 are given in Table 3.3. Commonwealth road expenditure declined in real terms from 1972-73 to 1974-75. In 1975-76 there was a large injection of Commonwealth funds into roads, the additional funds being mainly attributable to the RED Scheme. (Red Scheme road expenditure is classified in BTE 1984 as local government expenditure, since it was not specifically provided for roadworks.) After 1975-76 Commonwealth road expenditure continued the long term downward trend to 1981-82. Subsequent to 1981-82 the ABRD scheme has resulted in an increase in Commonwealth road expenditure. Within these broad movements of Commonwealth Government expenditure there has been considerable change in emphasis on the type of assistance given to different categories of roads.

The 1969 legislation resulted in the proportion of Commonwealth funds being spent on rural roads declining from over 80 per cent to 47 per cent by 1973-74. In 1974 major changes were introduced in the legislation. These included the establishment of the national highway system and a major decline in the direct funding of three Commonwealth road categories; rural arterial, rural local, and urban arterial roads. Also for the first time funds were allocated for local roads in urban areas.

Since the new national highways were formally rural arterial roads, rural arterial roads as a whole actually received considerably increased funding. Rural roads in total (including national highways) also received a significant increase. Urban arterial roads was the category where the greatest decline occurred.

This increase in the share of funds allocated to rural roads at the expense of urban arterial roads was accentuated in the *States Grants (Roads) Act* 1977. The allocations in 1977-78 for rural roads (including national highways) amounted to approximately 70 per cent of total Commonwealth roads expenditure. This percentage remained fairly constant until 1981-82 because grants to particular road categories were increased annually on a pro rata basis as a result of subsequent pro rata total annual grant increases. In 1980-81 the urban/rural split for local roads was formally abolished and the following year the urban/rural split for arterial roads was also abolished.

Although total Commonwealth roads expenditure declined from 1974-75 to 1981-82 in real terms, grants for national roads increased. This suggests that the Commonwealth was directing more expenditure to those road category areas for which it accepted full responsibility at the expense of other road categories.

The ABRD program introduced in 1982 gives a slightly lower share of funding for national roads than the *Roads Grants Act* 1982 and a much greater share for arterial roads, primarily at the expense of local roads. This shift in emphasis is generally in line with the conclusions reached by researchers about the economic returns available from expenditures on particular road categories (BTE 1979, p226).

States Road Expenditure

In aggregate, State road expenditure declined in real terms from 1972-73 to 1975-76 then increased substantially in 1976-77 and 1977-78 and has since declined to below the 1972-73 level. The road expenditure patterns of individual State governments

TABLE 3.3—TOTAL AUSTRALIA: COMMONWEALTH ROAD EXPENDITURE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

Categories	*1972–73*	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Construction										
National roads	0.0	0.0	230.9	289.5	283.8	299.1	271.9	265.1	266.1	244.5
Rural arterial roads	219.4	210.3	133.5	116.7	96.3	119.1	119.9	111.3	104.2	92.5
Rural local roads	247.5	234.7	134.6	105.8	95.8	117.9	114.0	114.7	112.9	105.8
Urban arterial roads	509.9	521.2	345.8	340.3	271.2	198.5	193.0	165.4	146.7	150.6
Urban local roads	32.6	33.6	43.2	62.9	68.9	64.5	43.3	38.8	30.0	25.6
Total	1 009.2	999.9	887.9	915.3	815.9	799.1	742.2	695.1	659.8	619.2
Maintenance										
National roads	0.0	0.0	54.5	50.0	46.6	51.8	47.5	47.2	48.4	55.1
Rural arterial roads	19.3	19.9	17.6	13.9	7.9	5.8	1.5	1.1	1.1	1.5
Rural local roads	39.3	40.2	48.3	58.3	48.4	48.4	37.2	31.8	31.0	35.2
Urban arterial roads	3.9	3.9	3.9	2.9	3.1	2.2	2.8	3.6	3.2	3.3
Urban local roads	1.7	1.8	1.8	2.4	1.9	2.5	2.4	2.8	3.6	4.2
Total	64.2	65.8	126.2	127.5	107.7	110.7	91.2	86.5	87.2	99.1
Total construction and maintenance	1 073.4	1 065.6	1 014.0	1 042.8	923.0	909.9	833.4	781.6	747.0	718.3
Planning and research	13.8	14.0	12.3	17.3	14.4	14.5	9.6	9.1	7.1	0.0
Total road expenditure	1 087.2	1 079.7	1 026.3	1 060.1	937.3	924.4	843.1	790.6	754.0	718.3

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

Source: BTE (1984)

varied considerably over this period as shown in Table 3.4. The Northern Territory figures have been excluded from the table because prior to its achieving self government in 1978–79 it had no 'State' road expenditure and inclusion of Northern Territory figures after 1978–79 would distort comparisons with previous years' figures.

Queensland is the only state where road expenditure during 1981–82 was significantly higher than the 1972–73 level and all this increase occurred in 1981–82, chiefly as a result of a large increase in vehicle registration charges for that year. For some States the recent decline appears to have been accelerating.

Table 3.5 shows total State expenditure for each road category from 1972–73 to 1981–82. The data shows that State expenditure on rural local roads generally increased over the decade while expenditure on rural arterial roads (including national highways) generally declined. It is interesting that state expenditure on urban local roads was reduced some 30 per cent in 1981–82 compared with the previous years' expenditure level.

TABLE 3.4—STATE GOVERNMENT ROAD EXPENDITURE, BY STATE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($ million)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1972–73	357	236	146	74	85	33	930
1973–74	351	254	129	66	83	28	911
1974–75	333	256	131	69	65	23	877
1975–76	332	241	126	61	70	25	855
1976–77	324	245	161	79	89	44	941
1977–78	384	262	156	70	87	45	1004
1978–79	365	240	156	74	101	47	983
1979–80	376	215	151	63	107	43	955
1980–81	377	199	149	62	99	39	924
1981–82	330	204	174	58	90	36	891

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

Source: BTE (1984).

Local Road Expenditure

Local government road expenditure in real terms in 1981–82 was only slightly above that in 1972–73. This represented a significant decline from the peak level in 1975–76. However, as Table 3.6 shows, 1975–76 was a peak for only one individual State. In most States the peak was later.

Local government road expenditure is almost wholly directed to local roads. Urban local roads in 1981–82 received about 58 per cent of total local government road expenditure and about 53 per cent of these total funds were devoted to maintenance (see Table 3.7).

Total Australian Road Expenditure

Table 3.8 shows the allocation among road categories of total road expenditure by the three levels of governments. The difference between the peak expenditure of 1975–76 and 1981–82 represents a decline in total road expenditure of 2.4 per cent per annum in real terms. Over the corresponding period total road construction declined by 3.1 per cent per annum, although there was an increase in 1977–78 of 1.5 per cent over the 1976–77 figure.

TABLE 3.5—TOTAL AUSTRALIA: STATE GOVERNMENT ROAD EXPENDITURE, 1972-73 TO 1981-82 (CONSTANT 1981-82 PRICES)

($million)

Categories	*1972-73*	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*
Construction										
National roads	0.0	0.0	32.1	30.3	27.7	30.0	46.5	33.6	31.7	22.4
Rural arterial roads	280.6	258.6	205.6	222.6	230.8	197.6	197.9	222.8	189.9	196.8
Rural local roads	63.4	57.5	51.0	68.4	104.9	86.3	83.7	87.5	104.3	112.8
Urban arterial roads	234.7	222.9	214.0	156.0	178.0	276.5	264.1	255.6	239.3	220.1
Urban local roads	35.4	38.4	17.4	18.5	34.9	34.3	39.1	33.1	43.7	26.5
Total	614.1	577.7	520.1	495.6	576.2	624.8	630.6	632.5	608.9	578.5
Maintenance										
National roads	0.0	0.0	3.0	1.8	4.4	5.5	13.7	9.6	10.8	6.3
Rural arterial roads	207.2	221.8	217.4	204.1	206.3	206.3	202.0	203.6	191.1	193.6
Rural local roads	39.1	37.8	45.2	50.0	54.6	60.9	71.6	54.3	55.8	54.2
Urban arterial roads	58.3	60.6	78.6	77.9	81.1	88.8	96.6	77.7	74.6	76.1
Urban local roads	10.1	10.8	5.2	14.7	11.0	8.3	11.7	7.3	6.8	5.5
Total	314.3	330.6	349.3	348.3	357.2	369.8	395.4	352.1	339.2	335.9
Total construction and maintenance	928.5	908.3	868.8	844.0	933.2	994.5	1 025.8	984.6	948.1	914.3
Planning and research	5.2	4.9	10.3	12.2	11.0	12.3	14.3	13.4	14.3	14.8
Total road expenditure	933.7	913.2	879.2	856.1	944.2	1 006.7	1 040.2	997.8	962.3	929.0

Note: Figures may not add to totals due to rounding

Source: BTE (1984).

TABLE 3.6—LOCAL GOVERNMENT ROAD EXPENDITURE, BY STATE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($ million)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Total
1972–73	332	142	152	56	21	29	3	736
1973–74	334	155	142	56	50	26	3	766
1974–75	350	176	158	60	53	29	3	827
1975–76	441	161	154	53	57	29	3	898
1976–77	368	172	132	56	59	28	5	818
1977–78	388	165	128	63	60	29	4	837
1978–79	395	169	125	62	67	30	1	848
1979–80	237[a]	175	141	56	54	25	3	690[a]
1980–81	319	190	138	56	51	20	1	776
1981–82	353	177	115	56	56	21	3	781

a. The local government expenditure figures for New South Wales for 1979–80 may be incorrect.

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

Source: BTE (1984).

TABLE 3.7—TOTAL AUSTRALIA; LOCAL GOVERNMENT ROAD EXPENDITURE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

Categories	*1972–73*	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*
Construction										
National roads	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rural arterial roads	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.3	0.3	0.0
Rural local roads	173.3	186.2	234.8	223.3	188.6	183.8	183.4	142.7	144.7	158.0
Urban arterial roads	14.6	13.8	15.3	15.6	14.8	14.5	15.3	12.6	12.4	0.0
Urban local roads	211.0	218.0	198.7	245.3	251.9	252.2	258.5	184.3	199.3	209.2
Total	389.9	418.0	448.8	484.1	455.7	450.8	457.5	339.9	356.9	367.2
Maintenance										
National roads	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rural arterial roads	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.3	0.2	0.0
Rural local roads	149.1	158.3	202.1	195.6	152.8	159.1	158.2	169.5	199.6	169.4
Urban arterial roads	6.3	6.5	6.6	6.1	7.4	7.6	7.8	7.4	8.5	0.0
Urban local roads	181.5	183.9	170.2	211.9	202.4	219.6	224.9	173.6	211.0	244.4
Total	336.9	348.7	378.9	413.6	362.9	386.5	391.3	350.6	419.2	413.8
Total construction and maintenance	735.9	766.8	827.8	897.8	818.6	837.3	848.9	690.5	776.1	781.0
Planning and research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total road expenditure	735.9	766.8	827.8	897.8	818.6	837.3	848.9	690.5	776.1	781.0

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

Source: BTE (1984).

TABLE 3.8—TOTAL AUSTRALIA; TOTAL ROAD EXPENDITURE, 1972-73 TO 1981-82 (CONSTANT 1981-82 PRICES)

($ million)

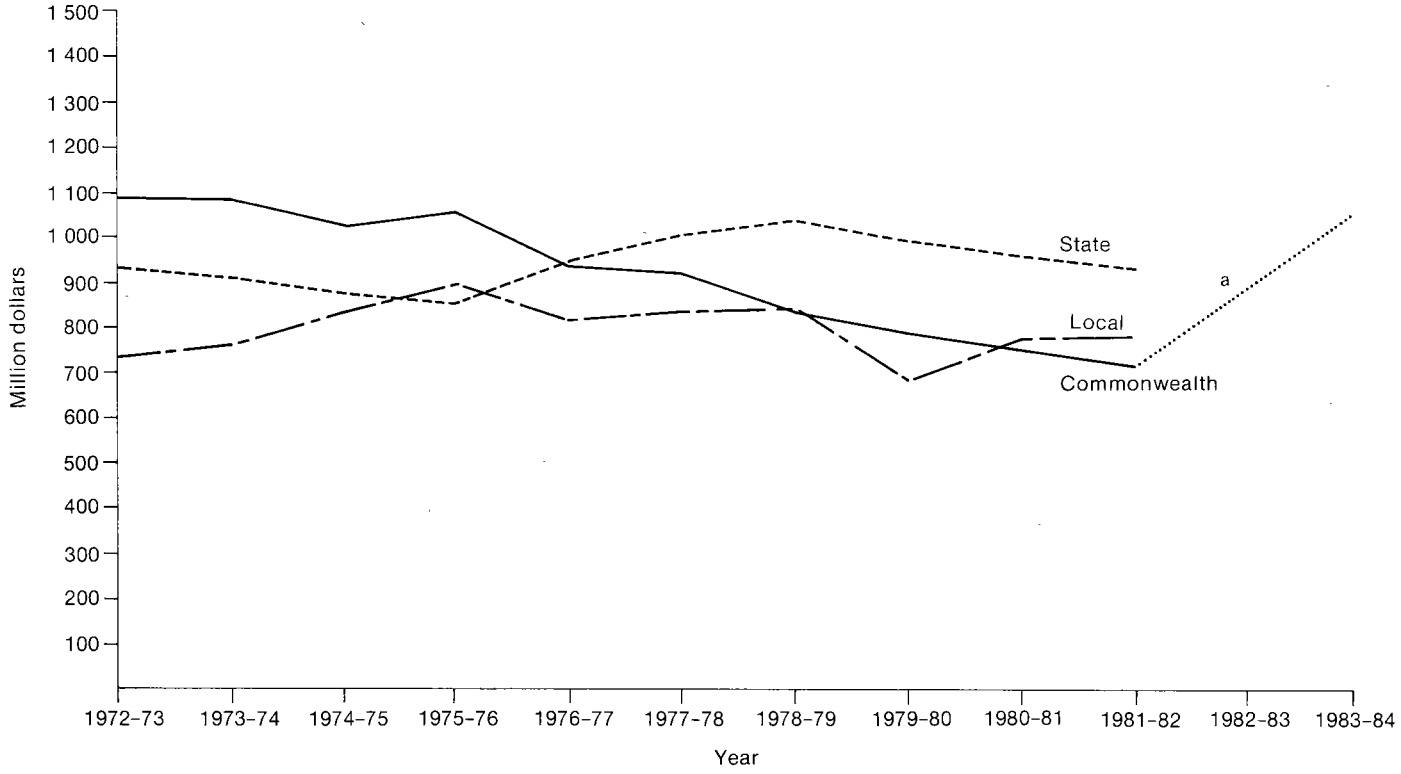
Categories	*1972-73*	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*
Construction										
National roads	0.0	0.0	263.0	319.8	311.4	329.1	318.4	298.7	297.7	266.9
Rural arterial roads	500.0	468.9	339.1	339.3	327.6	317.3	318.3	334.4	294.4	289.3
Rural local roads	484.2	478.4	420.4	397.6	389.3	388.1	381.1	344.8	362.0	376.6
Urban arterial roads	759.2	758.0	575.1	511.9	464.0	489.5	472.4	433.6	398.4	370.7
Urban local roads	279.0	290.0	259.2	326.6	355.7	351.0	341.0	256.2	272.9	261.3
Total	2 022.3	1 995.6	1 856.7	1 895.1	1 847.8	1 874.7	1 830.3	1 667.6	1 625.5	1 570.9
Maintenance										
National roads	0.0	0.0	57.5	51.8	51.0	57.2	61.1	56.8	59.2	61.4
Rural arterial roads	226.4	241.7	235.0	218.0	214.5	212.4	203.7	205.0	192.4	195.1
Rural local roads	227.6	236.4	295.6	304.0	255.7	268.4	267.0	255.6	286.4	258.8
Urban arterial roads	68.4	70.9	89.0	86.9	91.6	98.5	107.1	88.7	86.3	79.4
Urban local roads	193.3	196.4	177.3	228.9	215.3	230.4	239.0	183.6	221.3	254.1
Total	715.3	745.0	854.4	889.4	827.9	867.0	877.9	789.2	845.6	848.7
Total construction and maintenance	2 737.8	2 740.7	2 710.7	2 784.6	2 674.8	2 741.6	2 708.1	2 456.8	2 471.1	2 413.5
Planning and research	19.0	18.9	22.6	29.5	25.3	26.9	23.7	21.5	21.7	14.8
Total road expenditure	2 756.7	2 759.7	2 733.3	2 814.1	2 700.2	2 768.4	2 732.1	2 479.0	2 492.3	2 428.3

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

Source: BTE (1984).

Since 1974–75 total expenditure on national roads and urban local roads has increased at an annual real rate of 0.3 per cent and 2.4 per cent respectively. In contrast expenditure during this period on urban arterial, rural local and rural arterial roads declined significantly. The largest decline in road expenditure occurred in the urban arterial category which fell 5.4 per cent per annum over the period 1974–75 to 1981–82.

Figure 3.6 illustrates how the total expenditure on roads by each level of government has changed during the last decade. It also shows how the relative shares of total road expenditure contributed by each level of government has changed. Estimates of Commonwealth expenditure in 1982–83 and 1983–84 show the impact of the ABRD program.



a.BTE estimates for 1982-1983 and 1983-1984
Source: BTE 1984

Figure 3.6—Road expenditure by level of government, 1972-73 to 1983-84 (constant 1981-82 prices)

CHAPTER 4—ANALYSIS OF RECENT ROAD FINANCING ARRANGEMENTS

A short discussion was provided in Chapter 2 of recent developments in Commonwealth road financing arrangements. This chapter contains an analysis of these changes in much more detail. The use made by the Commonwealth Government of the various road financing mechanisms is examined and the success in achieving particular objectives assessed. In doing so it has been necessary to repeat some of the general material covered in Chapter 2.

The discussion in this chapter focuses on the announced objectives of the Commonwealth Government for road funding. The objectives sought with particular financing mechanisms may, of course, differ from those identified in public finance theory. For this reason a theoretical discussion of the various mechanisms is provided in Appendix II.

The recent road financing arrangements used in Australia are discussed below under the following headings:

- quotas
- categories
- hypothecation and trust funds
- program approval procedures
- loans
- formula grants.

QUOTAS

Objectives

In recent Commonwealth roads legislation quotas have been adopted as the form of road expenditure requirement imposed on the States. There are two main objectives of imposing quotas or other expenditure requirements on grants; to correct for inter-jurisdictional spill-overs (ie national benefits over and above purely State benefits) and to ensure that the recipients of Commonwealth grants do not use them merely to replace their own expenditure (see Appendix II). In addition to these efficiency objectives, the objective of horizontal equity (equality of road funding effort among the States) has also been a significant factor in the form of quota conditions adopted by the Commonwealth Government.

Quota conditions were removed from Commonwealth roads legislation in 1926. They were not fully reintroduced until 1969 although there was a form of partial matching prior to this date. The reintroduction of quotas in 1969 followed a recommendation in the CBR's 1969 report. In this report the CBR strongly advocated quota conditions as a key element in a national strategy for road funding. The concern was with the total road program rather than simply the Commonwealth's role in road funding. This recommendation on quotas was reinforced in the CBR's 1973 and 1975 reports, although the detailed form of the quota requirements underwent considerable development over this period. This development, as well as the changes in the quota requirements contained in the various road legislations, are examined below.

1969 CBR Report

The 1969 CBR report strongly advocated the imposition of various conditions on the use of Commonwealth road grants by the States. The reasons for advocating the adoption of quotas were:

- the development of a co-operative interest in the road programme at all levels of government;
- the guidance of investment in roads towards national objectives; and
- the limitation of the possibility of Commonwealth funds being used as a replacement for funds from State sources (CBR 1969, para 5.11).

None of these matters were addressed by the then Treasurer in his Second Reading Speech on the 1969 Bill. The only reference to the quota conditions contained in the Bill was: 'to get in each State an increased order of expenditure' (House of Representatives, Hansard, 28 May 1969, p2380, Sinclair).

CAR Act 1969

The conditions introduced into the 1969 legislation were not dollar for dollar matching as in the pre-1926 legislation or the 1959 and 1964 Acts (where they applied only to a small share of grants) but rather a fixed minimum amount, or quota, which the States were required to spend in order to receive a fixed maximum of Commonwealth grants. The 1969 Act specified that failure to achieve the quota would result in a dollar reduction in Commonwealth grants for each dollar shortfall in quota.

The quotas in the 1969 legislation were set at a fixed amount per registered motor vehicle in each State. It is not clear from the Parliamentary debate at that time why this particular method was adopted. The CBR recommended this approach but the reasons for this recommendation were not made clear in the 1969 CBR Report (see paragraphs 5.11 to 5.15 in CBR 1969). The CBR did, however, advocate changing from quotas based, to some extent, on the level of Commonwealth grants to each State (ie the partial dollar for dollar matching in the CAR Act 1964) to ones based on the main source of State finance for road works (ie taxes on vehicles).

1973 CBR Report

The CBR discussed quota conditions more fully in its 1973 report. This report reiterated the views expressed in the 1969 report concerning the necessity of such conditions and noted that, 'matching conditions are necessary as an aid to the achievement of the Australian Government's objectives in making grants to the States for roads' (CBR 1973, p162).

The 1973 CBR report proceeded to a fairly broad discussion of the objectives of quota conditions. The main points in this discussion were:

- The previous CAR Acts contained an efficiency objective: ensuring States contribute to the warranted program and do not substitute Commonwealth for State road funding.
- An equity objective was also implied: that States meet a fair share of the road financing burden.
- The States should be encouraged to meet their financial obligations with matching conditions in terms of total expenditure on roads or on road categories, in geographical areas or on specific projects.
- The financial contributions of each level of government in each State should be equitable in three senses: they should be aimed at equalising tax effort between States, there should be an equitable geographical distribution of road benefits, and consideration should be given to the proportion of taxes paid by each income group to each level of government.

The 1973 report noted that the last objective required substantial analysis to devise

and assess alternative quota conditions to fulfil these equity objectives effectively. It also noted that the achievement of each objective is likely to conflict with the achievement of another and thus a choice between objectives may need to be made.

In calculating the level of quotas for each State in its 1973 report the basic principle adopted by the CBR was stated as 'equity between the States' (CBR 1973, p139). Further, the report states:

> 'In adopting the level of finance from an equal tax effort, we have given consideration to measures of taxable capacity. However, we consider that because the level of vehicle ownership is sufficiently related to levels of income, the differences in ownership levels between States are in themselves a satisfactory index of relative capacity.' (CBR 1973, p149).

While the CBR made explicit recommendations for State government quota requirements based on motor vehicles, a less formal arrangement was advocated for local government. However, the CBR adopted the same principle of effort based on motor vehicle numbers for local government. It suggested that local government road expenditure effort (measured as expenditure per vehicle) in other States be brought up to the level achieved in New South Wales, Victoria and Queensland but adjusted for differences in relative income per capita between the States.

The CBR assessed what it considered to be a fair share of the total roads program to be financed by local government in each State. It recommended that if local government authorities in particular States fell behind in meeting this level of expenditure, the Commonwealth reduce its grants for local roads to those States accordingly.

1974 Roads Legislation

There is no indication in the debates on the 1969 or 1974 legislation of the acceptance or otherwise by the Commonwealth Government of the suggestions about quota conditions contained in either the 1969 or 1973 CBR reports. However, the legislation did contain the principles espoused. In addition, the level of quotas set in the 1974 legislation only differed from those recommended in the 1973 report by being uniformly about 15 per cent lower. This was in line with the level of grants which were also 15 per cent lower than those recommended. State quota relativities were exactly as recommended. The reason given for the 15 per cent reduction in quotas was to 'relieve the States...of the responsibility of increasing user charges' (House of Representatives, Hansard, 18 July 1974, p385, Jones).

The CBR 1973 report also contained a recommendation of specific quotas for three categories of roads: national highways, urban arterial roads and the category of Minor Improvements Traffic Engineering and Road Safety (MITERS).

This recommendation was not included in the 1974 legislation. The reasons can be traced to the financial arrangements introduced in the legislation for national highways. The CBR recommended that the Commonwealth finance 80 per cent of the recommended national highway program and that specific quotas to cover the balance from the States be included in the legislation. The Commonwealth Government decided to accept 100 per cent financial responsibility for this road category so that a specific quota for this road category was not necessary. There is no indication in the debate on the 1974 legislation why category quotas for the other two road categories were not adopted. One possible reason is that, with the need for matching for national highways removed and given a total quota for each State, it was considered that little would be gained from such requirements for the other two categories.

1977-82 Roads Legislation

In the *States Grants (Roads) Act* 1977 quotas were increased pro rata over the 1976-77 level by the same percentage increases as total grants. However, the CBR's 1975

report recommended a far more sophisticated assessment of State quotas. It was argued that:

> '...given the much smaller roads program (than recommended in 1973), quotas should be based on the same factors we used in establishing the size of the road program and the contributions of each level of Government to these programs; principally:
>
> (a) the relative size of the road program in each State;
>
> (b) the rate of growth in each program in each State;
>
> (c) the benefits occuring from the road program in each State;
>
> (d) the general desirability of moving towards equality of effort between States in the provision of road finance; and
>
> (e) the relative capacities of States to increase road finance from their own sources.' (CBR 1975, p279).

The quotas calculated by the CBR were such that for each State the quota per registered vehicle was fairly similar. This would indicate that factor (d) above received a high weighting.

In the *Roads Grants Act* 1980 the quotas were again increased pro rata in line with the pro rata increase in grants. However, as noted in Chapter 2, the basis for the calculation of the quota for each State for the following years was changed to provide for a phasing in over six years to an equal level of road expenditure per registered motor vehicle in each State (ie a return to the 1969 system).

In 1981, quotas were suddenly abolished. While no reason for this was provided in the Minister's Second Reading Speech or elsewhere, a possible explanation is suggested in the following section.

The Australian Bicentennial Road Development (ABRD) Program
A dramatic change occurred with the introduction of the ABRD program in 1982-83. Quotas were reintroduced but in a much more stringent form. The legislation required each State to maintain the real level of its road expenditure over the period of the legislation. The introduction of the legislation followed, by a few years, a peak in State road expenditure. The effect of the legislation will be to reverse the gradual decline in State road expenditure from this peak if the quota provisions are enforced and the States are to receive their full entitlement to grants under the program.

The reason given for reintroducing these quota requirements was to maximise the benefits of the program on the Australian road system (House of Representatives, Hansard, 14 October 1982, p2086, Hunt). This indicates that when drawing up the legislation, the main objective was to minimise substitution of Commonwealth for State funds rather than to achieve other objectives such as equity.

Effectiveness of quota requirements

The effectiveness of the 1969 quota conditions was questioned by the CBR in its 1973 report:

> 'A review of the matching conditions imposed on State road funds in the current CAR legislation indicates that the conditions were only partly successful. The linking of the matching quotas of State road funds to motor vehicle numbers, meant that States' road funds were required to rise steadily but this was a modest requirement easily met in most States. The quotas required included no allowance for cost rises at either the past, or more recent rates, and in the event did not require the State to maintain even a stable level of self-financed road expenditure in real terms. In these circumstances States' road funds grew less in real terms than was envisaged.' (CBR 1973, p162).

While inflation had led to problems with the effectiveness of the 1969 quota requirements, from 1974-75 onwards inflation led to a different problem: State road expenditure began to outstrip the quotas. Commonwealth road expenditure had

peaked in real terms in 1972–73. Increases in Commonwealth grants in every year following, until 1982–83, were insufficient to account for inflation. From 1974–75 to 1980–81 quotas were indexed in line with grants so that they also declined in real terms. However, actual State road expenditure increased in real terms from 1975–76 to 1978–79 (as shown in Figure 4.1). The gap between State road expenditure and the quotas grew quickly.

By 1980–81 State road expenditure had far exceeded the quotas. It is unlikely that they were having any effect on State road expenditure levels, except possibly in Victoria where road expenditure by the State Government only exceeded the quota by about 5 per cent (while road expenditures by all States in 1980–81 exceeded the quota by 65 per cent, ie State expenditure of $885 million compared with quotas of $538 million).

In addition to this gap between quotas and actual expenditure by 1980–81 there was a considerable disparity in road expenditure effort among the States as measured by State road expenditure per registered motor vehicle. Details of this measure by State are given in Table 4.1. Victoria and South Australia in particular had fallen significantly behind New South Wales, Tasmania and the Northern Territory in road expenditure per vehicle. Accordingly, the quotas do not appear to have encouraged equity, at least as measured by equality of effort, as the CBR had sought in its 1973 and 1975 reports.

The introduction in the *Roads Grants Act* 1980 of a new system of quotas (designed to equalise State road expenditure effort over six years) can be seen as an attempt to rectify this equity problem. However, since the total level of quotas was by then so much lower than actual road expenditure in most States, this approach was likely to be unsuccessful. In the event, the Government chose to abandon the scheme altogether in 1981. This may have been because of the difficulty of increasing quotas to an effective level while Commonwealth road funds were declining.

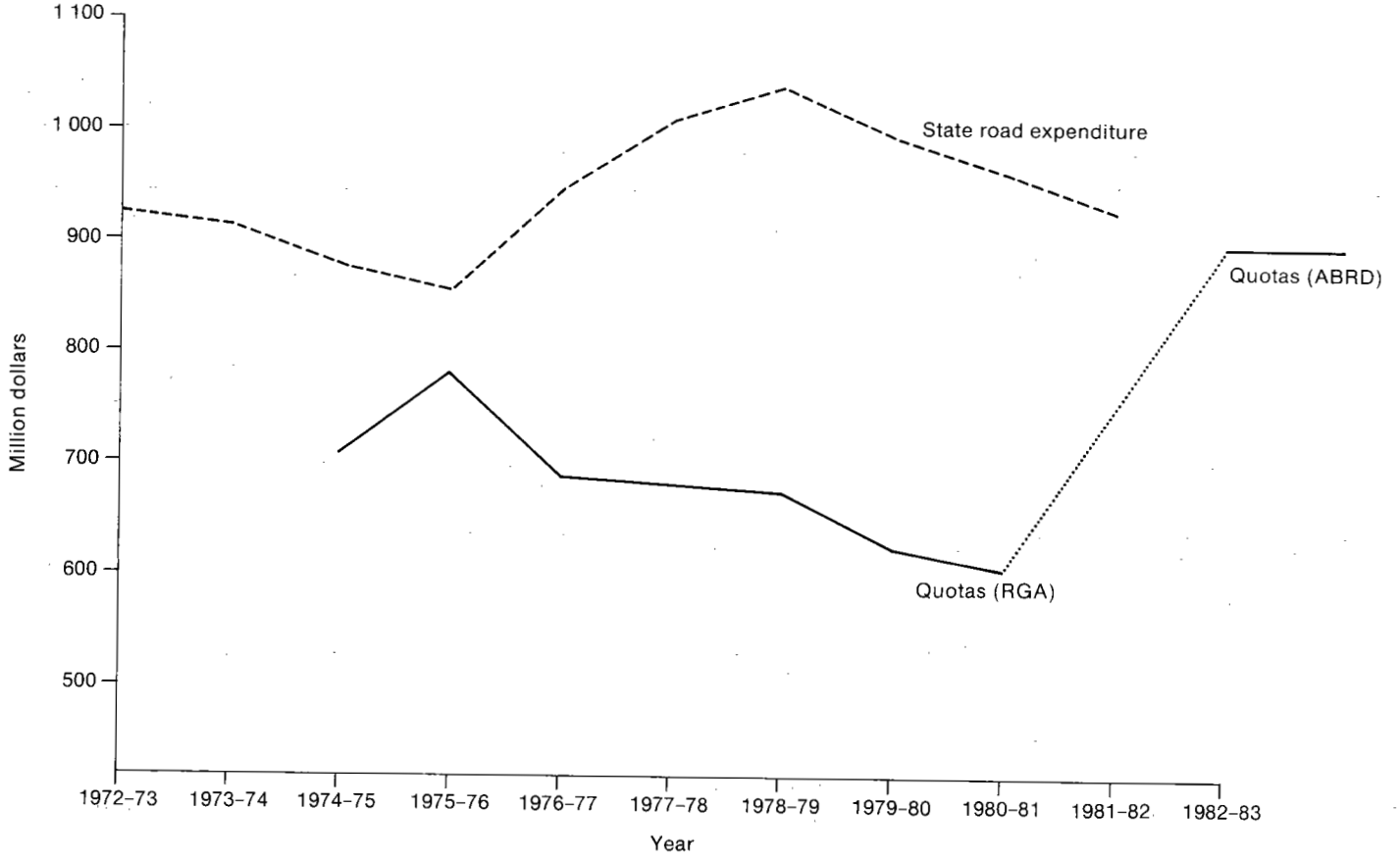
The introduction of the ABRD program presented an opportunity to reintroduce quota conditions. The program also gave the Commonwealth the opportunity to raise the level of quotas to an effective level.

This time the quotas were linked to inflation, thus overcoming a main problem from 1969 to 1980. In fact the effect of the new quota system is likely to make it difficult for some States to comply with the requirements, with the result that higher State road expenditure should be encouraged. At the time the ABRD quota arrangements were introduced, State expenditure had been declining. The new system could arrest this decline.

The new system takes no account of equity considerations in that it contains no provision for encouraging equality of road expenditure effort among the States. The disparity in State road expenditure effort noted above continued after 1980. Table 4.1 shows that by 1981–82 the Northern Territory Government, as an extreme example, was spending around nine times as much per vehicle on roads as was the South Australian Government.

The effect of the quota conditions under the ABRD program is to help perpetuate this variation between States of road funding effort. The legislation does not require those States with low expenditure effort to improve their expenditure on roads relative to the other States. This means that the Commonwealth is effectively providing road financing to some States where past road expenditure patterns suggest that they do not consider it worthwhile increasing road expenditure themselves. The aim of setting quotas based on road expenditure effort would be to provide a disincentive for States to fall behind rather than to discourage States from greater effort.

Unless the excise rate under the current ABRD program is increased or collections in current values increase faster than the rate of inflation, the States will be faced with a situation where they lose dollar for dollar if they do not fulfil the ABRD quota



Sources: Commonwealth of Australia (1973–82). BTE (1984).

Figure 4.1—Comparison of State quotas with State road expenditure, 1972–73 to 1972–83 (constant 1981–82 prices)

TABLE 4.1—STATE ROAD EXPENDITURE PER MOTOR VEHICLE ON REGISTER, BY STATE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Average
1972–73	184.4	155.7	176.3	135.8	174.1	194.1	a	169.5
1973–74	172.5	157.5	144.9	114.3	159.6	154.4	a	156.4
1974–75	155.4	149.3	142.9	111.0	116.3	119.5	a	142.7
1975–76	151.9	134.1	124.8	96.1	129.4	124.0	a	134.0
1976–77	144.3	134.4	150.9	118.1	136.9	209.5	a	141.3
1977–78	165.2	137.0	138.3	102.6	125.1	204.1	a	144.4
1978–79	151.7	122.1	132.7	108.0	141.0	204.3	1 094.0	143.5
1979–80	149.4	109.9	120.2	89.0	143.5	185.2	820.0	133.6
1980–81	143.3	97.4	109.3	85.2	128.2	162.5	762.0	123.2
1981–82	118.6	94.0	121.0	71.0	113.3	142.4	631.7	111.8

a. Prior to Northern Territory self-government in 1978 all road expenditure was provided by the Commonwealth government.

Sources: ABS (1969–83), BTE (1984).

conditions and even if they do, over the remaining period of the program, they will continue to receive less and less grants in real terms. In neither case with the existing legislation can they receive any further funding under the program. This situation is far more stringent than any of the options canvassed earlier.

In summary, the general use of quotas by the Commonwealth Government, to ensure that the States do not use Commonwealth funds to replace their own road expenditure, follows the principles of public finance theory. The quotas adopted in Commonwealth road legislation since 1969 have not been in the form of dollar for dollar matching but a fixed maximum Commonwealth grant for a fixed minimum level of State road expenditure. The actual ratio of Commonwealth grant to quota varied among the States. When the quotas were not indexed to inflation they failed to achieve the objective of stopping the States substituting Commonwealth funds for their own expenditure. When they were not related to motor vehicles or other measures of effort they failed to achieve equity in terms of equal road financing effort by the States. An indexed quota based on State motor vehicle registrations may be one way in which both objectives could be achieved simultaneously.

CATEGORIES

The main objective of dividing grants into specific categories of expenditure is to ensure that particular, rather than general, Commonwealth road funding policies are implemented. It is possible, however, for the recipients to thwart the objectives of allocation of grants among categories if such an arrangement was not accompanied by a requirement for category quotas. Without such a requirement the recipient of the grants could alter its own allocation to road categories to those considered unimportant by the donor and so counter the donor's initial intentions.

The Commonwealth Government has never imposed category quota conditions, although their implementation has been suggested (CBR 1973). Thus there has existed a potential for States to counter Commonwealth objectives in this area. This section examines whether this potential has actually been realised and how successful the Commonwealth has been in achieving the stated objectives behind its allocation of grants to particular road categories.

Effectiveness of categories

CAR Act 1969

The 1969 CAR Act contained the first major introduction of categories into Commonwealth road legislation. Four categories were specified; urban arterial roads, rural arterial roads, rural roads other than arterial, and planning and research.

Prior to 1969 the only condition relating to the direction of Commonwealth road funds was that at least 40 per cent were to be spent on unclassified rural roads. As noted in BTE (1981) in fact at least 80 per cent of Commonwealth funds were spent on rural roads from 1953-54 to 1969-70. The allocation of just over 50 per cent of grants to urban arterial roads in 1969 therefore indicates a considerable shift in Commonwealth policies.

The 1969 report of the CBR did not contain any recommendation concerning category quotas. However, the States did not attempt to counter the shift in Commonwealth funding from rural to urban roads contained in the 1969 legislation. Thus the Commonwealth was successful in redirecting funds from rural to urban areas. This redirection of funds was not the stated objective in itself. The objective was couched in much more general terms including reducing the 'cost of moving goods and contributing to planned urban development, particularly in those principal sectors of population on the east coast of Australia' (House of Representatives, Hansard, 28 June 1969, p2381, Sinclair).

The CBR had recommended in its 1969 report a reallocation of funds towards urban

roads. Although the exact reasons for this shift were not elaborated in the report it is probable that the recommendation was based on the relatively high benefit cost ratios obtained for urban arterial roads compared with those for other road categories. On this latter point the Minister for Transport at the time criticised the CBR analysis for not adequately considering both the economic and social advantages of road construction. He suggested that the CBR had not taken account of the effects of large vehicles on rural local roads (House of Representatives, Hansard 28 June 1969, p2381, Sinclair). A comparison of the CBR recommended allocation with the allocations under the CAR Act 1969 and CAR Act 1964 is shown in Table 4.2. It is apparent that despite this criticism the share of the principal grant allocated to rural local roads in the Act was actually lower than that recommended by the CBR.

TABLE 4.2—COMPARISON OF SHARES OF COMMONWEALTH ROAD GRANTS FOR EACH ROAD CATEGORY IN THE 1969 CAR ACT WITH THE CBR'S 1969 RECOMMENDATIONS AND SHARES IN THE 1964 CAR ACT

(per cent)

Category	*CBR 1969 recommendation*	*1969[a] CAR Act (legislated)*	*1964[a] CAR Act (actual)*
Rural arterial roads	14	15.5	40
Urban arterial roads	45	50	20
Rural local roads	40	33	40
Planning and research	1	1.5	0
Total	100	100	100

a. Principal grant only.

Sources: CBR (1969). Commonwealth of Australia (1964–82).

In its 1969 report, the CBR had also recommended establishing a system of national highways. This was not taken up in the 1969 legislation on the grounds that it would require more analysis than was possible at the time. A joint Commonwealth/State study team did investigate the proposal in 1972 and the idea was subsequently incorporated in the *National Roads Act* 1974.

1974 Legislation

In its 1973 report, the CBR recommended an expanded number of categories to include urban local roads, national highways and MITERS. There were a number of recommendations concerning national highways, all aimed at very detailed Commonwealth involvement in the planning, construction and maintenance of these roads, including category quotas and project approval procedures. Specific category quota conditions for urban arterial roads and MITERS were also advocated.

As a result of the Commonwealth adopting a policy of fully funding national highways there was a dramatic shift in category allocations from 1973–74 (last year of the *CAR Act* 1969) to 1974–75 (first year of the *Roads Grants Act* 1974 and *National Roads Act* 1974. This shift is shown in Table 4.3, along with the allocation recommended in the 1973 CBR report.

The Commonwealth Government accepted the CBR's advice on control over the expenditure of funds for national highways. The Commonwealth has exercised control over all aspects of funding, planning standards, routes, sign-posting and project approval since 1974–75 and, as a result, national highways can be said to be one area where Commonwealth category allocation objectives have been fully achieved.

The Commonwealth Government expressed a desire for States to redirect their own

TABLE 4.3—ALLOCATION OF COMMONWEALTH ROAD GRANTS AMONG ROAD CATEGORIES, 1973-74 AND 1974-75[a], COMPARED WITH THE CBR'S 1973 RECOMMENDATIONS

(per cent)

Category	*Urban arterial*	*Urban local*	*Rural local*	*Rural arterial*	*National*	*Total*
Legislated grants						
1973-74	54.6	-	28.4	17.0	-	100.0
1974-75	36.2	1.8	17.7	12.9	31.3	100.0
CBR 1973[b] recommendation	39.8	1.6	16.7	20.9	20.9	100.0

a. Excluding planning and research.
b. Excluding planning and research, MITERS, supplementary and equalisation grants.

- nil or rounded to zero.

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

Source: BTE (1981) Table 10.2, p52. Commonwealth of Australia (1964-82).

funding to road categories other than national highways in 1974-75, following its acceptance of full funding responsibility for national highways (House of Representatives, Hansard, 18 July 1974, p385, Jones). This redirection did not eventuate. The actual expenditure by State governments by road category over the period 1973-74 to 1981-82 is shown in Table 3.5. These data indicate that in 1974-75 the States did spend some funds on national highways and that this expenditure was diverted mainly from rural arterial roads, which was contrary to stated Commonwealth objectives at the time. There was also a sizeable percentage reduction in expenditure on urban local roads, thus reducing the net impact of Commonwealth grants in this category. In 1975-76 a further reduction in State road expenditure occurred which fell most heavily on urban arterial roads. In 1976-77, however, there was a significant increase in expenditure in all categories of roads.

State Grants (Roads) Act 1977

State road expenditure continued to increase in real terms from 1975-76 to 1978-79 but in general the pattern of allocations did not alter much with one notable exception; State allocations for urban arterial roads increased substantially in 1977-78.

This increase in State expenditure on urban arterial roads was a counter to the Commonwealth's shifting grants away from urban arterial roads towards rural arterial and rural local roads in the *States Grants (Roads) Act* 1977. The new L-NCP Government did not accept the reduction in grants for rural arterial roads which followed the introduction of the national highway system and moved to redress this situation at the expense of urban arterial roads (rather than through increased total grants).

The new Commonwealth Government at the time also expressed concern at the level of Commonwealth expenditure on urban arterial roads and the fact that in some States the Commonwealth was funding the bulk of expenditure on these roads. There were also expressions of disquiet concerning freeway construction and expressed desires to increase the level of road funding directed to local government authorities.

The State expenditure data in Table 3.5 show that the States shifted funds from rural to urban roads to counter Commonwealth reallocations. At the same time local government expenditure on local roads had fallen considerably from the 1974-75 level when grants under the RED Scheme were available to spend on local roads. The overall result for rural local roads was a continuation of the decline in total expenditure which began with the CAR Act 1969.

1980-82 Legislation

In the 1980-81 roads legislation the number of Commonwealth road funding categories was reduced from eight to four. The urban/rural split for local roads was abolished, as were the MITERS, beef roads and national highway maintenance and national commerce roads categories.

Despite the abolition of the urban/rural split for local roads the distribution by the States of Commonwealth funds for local roads between urban and rural areas remained unchanged. However, the move preceded the establishment of a formula approach to the allocation of these grants (discussed in a later section of this chapter).

In 1981-82 the urban/rural split for arterial roads was also abolished. However, it was reintroduced in the ABRD program in 1982-83. The dropping of the urban/rural split in 1981-82 was seen as the continuation of moves begun in 1980-81 to reduce the number of categories. The then Minister for Transport stated that it was:

> '...designed to streamline further the administration of the roads program... The changes are also very much in line with the Government's rationalisation of responsibilities between the Commonwealth and the States over a broad range of public sector activities.' (House of Representatives, Hansard, 14 May 1981, p2438, Hunt).

The reason given for the reintroduction of the separate categories in 1982-83 was to:

> '...enable appropriate attention to be devoted to roads in urban areas where the majority of population lives.' (House of Representatives, Hansard, 14 October 1982, p2088, Hunt).

These two quotes illustrate two apparently opposing objectives. The first was consistent with the new federalism policy of the L-NCP Government, which was aimed at providing more autonomy in decision making to the States. In contrast, categorisation is usually directed at interfering with State decision making to further Commonwealth, or national, priorities.

These two objectives may not always conflict. One example is that of MITERS expenditure. This category was abolished in 1980-81 after six years. The reason given for discontinuing this expenditure under a separate category was that:

> '...the MITERS program...has successfully focussed attention on the need to ensure that road safety is an integral part of road planning and construction.' (House of Representatives, Hansard, 15 May 1980. p2847, Hunt).

The program had apparently achieved its aim; the States were (at least to some extent) by then incorporating road safety measures into their road programs as a matter of course.

Information is not yet available on State expenditure patterns past 1981-82 to test the implications of the reduction in categories introduced in 1980-81 and 1981-82, nor the reintroduction of the urban/rural split for arterial roads in the ABRD program. Preliminary indications are that the States have not significantly altered the urban/rural split of Commonwealth funds under the Roads Grants Act at this stage. If this is the case it suggests that State and Commonwealth objectives may have coincided on this occasion.

In summary, the history of categorisation in Commonwealth roads legislation since 1969 shows one notable success; that of national highways. Commonwealth objectives have succeeded in this area largely because the Commonwealth took full financial responsibility as well as a large degree of control over national highway projects. By doing so desired expenditure levels have been achieved without any category quotas.

The evidence suggests, however, that with other road expenditure categories the States have on occasions moved to defeat what were the stated Commonwealth

objectives and that they were able to do this because there were no category quota requirements.

There has also been some changes in the actual objectives followed by the Commonwealth Government. While it is understandable that a Government of different philosophy in 1977-78 should change the direction of the 1974-75 legislation, the same Government altered its own directions in the ABRD program. The ABRD program and the Roads Grants Act are in sharp contrast to each other, eg in category allocations, quotas, project approval, hypothecation and trust funds. This situation may reflect the fact that priorities change over time and the two Acts are directed at achieving somewhat different objectives, including different degrees of accountability.

The dramatic changes in categories in recent years highlight the conflict between the federalism policy followed during the late 1970s and early 1980s and the use of specific purpose grants. The main objective of specific purpose grants is to assist the donor government to impose its priorities on the recipient government. The previous L-NCP Government's federalism policies were directed at greater autonomy for the recipient.

HYPOTHECATION AND TRUST FUNDS

Three aspects of hypothecation in the current road funding arrangements are discussed below; the hypothecation policy, trust funds, and the pricing and cost recovery aspects of hypothecation.

Hypothecation

The effectiveness of recent hypothecation policies and trust funds at the Commonwealth level cannot be assessed in any detail at this time since hypothecation of fuel excise was only reintroduced in 1982-83 and there has been insufficient time to observe how it is operating to make a complete assessment. The Commonwealth did hypothecate fuel excise to road works from 1931 to 1959 but only partially. BTE (1981) discussed this subject and in that paper it was noted that the level of hypothecation fluctuated greatly over the period. It is fairly obvious from an examination of the level of revenue and road expenditure over this earlier period that despite the formal link, the level of road grants did not depend greatly on the level of fuel excise. It is interesting to note that the level of road expenditure compared with receipts from fuel excise since 1959 has on average been higher than pre-1959 despite the abolition of a formal hypothecation policy.

Prior to the 1983 Federal Budget, the level of grants under the Roads Grants Acts was around 80 per cent of fuel excise receipts (excluding the ABRD levy). This proportion will be less for 1983-84 because excise was increased by almost two cents/litre (or 40 per cent) in the 1983-84 Budget. In addition, the Commonwealth Government announced that the total level of excise will be increased half yearly in line with increases in the Consumer Price Index. If the level of road grants under the current Roads Grants Act and its replacement in 1985 does not increase at this rate the ratio of these grants to non-ABRD fuel excise will fall further.

The period from 1975 to 1982, when the fuel excise rate was fixed in nominal terms, illustrated one of the problems of a hypothecation policy. In a situation where there is a fixed rate of excise, growth in nominal revenue will only occur through growth in fuel consumption which is likely to be less than the rate of inflation except when the latter is low (eg below 3-4 per cent). Thus, with a formal hypothecation policy, regular increases in the excise rate are needed to maintain real levels of revenue for road expenditure.

Most of the State business fuel franchise schemes are based on the principle of allocating most if not all the receipts to road expenditure. Those that were

introduced in 1979 have had their rates of tax increased since then. In addition, all States except Western Australia have *ad valorem* taxes which will increase with the nominal price of fuel.

The ABRD program, in contrast, has no built-in adjustment mechanism. Accordingly, road expenditure under the scheme with current arrangements is likely to fall significantly in real terms over its duration. The fall in real terms will depend on the extent to which inflationary effects are offset by increases in fuel consumption over the period. As the effects of inflation compound over time the significance of ABRD funds will be reduced (the real value of any fixed charge after five years, at say, 10 per cent annual inflation rate will be almost halved). Thus one of the main advantages often claimed of hypothecation can be lost by inflation in the absence of indexation.

Trust Funds

Trust funds are often closely linked with hypothecation, particularly when an attempt is made to introduce a proper cost recovery program. Since road expenditure may not equate with the cost of using roads on an annual basis a trust fund can assist to smooth out the differences. Balances in the fund can rise and fall to suit road expenditure needs while hypothecated road charges can be collected according to principles of economic efficiency or other social objectives.

The ABRD program and all State hypothecated road charges are directed to road expenditure by means of special funds rather than through consolidated revenue funds. These trust funds are used simply as accounts rather than as tools for the efficient allocation of resources or the pursuit of specific cost recovery objectives.

The road trust funds operated by the States have more flexibility than the ABRD fund in that they receive a mixture of charges which are revised from time to time, usually on an ad hoc basis in annual budgets. However, New South Wales in 1982 elected to index its charges annually thus avoiding the necessity of annual budget adjustments.

In comparison, the ABRD program is funded from a single fixed charge. This charge could, of course, be increased in the future, even indexed, but there is no indication that such changes will be introduced.

The main advantage of the ABRD trust fund appears to be the visibility of the tie between receipts and expenditure. Those motorists who contribute to the fund through their use of roads can see the funds being directed back to road works rather than being absorbed into consolidated revenue from where the benefits may be distributed widely to users and non-users alike.

Road pricing and cost recovery

There has been much debate on road pricing in Australia, particularly since 1975 when the CBR discussed the issue in an Appendix to its 1975 report and later with various BTE papers and reports (eg BTE 1977). However, little has happened to bring about an efficient or equitable road pricing system in this country. If anything, major moves have been taken in the opposite direction, such as the abolition of road maintenance charges in 1979.

Hypothecation of road user charges is often raised during discussions on road pricing and cost recovery. At the State government level and with the ABRD program at the Commonwealth level a large share of total road expenditure in Australia is tied to road user charges. Thus the current hypothecation policies have important consequences for efficiency and equity in the allocation of resources to roads.

The major development affecting road pricing in recent years, particularly following the abolition of the road maintenance charges, has been the growing reliance on

fuel excise revenue for funding road expenditure. The States (except for Queensland) have for many years been relying less and less on fixed motorist charges (eg registration fees) to fund roads. In addition, recent increases in Commonwealth fuel excise taxation, coupled with the ABRD levy, have meant a dramatic increase (80 per cent in real terms) in receipts through fuel sales over the period 1980-1983 (currently only 22 per cent of this revenue is formally hypothecated to roads).

On economic efficiency grounds, road users should be charged at least the avoidable cost of their use of the road. Charging users avoidable cost also meets the criterion of horizontal equity. In the case of heavy vehicles the avoidable cost is predominantly the wear and tear caused to the road. Studies have shown that this wear and tear is largely proportional to the fourth power of the axle load, although the thickness of the road surface is also an important factor. Unfortunately, it is extremely difficult to devise a pricing system where charges are perfectly related to avoidable cost. However, a charge closely related to avoidable cost is one based on axle load and distance travelled such as the former road maintenance charge (which was a ton/mile tax). A pricing system based on consumption of motor fuels will be imperfectly related to avoidable costs for most vehicles because fuel consumption does not properly reflect damage caused to roads. Given the current fuel consumption rates of heavy vehicles and current fuel excise rates, the available evidence indicates that operators of heavy vehicles are not meeting their avoidable cost. In comparison, private motorists are paying at rates well above the level of their avoidable costs.

A large differential between excise rates on automotive distillate and motor spirit could help redress the current bias in favour of operators of heavy vehicles. However, this may encourage a switch from diesel trucks (which are more fuel efficient) to petrol driven trucks, thus achieving little in terms of economic efficiency and a loss in terms of fuel efficiency.

Alternatively, a fixed charge on large vehicles, such as a vehicle registration charge related, say, to axle load and average distance travelled by vehicles of a particular class, could redress this imbalance. However, since such a charge would not relate charges to actual road usage it would not necessarily promote efficient use of the road system. Previous High Court interpretation of Section 92 of the Constitution would mean that large fixed taxes on interstate vehicles may be in contravention of this Section but operators of vehicles which travelled only intrastate could be charged at a level approaching avoidable cost.

The abolition of road maintenance charges removed a pricing mechanism that had the potential to achieve economic efficiency objectives. Recent reduction in reliance on fixed charges in favour of fuel taxes in most States has tended to result in even more of the collections from road users coming from the private motorist. However, since interstate vehicle operators do not pay more than nominal registration charges, a fuel tax at least recovers some amount from this group.

Of course hypothecation does not have to mean 'hypothecated fuel taxes' but refers to the hypothecation of any revenue source. Therefore, a hypothecation policy with less reliance on fuel taxes could be maintained by State governments which resulted in similar revenue collections. If less reliance on fuel taxes is considered worthwhile then the reintroduction of a charge similar to road maintenance charges or a change directly related to road use should be seriously examined since this charge has many desirable attributes on both efficiency grounds and on grounds of fairness.

On a more general issue, assessment of the level of cost recovery actually being achieved for road infrastructure requires determining which cost items and revenues can rationally or legitimately be assigned to road activities and the value of these costs items. This means that decisions must be made about the cost items to include for cost recovery purposes, the methodology to adopt to value those items for cost recovery purposes and about which revenues collected from road users are to be regarded as road user charges (rather than, for example, general revenue taxes).

In summary, there are two main aims of hypothecation; provision of a guaranteed source of funding for roads and its use as part of a road pricing or cost recovery mechanism (although an efficient road pricing and cost recovery policy does not require hypothecation).

The ABRD program only provides a mechanism for guaranteed funding to 1988 but the level of real funds available will be eroded by inflation over time unless the current legislation is amended. However, the stated intention of the program was only to provide a guaranteed source of funding for roads until the year of the bicentennial. In the case of State hypothecated taxes they are intended as the main source of guaranteed funds for State road authorities and in some States are now regularly increased by indexation (eg New South Wales).

If hypothecation of road user charges is considered desirable, trust funds could play a role in assisting in the efficient allocation of resources.

PROGRAM APPROVAL PROCEDURES

Program approval requirements were reintroduced in 1974 after a break of 43 years. During this period the States had been required to meet various conditions attached to the expenditure of Commonwealth road grants, such as the type of roads on which expenditure of these funds were permitted, but apart from these conditions the States were free to direct Commonwealth road grants according to their own priorities. In 1974, however, the ALP Commonwealth Government reintroduced program approval procedures with the aim of ensuring that State expenditure of Commonwealth road grants met with its own, national, priorities.

Program approval procedures varied between the various Acts after 1974 but broadly they were in the form of a requirement that State Ministers submit to the Commonwealth Minister for Transport for approval a program of proposed road projects and certain specified details concerning the projects. In general the Commonwealth Minister for Transport was empowered to alter this program if some projects were considered unsuitable.

Objectives

The aim of program approval procedures under the *National Roads Act* 1974 was 'ensuring national objectives are taken fully into account' (House of Representatives, Hansard, 18 July 1974, p382, Jones). The Government referred to 'strategic planning of the roads system' and stated that in view of its acceptance of full financial responsibility for national roads it was justified in seeking State compliance with these national objectives.

There was a specific concern about urban freeways which prompted the approval requirements under the *Roads Grants Act* 1974. The then Minister stated at the time:

> 'Some freeways in middle to outer (urban) areas, will cause problems and may not be justified... We shall only approve the construction of major projects of this type if we are convinced that they are justified.' (House of Representatives, Hansard. 18 July 1974, p383, Jones).

The then Minister for Transport also noted the departure from previous policy of abdicating 'responsibility for determining the road works to be eligible for assistance and the priorities to be attached to them' (House of Representatives, Hansard 18 July 1974, p385, Jones). He apparently intended using program approval procedures to ensure Commonwealth priorities were followed.

The CBR 1973 report recommended the establishment of a consultative process formulated by the three levels of government to assist in developing national road transport strategies. The CBR envisaged that State road authorities would develop detailed road programs to be submitted to the Bureau for examination and advice to the Minister. This option was not taken up by the Government.

The approval procedures prescribed under the *National Roads Act* 1974 were comprehensive. They required State Ministers to submit particulars of national roads projects contained in the program for approval. The Commonwealth Minister for Transport could reject, modify or approve a project or request further investigation of the details of the project or require consultations with the State Minister. The Commonwealth published Notes of Administration under the Act setting out detailed guidelines for projects, and reserved to itself decisions on standards and route for national highways. For all categories under the *Roads Grants Act* 1974, except urban arterial roads, a program of projects was required to be submitted for approval. However, for urban arterial roads, the Minister could refuse to approve individual projects in the program including projects funded from State sources. The then Minister for Transport argued:

> 'It is therefore illogical to provide large sums of money in a number of important areas...without recognising that roads built by States and municipal authorities form just as much a part of the transport system as do roads...financed by Australian Government Grants.' (House of Representatives, Hansard, 18 July 1974, p385, Jones).

The Act made provision for the establishment of consultative planning committees but there was some opposition to these and they were not established in all States.

The hostility of the States to these program approval procedures, particularly those related to urban arterial roads, led the new L-NCP Government to amend the legislation in 1976. The amendments removed the need for Commonwealth approval of State funded urban arterial projects. In addition new arrangements were introduced to allow program approval procedures for local road grants to be replaced by the submission for approval of a list of allocations of these grants to local government authorities.

These steps in relaxing program approval procedures were accentuated in the 1977 legislation. The 1977 legislation continued program approval procedures but also introduced alternative arrangements, committees of Commonwealth and State officials who would plan and furnish advice to Commonwealth and State Ministers on road expenditure programs.

The then Minister for Transport stated that these 1977 measures had the:

> '...objective of eliminating unnecessary complexity and intrusion on our part in the affairs of State governments in relation to transport matters. This is, of course, part of our wide approach in the development of a federalism policy designed to avoid the many areas of friction which characterised our predecessors' arrangements.' (House of Representatives, Hansard, 15 September 1977, p1189, Nixon).

Unfortunately there was a lack of good-will on the part of some States, even hostility towards these committees. As a result there were considerable delays in establishing them.

In 1981 program approval procedures for arterial roads were abolished. While no clear reason was given the move was in line with the federalism policy.

While the approval procedures under the original 1974 Act did lead to the abandonment of some inner city freeway projects in Sydney and Melbourne (and perhaps variations in other projects), there is little evidence that any urban arterial projects were stopped after 1976. Of course the States by then were free to fund any such projects with their own funds. The only major areas of friction concerning projects after 1976 appears to have related to national road projects (routes, standards, etc) which were funded by Commonwealth funds and the requirements for submitting projects to open tender after 1980.

Five year funding program

The CBR's 1975 report noted that the development of a five year program of roadworks, covering the road expenditure of the three levels of government, would make project

or program approval procedures unnecessary. This had not been achieved prior to the 1977 legislation.

When the Commonwealth did announce a five year funding plan in 1980, following repeated requests from the States over many years, the States refused to reciprocate by announcing their own plans. On a number of occasions plans were initiated through the Australian Transport Advisory Council to establish a global funding plan for roads but the States were reluctant to provide information on their share of the total road program. The Australian Council for Intergovernment Relations (ACIR 1981) called for a national road funding plan, even a Roads Council, but the States have shown no inclination to participate.

In short, program approval controls on Commonwealth funds may achieve little in terms of the efficient allocation of total road resources while there is no control over, and indeed, no knowledge of, State and local government road programs. Effective program planning would appear to require a greater degree of co-operation between levels of government than has been evidenced in the past.

LOANS

There are a number of cases where loans have been used to fund road works, particularly at the State and local government levels. The stated objectives of the various road funding authorities at the three levels of government for using loan funds have varied considerably.

At the Commonwealth level there is no real distinction made between revenue sources for road works under the current Road Grants Act since funds are not hypothecated for this Act. Currently there is a clause in the Act providing for dual appropriation, either from the Consolidated Fund or the Loan Fund. As far as the use of funds on road works is concerned, however, there is no significance attached to the source of the funds at all. The clause was provided for purposes of overall budget management and whether the grants come from one fund or the other, the States receive 'non-repayable' grants.

States have on occasions used loan funding for specific road works with the debt being serviced by a toll on the use of the project by motorists. Examples are the Sydney Harbour Bridge, the Berowra-Calga and Waterfall-Bulli tollways in New South Wales, the Indooroopilly and Hinchinbrook Bridges in Queensland and the West Gate Bridge in Victoria. The collection of the tolls and the construction of the project has been in some cases carried out by private companies (eg West Gate Bridge, Indooroopilly Bridge).

The scale of borrowings by State road authorities in recent years is presented in Table 4.4. Only in New South Wales does the Department of Main Roads (DMR) rely heavily on borrowings for road works. These borrowings are not raised for or directed to specific projects. They are largely just a different source of funds for roads. Over time the level of interest payments on these loans is likely to grow significantly and thus, under current arrangements, a smaller share of total expenditure by the DMR will actually be spent on roadworks.

Local government authorities have traditionally relied heavily on borrowings to supplement their rate revenue. While neither source of funds is tied specifically to road works decisions on local government borrowing programs may be at least partly influenced by perceived road needs, particularly as road works form such a large part of the expenditure of many local government authorities.

The use of loans may aid in the efficient allocation of resources because the interest rate payable creates financial discipline. However, because there is generally no direct tie between revenue and expenditure the extent to which loans will encourage investment in those projects with a higher rate of return may be limited.

TABLE 4.4—BORROWINGS BY STATE ROAD AUTHORITIES, 1972-73 TO 1981-82 (CURRENT PRICES)

($million)

State	*1972-73*	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*
New South Wales	8.6	6.5	10.0	21.3	22.0	26.0	51.4	107.0	110.1	95.2
Victoria	0.4	0.3	0.3	0.3	0.3	0.3	1.3	2.5	5.5	1.5
Queensland	1.8	1.4	5.9	2.2	13.8	12.2	7.0	17.6	21.2	13.1
South Australia	0.8	2.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Western Australia	0.0	0.0	0.0	0.5	1.0	0.8	1.0	0.6	1.8	0.2
Tasmania	0.5	0.7	0.6	1.0	5.5	3.9	5.1	4.9	4.1	3.4
Total	12.0	10.9	16.8	25.3	42.5	43.2	66.9	132.6	142.7	113.4

Notes: 1. Figures include only borrowings of State road authorities and exclude borrowings from organisations such as the West Gate Bridge Authority.
2. Figures may not add to totals due to rounding.

Source: BTE (1984).

It is unlikely that these considerations have in any way influenced local or State governments. It is probable that loans are seen simply as another source of funds, particularly when the project can generate a financial return (eg tolls) or when other forms of revenue raising (eg higher taxes) become politically unacceptable.

It is worth noting that interest payments on loans borrowed for road works are allowable as road expenditure for the purposes of quota provisions under the ABRD program. This may make loans more attractive and States which are significant borrowers (eg New South Wales) may consider this aspect before abandoning this form of revenue raising in the near future.

Overall, there are no strong economic reasons to favour loan financing over grants or hypothecated revenue sources in financing road works.

FORMULA

Allocation of Commonwealth Road Grants among States

For many years a formula was used to determine the distribution of Commonwealth road grant money in Australia. This approach involved giving weightings to a variety of criteria; population, area and later the number of motor vehicles on register in each State. It remained in use from the inauguration of Commonwealth roads assistance to the States with the first *Main Roads Development Act* 1923 to the CAR Act 1969 when it was replaced by the recommendations based on benefit cost analysis.

The initial formula was 5 per cent of total road grants allocated to Tasmania and of the remaining 95 per cent, 60 per cent was allocated to the other States on the basis of population, and 40 per cent on an area basis.

In 1959 these weightings were changed to 5 per cent to Tasmania, with the remainder being distributed among States on the basis of one-third population, one-third area and one-third motor vehicles on register.

The 1969 CBR report recommended replacing the formula by allocations based on economic needs, as measured by the CBR's benefit cost analyses. As noted in BTE (1981) this approach was partly adopted in the 1969 legislation and more fully in the 1974 legislation.

The actual distribution of Commonwealth road grants among the States after 1969–70 as compared with the distribution based on the pre-1969 formula is shown in Table 4.5. A comparison of these two distributions indicates that the actual allocation of grants after 1969–70, which were based to a large extent on the benefit cost approach, gradually diverged from the distribution that would have been achieved using the formula approach. By 1980 there were substantial differences in the allocations to some States between the two approaches. Western Australia and South Australia lost considerably as a result of the abandonment of the formula approach.

The old formula approach was in essence an equity based approach, originally focussing on the expenditure side with population and area as proxies for road expenditure needs. The addition of motor vehicle numbers related both to the revenue and expenditure side, but also reduced the weight given to the two largest States in terms of area. Motor vehicle numbers and population are closely related so the overall effect of the change in 1969 was to reduce the share of grants previously provided to Western Australia and Queensland.

The new approach using benefit cost analyses was in essence an efficiency approach. By cutting further the share to Western Australia it meant a shift in emphasis from providing roads in areas of low population density with large road lengths and low traffic volumes to areas where traffic volumes were higher, such as cities.

TABLE 4.5—COMPARISON OF ACTUAL DISTRIBUTION OF COMMONWEATH ROAD GRANTS AMONG STATES WITH DISTRIBUTION IF BASED ON PRE-1969 FORMULA, 1969-70 TO 1981-82[a]

(per cent)

Year	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania	
	Formula	*Actual*	*Formula*	*Actual*	*Formula*	*Actual*	*Formula*	*Actual*	*Formula*	*Actual*	*Formula*	*Actual*
1969–70	27.8	29.6	19.4	19.8	18.3	18.0	11.3	10.9	18.2	17.1	5	4.7
1970–71	27.8	29.8	19.4	19.9	18.2	18.1	11.3	10.8	18.3	16.6	5	4.7
1971–72	27.8	30.4	19.3	20.3	18.2	18.6	11.3	10.4	18.4	16.0	5	4.4
1972–73	27.7	30.7	19.3	20.5	18.3	18.7	11.3	10.0	18.4	15.7	5	4.4
1973–74	27.6	31.0	19.3	20.7	18.5	18.9	11.3	9.8	18.4	15.7	5	4.4
1974–75	27.4	31.5	19.2	20.6	18.6	20.5	11.3	8.7	18.5	13.7	5	5.0
1975–76	27.3	30.8	19.2	20.8	18.7	20.4	11.3	9.4	18.5	14.1	5	4.5
1976–77	27.1	31.2	19.3	21.0	18.7	20.9	11.3	8.9	18.7	13.2	5	4.7
1977–78	26.9	32.6	19.3	20.7	18.8	20.9	11.3	8.5	18.8	12.8	5	4.5
1978–79	26.8	32.4	19.2	20.8	18.9	21.1	11.2	8.5	18.9	12.7	5	4.6
1979–80	26.8	32.4	19.2	20.8	19.0	21.1	11.2	8.5	18.9	12.7	5	4.6
1980–81	26.7	32.4	19.0	20.8	19.2	21.1	11.1	8.5	19.0	12.7	5	4.6
1981–82	26.7	32.4	18.5	20.8	19.6	21.1	11.2	8.5	18.7	12.7	5	4.6

a. Formula was 5 per cent for Tasmania, balance divided one-third according to population, one-third according to area and one-third according to motor vehicles on register.

Note: Figures for Northern Territory have been excluded to enable a consistent comparison over the whole period.

Sources: ABS (1969–82 and 1969–1983). Commonwealth of Australia (1964–82).

Current allocation of Local Road Grants

The new system of allocating grants largely based on efficiency subsequently fell into disfavour as far as local roads grants were concerned. The CBR reports of 1973 and 1975 indicated that on benefit cost grounds local roads, which normally had low traffic levels, particularly in rural areas, would not warrant large expenditure. The roads legislation enacted by the Commonwealth Government indicates, however, that it was keen to continue funding these roads. For this and two other reasons there began a move towards a formula approach to the funding of these roads based on equity criteria.

The first of these other reasons was a concern that States were directing a disproportionate level of Commonwealth local roads grants to local roads which were the responsibility of State government authorities, at the expense of roads which were the responsibility of local government authorities. It is clear that the Commonwealth Government at the time saw local roads grants as an important element of assistance to local government.

The second reason was the perception by the Commonwealth that local government authorities were not always aware of the level of Commonwealth funding of local roads. Commonwealth funds were provided initially to the States. State funds were in most cases added to these funds with the result that Commonwealth and State funds were not easily distinguishable. A cut in State funds could be seen by some local government authorities as a reduction in Commonwealth funds.

A formula approach solves these problems. Firstly, it can be based on equity rather than efficiency objectives if so desired. Secondly, State governments cannot interfere in the allocation process once the formulae have been agreed upon. Thirdly, local government authorities can see exactly how much Commonwealth money they receive. In addition, the stability of funding offered by a set formula enables local government authorities to better plan their road programs.

The disadvantages of the approach from an efficiency viewpoint mainly concern the rigidity created by a formula and the difficulty in properly accounting for efficiency objectives over time. It is difficult, for example, for a formula to be readily adjusted to take into account special needs that arise from time to time, such as development needs in an area experiencing a sharp upturn in activity in, say, business or mining. It may also be preferable to take account of other special needs. For example, areas where output is mainly perishables (eg milk) may obtain greater benefits in terms of time savings from better roads than, say, mining areas. It is also important from an efficiency viewpoint to fully consider the costs of providing better roads to areas in economic decline. The best way to adequately take account of these aspects under a formula approach is to reserve a proportion of the grants for separate distribution on a needs basis. However, this portion becomes in effect, a separate 'non-formula' or 'needs' grant.

Examination of current local roads formulae

The current allocation formulae for local roads were examined with a view to relating them to possible objectives. The aim of this exercise was to identify various alternative formulae that could be adopted and to assess the possible effects of their adoption. The exercise was conducted because there appeared to be no clear objectives behind the current formulae nor were the reasons for differences between the various formulae clearly stated.

Details of the current formulae are provided in Appendix III. Most of the formulae contain two separate parts. The first is the share of the grant to each State that is to be passed on to local government authorities with the balance to be spent by the State.

The second part of the typical formula relates to the distribution of this portion passed on among local government authorities. It is this distribution formula that is examined in this section. In some cases (eg Western Australia) there is a fixed split among urban and rural authorities with further distribution on a different basis for rural and urban authorities. In other cases there is no specific rural/urban split, with allocations to each authority being determined by broad criteria such as population and road length. In one case, Queensland, there is not really any formula at all but rather a specific share of total funds is allocated to each authority based on a previous year's allocations.

The differences from one State to another in the formulae are of interest. It appears that the formulae are more tailored to special circumstances in each State rather than national similarities. Nevertheless there are common elements in some of the formulae. The predominant element in the various formulae is population. Road length is also an element of almost all formulae. Other factors include area and road funding effort.

Individual State formulae for allocating road finance to local government authorities were analysed by classifying local governments into eight categories. These categories are based on the work by C.P. Harris and are set out in Table 4.6. This classification assisted in examining the effects of the formulae on various types of local government authority, particularly the differences for urban and rural local authorities.

The distribution of local road grants in each State as a result of the formulae is shown in Table 4.7. Table 4.7 also shows the distribution which would result from a formula based entirely on either population or road length. These statistics were derived from the ABS series *Standardised Local Government Financial Statistics* (which was referred to in Chapter 2). With the exception of Victoria the current allocations fall between the results obtained using either population or road length.

Alternative formulae arrangements

A formula to distribute local road grants could be based on a number of factors. These include distributions based on area, road length per unit area or per capita, road expenditure from own resources and population density. Table 4.8 illustrates what the distribution of grants to urban and rural areas would be if the formula was based on any one of these factors. Widely differing results are evident, indicating that the choice of elements of the formula or the weightings given to each element can be highly significant.

TABLE 4.6—CLASSIFICATION OF LOCAL GOVERNMENT AUTHORITIES

Local government category	*Type of authority*	*Population range of urban centre with which local authority is associated*
1	Metropolitan local authority	500 000 and over
2	Large city local authority	100 000–499 999
3	Medium city local authority	25 000– 99 999
4	Small city local authority	10 000– 24 999
5	Large town local authority	5 000– 9 999
6	Medium town local authority	2 500– 4 999
7	Small town local authority	1 000– 2 499
8	Country local authority	no association with an urban centre

Source: Harris (1975).

TABLE 4.7—COMPARISON OF DISTRIBUTION OF LOCAL ROADS GRANTS AMONG LOCAL GOVERNMENT AUTHORITIES WITH DISTRIBUTION ACCORDING TO POPULATION AND ROAD LENGTH, BY STATE, BY HARRIS CATEGORY, 1982–83

(percentage of State total)

	Urban				*Rural*					
Distribution method	*Metro-politan*	*Large city*	*Medium city*	*Total urban*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*	*Total rural*
				New South Wales						
Current distribution of grants	19	4	2	25	11	15	17	21	12	75
Distribution if formula based on:										
Population	59	10	4	73	11	7	4	5	2	28
Road length	8	2	1	11	10	11	18	28	22	89
				Victoria						
Current distribution of grants	10	2	3	15	5	5	17	27	31	85
Distribution if formula based on:										
Population	68	4	4	76	6	3	4	6	4	23
Road length	13	1	4	18	3	2	11	29	37	82
				Queensland						
Current distribution of grants	30	0	15	45	2	9	10	15	19	55
Distribution if formula based on:										
Population	46	0	23	69	3	9	8	6	6	32
Road length	6	0	5	11	1	6	15	25	42	89

TABLE 4.7(Cont)—COMPARISON OF DISTRIBUTION OF LOCAL ROADS GRANTS AMONG LOCAL GOVERNMENT AUTHORITIES WITH DISTRIBUTION ACCORDING TO POPULATION AND ROAD LENGTH, BY STATE, BY HARRIS CATEGORY, 1982-83

(percentage of State total)

Distribution method	*Urban*				*Rural*					
	Metro-politan	*Large city*	*Medium city*	*Total urban*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*	*Total rural*
South Australia										
Current distribution of grants	39	0	1	40	3	4	4	15	33	59
Distribution if formula based on:										
Population	71	0	2	73	4	4	3	7	8	26
Road length	10	0	0	10	2	4	3	21	59	89
Western Australia										
Current distribution of grants	14	0	0	14	13	6	14	11	42	86
Distribution if formula based on:										
Population	68	0	0	68	10	4	7	4	7	32
Road length	7	0	0	7	4	2	15	15	58	94
Tasmania										
Current distribution of grants	0	13	15	28	4	5	14	14	35	72
Distribution if formula based on:										
Population	0	32	20	52	10	5	11	9	12	47
Road length	0	6	12	18	4	5	14	17	44	84

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

Source: ABS (1980-81).

TABLE 4.8—DISTRIBUTION OF LOCAL GOVERNMENT ROAD GRANTS BETWEEN URBAN AND RURAL AREAS IF FORMULA BASED ON ALTERNATIVE FACTORS, 1980–81

(percentage of State total)

	Population	*Road length*	*Area*	*Road length per unit area*	*Road length per capita*	*Road exp from own resources*	*Population density*
New South Wales							
Urban	73	11	1	73	1	71	97
Rural	29	89	99	26	99	30	3
Victoria							
Urban	76	18	5	74	3	67	86
Rural	23	82	95	26	98	33	14
Queensland							
Urban	69	11	3	50	–	45	95
Rural	32	89	97	50	99	56	5
South Australia							
Urban	73	10	2	67	1	73	92
Rural	26	89	98	33	100	27	8
Western Australia							
Urban	68	7	–	71	–	73	98
Rural	32	94	100	30	100	27	2
Tasmania							
Urban	52	18	7	66	4	42	79
Rural	47	83	94	33	96	58	20

– nil or rounded to zero

Note: Urban and rural figures may not add to 100 due to rounding.

Source: ABS 1980–81.

The presentations in Tables 4.6 and 4.7 show that it may be difficult to develop a sensible formula based on one factor alone. They also show the importance of selecting the elements of a formulae for distributing road grants to local government. This selection should be based on the objectives that the Commonwealth may have for local road grants.

There are various reasons for choosing particular elements in a formula. For example, it could be argued that authorities with small populations but large areas need special assistance on both the revenue side (because of a small revenue base) and the expenditure side (because they are likely to have a greater road length to service). In contrast, population alone may also be an important factor since it influences the use of roads and the upkeep of them. However, the use of population alone would favour urban areas which could possibly be balanced by including area in the formula. Road expenditure effort could also be an important factor if it is considered that high road expenditure effort should be encouraged to avoid local governments using the grants to substitute for their own expenditure.

Of course there are many other objectives that could be sought. It is important, however, that these be specified first and the tools to achieve them developed subsequently. For example, an objective such as the desire to assist rural in favour of urban areas should be clarified. It should be ascertained whether it is low population density or high road length per capita in rural areas that creates the 'special' need. If special treatment to one type of area is considered appropriate then the urban/rural split should be developed taking into account factors such as population density,

rather than selecting an apparently arbitrary split as is the case with some of the current State formulae. If, on the other hand, the reason for favouring one area over another is income related (eg lower rating capacity) this may better be addressed by other means such as personal income tax sharing arrangements and not through roads grants at all.

Once objectives are set the elements of a formula can more clearly be established and their weighting determined. Where there are special needs within particular States these can be addressed separately. The detail of some of the current formulae, particularly that for Western Australia, tends to suggest that the formulae have been designed more to provide for these special needs than for national objectives. In Western Australia, for example, where there are special needs in the Pilbara or Kimberleys, a proportion of the grant for Western Australia could be set aside (as suggested above) for the Department of Main roads to administer, with a separate formula if necessary, rather than altering the formula to suit these needs. This would enable a fairly consistent formula to be developed for each State aimed at national objectives rather than individual State special needs.

It must be noted, however, that these formulae for distributing Commonwealth road funds to local government authorities were developed in consultation with the individual State governments and, in many cases, with local government bodies. Presumably, one of the objectives of the Commonwealth at that time was to develop formulae that were acceptable to both the lower levels of governments. Where there are Commonwealth national objectives for local roads there is no guarantee these will correspond to those of the two lower levels of government. The Commonwealth Government should be clearly aware of its national objectives at the outset since there is always a danger that, in developing formulae to account for special needs, overall national objectives will become submerged and the resulting formulae represent merely State and local government objectives.

CHAPTER 5—ABSORPTION OF COMMONWEALTH GOVERNMENT SPECIFIC PURPOSE GRANTS FOR LOCAL ROADS INTO GENERAL REVENUE GRANTS

This chapter examines the final road financing arrangement to be addressed in this paper; the possible absorption of Commonwealth grants for local roads into local government income tax sharing grants.

Absorption is aimed at returning to the recipients of grants all the decision-making power over how the grants are to be spent (eg category allocations, project allocations, even whether the funds are to be spent on roads). Thus the discussion does not focus on whether Commonwealth objectives for roads are met, as in Chapter 4, but instead concentrates on likely implications of such a policy on the level and pattern of local government road expenditure.

Since a policy of absorption of road funds into general revenue grants has never been adopted in Australia, it cannot be examined from an historical perspective. The approach taken in this chapter is to first describe what the effects of absorption might be using the revenue and expenditure patterns of local government authorities. This is followed by a discussion of the applicability of different studies of local government expenditure to the absorption question and to road expenditure in general.

Associated with the likely effects absorption might have on road expenditure is the general question of local government expenditure priorities from general revenue grants. The Australian Council of Local Government Associations conducted a survey on this issue in an attempt to ascertain the attitude of local government authorities. The results of this survey are also briefly discussed later in the chapter.

The analysis of local government expenditure patterns was conducted using eight functional groups of local government authorities. These groups were the Harris categories used in the previous chapter, and are based on the population of the urban centres associated with the authority. The disaggregation of local government authority data is important because revenue sources and expenditure requirement patterns vary among authorities. As a result local government authorities with different budgets and other characteristics are likely to react differently to absorption of their Commonwealth road grants.

LOCAL GOVERNMENT AUTHORITY REVENUE

The major sources of revenue can be considered under the two broad headings, untied revenues and tied, being made up of:

Untied revenue

- rates
- loans
- general revenue grants.

Tied revenue

- specific purpose grants for roads (including reimbursements)[1].

The relative importance of different revenue sources by State by local government category is set out in the tables in Appendix IV. The tables show the proportion of total revenue that is derived from tied and untied revenue sources, as well as the relative importance to total revenue of specific purpose grants, rates, etc. It is the reaction of local government authorities to changes in the relativities between tied and untied sources of revenue which will give an indication of the effect on road expenditure from the absorption of road grants into general revenue grants.

Untied revenue

The level of untied revenue received by a local government authority can be considered as discretionary revenue that is available for expenditure in areas which are deemed important by that authority. The proportion of total revenue of local government authorities made up from untied revenue varies among authorities. For example, in New South Wales untied revenue made up 88.4 per cent of the total revenue received by local authorities in the metropolitan areas in 1980–81 (see Table 5.1). In the country authorities the corresponding percentage was 53.8 per cent. This suggests that the metropolitan local authorities had more flexibility in the distribution of funds between competing areas in that year.

Although in general untied grants can be considered as discretionary income there may be some local authorities for which a proportion of their revenue is required to complement other tied expenditure. For example, in those local authorities where the absolute level of revenue may be small, there may be some projects which are funded by tied grants but which their very nature require the funding of other (complementary) projects for example, storm water drainage associated with the sealing of roads. Such complementarity will occur in all local authorities, but for

TABLE 5.1—UNTIED REVENUE AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales	88.4	82.6	87.8	81.0	78.5	71.5	62.5	53.8
Victoria	83.7	77.8	74.1	72.6	69.5	66.3	64.8	58.2
Queensland	85.8	..	82.4	71.4	74.5	65.9	59.2	51.3
South Australia	90.1	..	88.5	82.3	83.0	85.7	81.0	72.6
Western Australia	86.0	..	..	74.3	77.2	70.2	69.8	63.3
Tasmania	..	93.6	81.9	94.4	76.2	85.6	76.8	67.6

.. not applicable

Source: ABS (1980–81).

1. In the ABS SLGFS, specific purpose grants comprise grants received specifically for roads (including repair of flood damage, except in Queensland) where these are credited to loan funds. The major component is grants made from joint Commonwealth-State road moneys or, in New South Wales and Queensland, Commonwealth road grants distributed by the State road authorities (in New South Wales before February 1975 they were distributed by the Department of Public Works). Reimbursement to councils for work done on behalf of the State road authorities etc are excluded from the ABS category 'Specific Purpose Grants' and are shown under 'Reimbursement for Work Done'.

small rural authorities this expenditure can represent a significant proportion of their untied revenues. The result is that the true discretionary component of untied revenue to some local government authorities may not be very large.

Rates

Rates contribute a greater proportion of revenue to local government authorities in urban areas than they do to local authorities in rural areas in four of the six States (see Table 5.2). New South Wales local authorities in the metropolitan areas obtain an average of 57 per cent of their total revenue from rates, with all the urban authorities obtaining at least half their revenue from rates. The local government authorities in the rural areas of New South Wales obtain less than 45 per cent of their total revenue from rates. In Western Australia and Victoria the metropolitan areas also obtain less than half of their total revenue from rates.

TABLE 5.2—RATES AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales	57.0	55.1	50.9	44.3	36.3	34.7	31.4	29.3
Victoria	45.9	50.7	43.2	36.9	36.0	37.5	39.9	32.5
Queensland	51.4	..	44.7	38.6	43.4	34.8	31.7	28.2
South Australia	59.3	..	46.3	52.6	53.0	50.2	47.7	47.0
Western Australia	47.7	..	..	36.3	40.1	27.7	29.5	30.5
Tasmania	..	57.6	45.2	61.3	46.8	51.0	46.4	34.9

.. not applicable

Source: ABS (1980–81).

General revenue grants

The importance of general revenue or personal income tax tax sharing (PITS) grants within the local government revenue pool varies among local government authorities.

Although there are a number of exceptions, general revenue grants, in terms of their share of total revenue, become more significant the smaller the city or town. For example, Table 5.3 shows that in New South Wales general revenue grants contribute about 7 per cent towards total revenue in the metropolitan areas, and about 11 per cent towards total revenue of the rural local authorities. Those local government authorities which include medium towns obtain about 13 per cent of their revenue from general revenue grants.

Tied revenue

Tied revenue represents a significant component of the total revenue received by local government authorities, particularly in small towns in rural areas. Therefore, any changes in the method of distribution of such grants may have a substantial impact on local government expenditure patterns, particularly if the level of total revenue of local governments is affected. These impacts are likely to be greater in the rural areas where any reduction in tied revenue levels would be more significant in relation to total revenue and could substantially reduce the activities of these local government authorities.

The relative importance of tied revenue to local government authorities is shown

TABLE 5.3—TOTAL COMMONWEALTH AND STATE GOVERNMENT GENERAL REVENUE GRANTS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales	7.1	9.1	9.1	10.1	11.3	13.3	12.1	11.2
Victoria	6.6	8.5	11.7	10.1	9.9	10.8	10.6	11.2
Queensland	6.7	..	9.1	10.1	10.4	12.2	17.0	16.0
South Australia	10.0	..	18.2	14.8	15.8	17.2	16.0	15.2
Western Australia	6.9	..	..	12.5	15.7	18.3	16.7	15.2
Tasmania	..	9.6	10.2	10.3	13.4	13.3	16.6	18.8

.. not applicable

Source: ABS (1980–81).

in Table 5.4. It is evident from this table that total tied revenue, which includes specific purpose grants for work done in relation to roads, contributes more to the total revenue of local government the further the local government authority is located from the major cities. In New South Wales, for example, metropolitan authorities obtain 11 per cent of their revenue in the form of tied revenue while rural local authorities obtain 46 per cent of their revenue from these same sources. This trend means that metropolitan local authorities will in general have greater flexibility in the choice of projects which they can undertake.

In some country areas the level of tied revenue for roads may well be the deciding factor in the decision of a local government authority to maintain a road maintenance/construction unit. Therefore, even though the road expenditure decision may be largely outside the direct control of the authority it can have a significant effect on a local government authority's own road expenditure decisions.

Specific purpose grants for roads

Specific purpose grants have greater significance for those local government authorities in rural areas because they represent a greater proportion of their total revenue.

TABLE 5.4—TIED REVENUE AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales	11.6	17.4	12.2	19.0	21.5	28.5	37.5	46.5
Victoria	16.3	22.2	25.8	27.4	30.5	33.7	35.2	41.8
Queensland	14.2	..	17.6	28.6	25.5	34.1	40.8	48.7
South Australia	9.9	..	11.5	17.6	17.0	14.3	24.0	27.4
Western Australia	14.0	..	..	25.7	22.7	29.8	30.2	36.7
Tasmania	..	6.4	18.1	5.6	23.8	14.4	23.1	32.1

.. not applicable

Source: ABS (1980–81).

For example, in Victoria specific purpose grants for roads contribute only about 6 per cent towards total revenue of metropolitan authorities while for rural authorities specific purpose grants contribute up to 32 per cent of total revenue (see Table 5.5).

TABLE 5.5—SPECIFIC PURPOSE GRANTS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales	4.4	10.0	5.8	12.3	14.0	21.9	31.0	40.7
Victoria	5.7	7.3	10.6	10.7	10.4	19.6	23.6	31.9
Queensland	6.5	9.0	9.0	9.1	15.8	20.0	28.2	32.2
South Australia	3.0	..	1.5	6.4	6.4	5.6	10.5	15.4
Western Australia	8.7	..	..	15.7	18.7	20.9	24.4	31.1
Tasmania	..	5.8	10.9	3.0	13.3	10.5	12.6	27.6

.. not applicable

Source: ABS (1980–81).

LOCAL GOVERNMENT ROAD EXPENDITURE

Local government road expenditure is a significant proportion of the total expenditure of all local government authorities in all States and particularly for rural local authorities.

Table 5.6 shows the importance of road expenditure for each Harris category for 1980–81. In the inner metropolitan areas in all States in this year road expenditure made up between 22 and 26 per cent of local government authority total expenditure. In contrast road expenditure by local government authorities in medium towns in rural areas made up between 25 and 43 per cent of their total expenditure, while for the country authorities not associated with any urban centre, road expenditure represented between 43 and 63 per cent of total expenditure.

TABLE 5.6—ROAD EXPENDITURE AS A PERCENTAGE OF LOCAL GOVERNMENT TOTAL EXPENDITURE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales	26.3	31.6	30.8	33.9	35.8	42.0	52.0	63.8
Victoria	22.0	22.6	36.4	26.9	24.6	42.3	49.7	59.1
Queensland	22.2	..	24.9	18.4	33.6	40.3	45.9	50.3
South Australia	23.0	..	20.4	22.9	28.9	25.1	35.9	43.1
Western Australia	22.9	..	..	27.8	31.5	31.2	42.6	49.5
Tasmania	..	25.0	26.4	36.8	23.7	43.0	36.2	46.5

.. not applicable

Source: ABS (1980–81).

Road works are financed from both tied and untied revenue. The relative importance of these two sources of revenue for road expenditure varies both between and within States. These differences are significant because it means that local government authorities are likely to react differently to changes in road funding arrangements.

Road expenditure from tied revenue sources

Road expenditure derived from tied revenue sources is important to all local government authorities, but is more important to rural local government authorities, as a component of total local government expenditure, than it is for local government authorities in urban areas. Local government authorities in small cities and in large towns show similar expenditure patterns to metropolitan authorities.

For example, in 1980–81 metropolitan local authorities in Queensland derived 2 per cent of their expenditure from tied resources, while small town and country authorities derived about 29 per cent and 35 per cent respectively of their total expenditure resources from tied funds (see Table 5.7).

Road expenditure derived from untied revenues

The proportion of road expenditure by local government authorities derived from untied revenue varies both between and within States. However, within each State the variation across local government categories is smaller than the variation in tied grants. In South Australia for example, the contribution to road expenditure from untied revenues as a percentage of total untied expenditure only varies between 19 and 26 per cent right across the local government categories (see Table 5.7).

TABLE 5.7—ROAD EXPENDITURE FROM TIED AND UNTIED REVENUE AS A PERCENTAGE OF LOCAL GOVERNMENT TOTAL EXPENDITURE, BY STATE, BY LOCAL GOVERNMENT CATEGORY, 1980–81

(per cent)

	Urban			*Rural*				
State	*Metro-politan*	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
New South Wales								
Tied revenue	7.2	12.8	8.2	14.7	17.5	23.4	32.4	41.5
Untied revenue	19.1	18.8	22.6	19.3	18.3	18.7	20.2	22.3
Victoria								
Tied revenue	8.4	10.2	14.2	14.8	13.2	23.4	26.6	33.6
Untied revenue	13.6	12.4	22.2	12.1	11.4	19.3	23.0	25.5
Queensland								
Tied revenue	2.2	..	10.3	9.4	16.9	21.7	28.8	35.1
Untied revenue	14.9	..	14.5	8.9	16.7	18.6	17.1	15.7
South Australia								
Tied revenue	3.9	..	1.7	6.1	7.0	6.3	11.4	17.0
Untied revenue	19.1	..	18.7	16.8	21.9	18.8	24.5	26.1
Western Australia								
Tied revenue	10.5	..	..	19.7	20.1	24.1	25.7	33.6
Untied revenue	12.4	..	..	8.1	11.3	8.4	17.0	16.1
Tasmania								
Tied revenue	..	4.6	12.9	3.5	16.0	13.6	18.9	33.6
Untied revenue	..	15.9	14.1	19.0	16.4	26.1	27.0	24.3

.. not applicable

Source: ABS (1980–81).

THE EFFECTS OF CHANGES IN REVENUE SOURCES ON LOCAL GOVERNMENT ROAD EXPENDITURE

The likely responses of local government authorities from the possible absorption of specific purpose grants into general revenue grants can be inferred from information about the general pattern of local government revenue raising and expenditure to date. The main guide is the reaction of local government to the introduction (and later expansion) of general revenue grants since absorption of road grants should, *ceteris paribus*, result in similar reactions.

There have been no specific studies of this question to date but there have been some more general studies of local government financial behaviour. These are examined below. In addition time series data on local government road expenditure are presented and a model developed by BTE, in an attempt to test hypotheses concerning local government behaviour, is discussed. Finally a recent survey of local government authorities is reported. All of these throw some light on the likely response of local government to a possible absorption policy.

Local government reaction to PITS grants

There are two main problems in assessing how local government authorities allocate their PITS grants among the various areas of expenditure. Firstly, local government authorities tend to pool untied funds so that a particular revenue source is not hypothecated to a particular area of expenditure. Although individual authorities or even groups of authorities (eg outer rural authorities) may tend to allocate more of their PITS grants to particular expenditure areas (eg roads) no clear patterns are discernable Australia-wide.

Secondly, as shown in Figure 5.1, PITS grants have grown at a similar rate to the total of all other untied revenue. As well. PITS grants currently represent less than 10 per cent of total untied revenue. For these two reasons it is difficult to isolate their effect on road expenditure from the influence of other untied revenue.

Overall, road expenditure as a percentage of total untied revenue (or as a percentage of untied revenue less PITS grants) has fallen steadily since general revenue grants were first introduced in 1974–75[1]. Real road expenditure has fallen while PITS grants and total untied revenue have risen in real terms. It would appear. therefore. that little of the PITS grants have been allocated to roads.

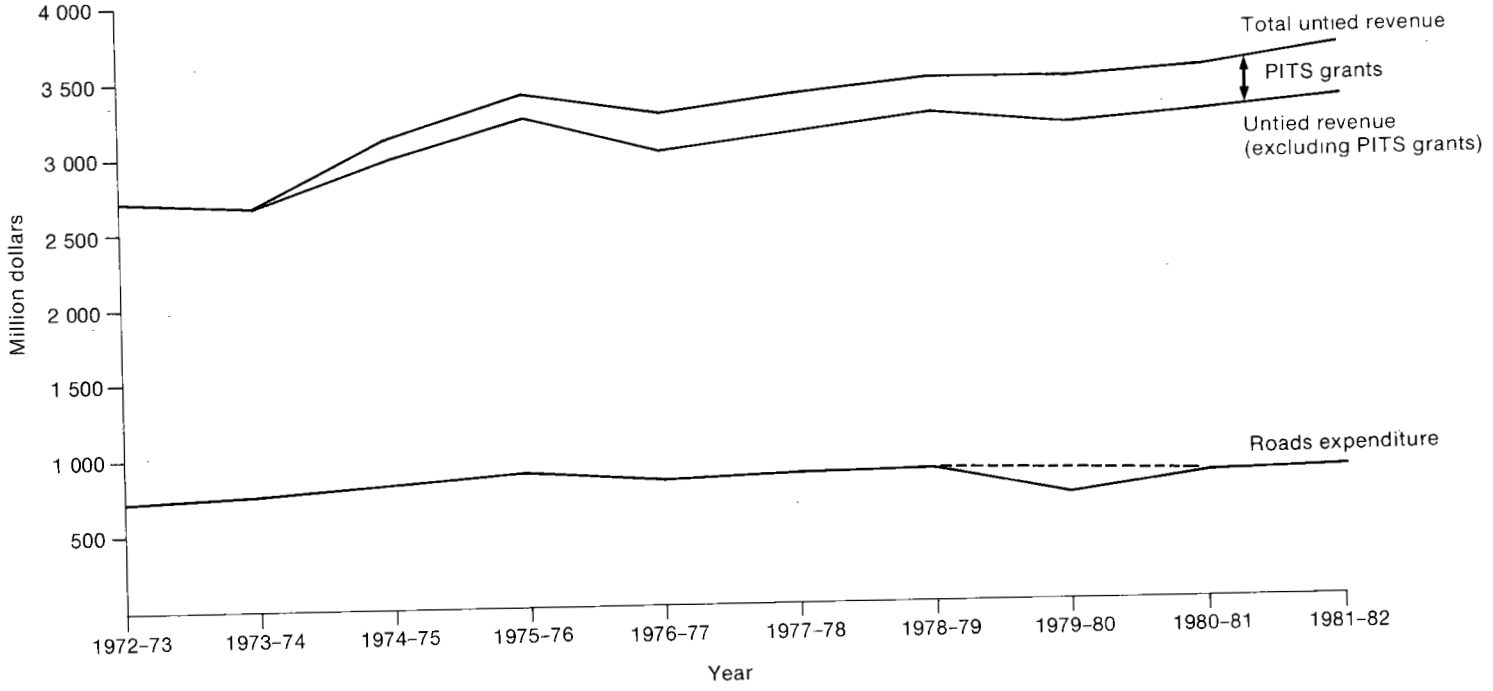
Australian Studies of Local Government Expenditure

There have been a number of recent Australian studies of local government revenue and expenditure patterns. These include studies by Blackburn, Kiefer, and Stanley and Starkie.

During the late 1970s the BTE undertook research into local government budget payments. An article by Blackburn (1979) reported on this work and presented a brief overview of the developments at that time in quantifying the impact of Commonwealth grants and advances on State and local government budgets. Blackburn used a generalised adjustment model with a pooled cross-section time series data set to examine the long run impact of Commonwealth Government payments on State and local government budgets.

There are, however, a number of factors which prevent Blackburn's model or his results being applicable for analysing the effects of changes in grant conditions on road expenditure. The time period used by Blackburn was 1961–62 to 1976–77. As noted previously, Commonwealth general revenue grants to local government only began in 1974–75. Therefore, the effects of these grants would not be properly

1. General revenue grants were changed to the current personal income tax sharing grants in 1976–77.



Sources: Commonwealth of Australia (1973–82). BTE (1984).

Figure 5.1—Comparison of local government road expenditure with total untied revenue (including PITS grants), 1972–73 to 1981–82 (constant 1981–82 prices)

reflected in his results. In adition, this work only considered Australia-wide effects, whereas there are likely to be variations in the reaction of local authorities to the introduction of general revenue grants from State to State, and particularly within States (eg between urban and rural authorities). For these reasons the model developed in BTE by Blackburn was not considered suitable for assessing local government reactions to general revenue grants.

A study by Kiefer (1981) examined the proposition that government budgets were relatively inflexible and looked at the measurement of 'adjustment dynamics' of public budgets among Australian local governments during the period 1967-74. Like the earlier BTE work, Kiefer also used a generalised adjustment model. Kiefer's results indicated that for the first few years for every dollar increase in specific purpose roads grants there would be an increase in total road expenditure of only about 75 cents. Local government authorities would divert 25 cents of their own road expenditure to other areas 'especially the budget surplus and other service accounts'. Kiefer concluded that 'after several years, however, a dollar of grants (specific purpose) eventually results in approximately an equal increase in road spending. This is evidence for the effectiveness of the Australian system of side conditions in earmarking grants specifically to road expenditure'. (Kiefer, 1981).

Stanley and Starkie (1983) looked at the significance of rural road expenditure in Australia and 'the limited success of attempts to place grants for these roads within a framework of economic efficiency'. Using a multiple regression approach with data from 1974-75 to 1978-79 for South Australia the authors concluded that the rural population considered road networks as a 'merit good' and as such the authors suspect that expenditure on rural roads would be higher than 'indicated as appropriate by a 'revised' cost benefit analysis'. Although the Stanley and Starkie approach provided interesting results, its conclusions are too narrow to assess local government reactions to a policy of absorption.

Recent BTE Work

The BTE, expanding on the work of the above three studies, developed a regression model in an attempt to look at the effects of changes in specific purpose and general revenue grants on road expenditure. The aim was to identify the possible effect of changes in the level of road expenditure resulting from changes in various sources of revenue. These effects were likely to be different depending on whether the authorities were urban or rural. Therefore, local government authorities were stratified into eight local government categories. However, the limitation of the data (the available ABS AMIS Series covered only the period 1975-76 to 1978-79 and in any case the AMIS Series was terminated in 1980) and the small variations in much of the data between 1975-76 and 1978-79 (see Figure 5.1) hindered the development of a 'robust' model.

A regression equation was tested with road expenditure as the dependent variable and the following as independent variables; rates, loans, general revenue grants, specific purpose grants, sealed road length, unsealed road length, street construction and maintenance, reimbursements, population and other expenditure. The model was developed to the point where there was no multicollinearity or serial correlation but it has not proved possible to isolate the 'pure' substitution effect from the income effect in the time series data. Nevertheless, the general results indicated that there would be both inter- and intra-state differences in road expenditure by local government authorities to changes in the levels of specific purpose grants and general revenue grants.

The regression results also tended to support the hypothesis that rural local authorities would spend a greater proportion of any absorbed funds on roads than would local government authorities in urban areas.

Survey conducted by the ACLGA

Further support for the above findings can be found in the results of a survey of local government authorities reported by the Australian Council of Local Government Associations at their 1982 national conference (ACLGA, 1982). While it was conceded that the survey was not conducted using completely scientific methods, nevertheless, the response rate to the questionnaire was fairly good.

The questionnaire sought from individual local authorities the expenditure priorities placed on general revenue (PITS) grants. The results indicated that for Australia as a whole the most significant uses of general revenue grants were:

'• Priority 1—containment of rate increases
- Priority 2—financing of normal capital works to reduce borrowing
- Priority 3—substitution for specific purpose grants
- Priority 4—providing additional funds for roadworks
- Priority 5—providing additional funds for recreation and culture
- Priority 6—containment and increases in fees and user charges' (ACLGA 1982, p11).

In all States the priority given to funding new roadworks was higher in rural areas than in urban areas. The importance of roadworks increased the more 'rural' the authority.

Distribution of Absorbed Funds

The above results indicate that the level of road expenditure from absorbed funds would depend on how the funds were distributed among local authorities. In general, there are three ways in which funds might be distributed. Firstly, they could be distributed in the same way as PITS grants are currently distributed by State Grants Commissions[1]. Secondly, they could be distributed in the same way as local road grants are currently allocated by the various State formulae. Alternatively, a new formula could be developed (which in practice would probably be a compromise between the first two methods of distribution).

In the first case, there would be a significant redistribution of funds away from many of the rural local government authorities to urban local authorities. Consequently, absorption on this basis would probably lead to a large reduction in total local government road expenditure. This is because the current distribution of PITS grants is much less biased towards rural authorities than is the distribution of local road grants under the various formulae (see Table 5.8).

In the second case, the total level of roads expenditure would also probably fall but there would be more expenditure on rural local roads than in the first case and less expenditure on urban local roads. An alternative distribution method would be required if these impacts were to be avoided.

Possible impacts of an absorption policy

If specific purpose grants to local government authorities for roads were to be absorbed into general revenue grants then the amount of expenditure on roads is likely to decline, particularly in urban areas. A decline in expenditure on roads is expected because the removal of restrictions on road grants is most unlikely to result

1. Roads needs are currently taken into account by the various State Grants Commissions in calculating the distribution of PITS grants among local government authorities. The exact details of the methodologies are not made public so it is not possible to determine how significant the road needs component is in these calculations. However, it is interesting that both the PITS calculations and the local roads formula both take some account of road needs.

TABLE 5.8—COMPARISON OF DISTRIBUTION OF LOCAL GOVERNMENT PITS GRANTS AND COMMONWEALTH GRANTS FOR LOCAL ROADS TO URBAN AND RURAL LOCAL GOVERNMENT AUTHORITIES

(per cent)

	PITS Grants		*Road Grants*	
States	*Urban*	*Rural*	*Urban*	*Rural*
New South Wales	45	54	25	75
Victoria	51	49	15	85
Queensland	45	55	45	55
South Australia	49	51	40	59
Western Australia	50	50	14	86
Tasmania	50	50	28	72

Source: ABS (1980-81).

in any local government authority actually spending more on roads, but may result in some (or all) authorities using some (or all) of the now untied funds for other purposes. However, there is no conclusive evidence available about what the resulting level of expenditure might be. Therefore, if the main objectives of a change in the distribution of grants were to give more autonomy to local government authorities without being concerned for the resulting level of road expenditure then absorption is an acceptable change to the funding mechanisms. If such a change were to be adopted and local government authorities are to maintain the current level of their combined specific purpose and general revenue grants, then consideration should be given to new methods of distributing funds to local government authorities, because the adoption of existing methods could result in the shift of funds from rural to urban areas.

CHAPTER 6—ALTERNATIVE ROAD FINANCING OPTIONS

The preceding chapters have been historical in their perspective, tracing both road expenditure patterns and arrangements over the decade to 1981–82. This chapter draws together the main conclusions reached in the previous chapters and discusses the implications for future road financing. Some projections are also presented of what might happen with road expenditure patterns over the next few years if current arrangements remain unchanged and recent trends continue. These projections, which indicate those categories and States where a decline or increase in expenditure might occur, should assist in identifying areas where changes in current arrangements may be desirable.

ROAD EXPENDITURE PROJECTIONS

The main assumption adopted in preparing the road expenditure projections was that there will be no sudden changes to Australia's road funding procedures. Changes to Australia's road expenditure patterns resulting from the introduction of a program like the ABRD or schemes such as State fuel franchise charges are impossible to predict.

The general methodology used was to separately project Commonwealth, State and local government road expenditure. For Commonwealth expenditure two alternative assumptions were made concerning the ABRD program. One projection (Projection A) was based on the assumption that the program ceases on 31 December 1988 as has been announced. Thus only expenditure under the Roads Grants Act was projected to 1989–90 in this scenario. An alternative projection (Projection B) was prepared assuming that the ABRD program is extended until at least June 1990 and continues to be financed by a two cents/litre hypothecated fuel excise. The relative allocation to categories and States under each Act was assumed to remain constant after 1984–85. State and local government expenditure was projected on a State by State basis but with the relative shares for each category in each State assumed to remain in line with the 1981–82 pattern (the last year for which data are available).

The assumptions adopted to project road expenditure levels in 1989–90 are set out in Table 6.1. In addition, it was assumed that the rate of increase in road construction costs would average 10 per cent per annum from 1981–82 to 1989–90.

Projection A

The projections are presented as a comparison between the projected 1989–90 expenditure and the actual expenditure in 1981–82. Table 6.2 shows the allocation of 1981–82 total road expenditure among States and categories with which the projections were compared.

The projected movements in expenditure among States and among road categories resulting from these assumptions if the ABRD program is terminated in 1988 are presented in Table 6.3 The movements shown represent increases and decreases in 1981–82 prices, from the 1981–82 allocations in Table 6.2.

The projections in Table 6.3 indicate that there would be a small decrease (8 per cent) in total road expenditure in 1989–90 compared with 1981–82. Figure 6.1 shows that by 1989–90 with these arrangements total road expenditure is likely to be declining

TABLE 6.1—ASSUMPTIONS ADOPTED TO PROJECT ROAD EXPENDITURE

Level of government	*Item*	*Assumption*
Commonwealth	Demand for motor fuels	Increase of 2.4% pa after 1983–84[a]
	Hypothecated excise rate	Constant two cents/litre
	Period of ABRD program	A. Terminates on 31 December 1988 B. Extended until 1989–90
	Level of RGA grants	Continues to decline in real terms
	JOLOR Program	Ceases in 1984–85
State	Overall State road expenditure	Will at least meet ABRD quotas
Local	Level of road expenditure	Will continue in line with recent and present patterns

a. Based on BTE pessimistic forecast of vehicle kilometres travelled (2.5 per cent per annum) in BTE (1984a), with a 3 per cent per annum increase in fuel efficiency for new vehicles.

TABLE 6.2—ROAD EXPENDITURE BY STATE AND ROAD CATEGORY, 1981–82 (1981–82 PRICES)

($million)

Categories	*NSW*	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*NT*	*Total*
Construction								
National roads	88.5	49.0	48.0	27.9	19.8	12.4	21.3	266.9
Rural arterial roads	108.9	35.8	81.5	12.6	29.9	19.0	1.6	289.3
Rural local roads	154.8	68.6	69.9	15.4	41.0	9.1	18.0	376.8
Urban arterial roads	121.8	114.9	34.4	17.5	46.6	24.4	6.1	365.7
Urban local roads	114.5	49.9	40.8	21.0	24.4	5.9	1.7	258.2
Total	588.5	318.2	274.6	94.6	161.6	70.7	48.6	1556.8
Maintenance								
National roads	13.7	6.3	20.5	4.8	11.0	1.4	3.7	61.4
Rural arterial roads	73.2	33.5	35.9	20.4	22.3	7.3	2.1	194.7
Rural local roads	83.3	64.0	53.1	21.6	17.1	13.2	6.0	258.3
Urban arterial roads	31.3	22.2	8.2	8.8	3.3	1.7	0.9	76.4
Urban local roads	101.8	70.6	35.9	18.8	13.5	8.1	2.3	251.0
Total	303.4	196.7	153.5	74.4	67.1	31.8	15.0	841.9
Total	891.8	514.8	428.2	169.0	228.8	102.6	63.6	2398.8

Notes: 1. Figures may not add to totals due to rounding.
2. Does not include Australian Capital Territory road expenditure.

Source: BTE (1984).

TABLE 6.3—PROJECTION A—DIFFERENCE BETWEEN PROJECTED 1989-90 ROAD EXPENDITURE, WITH ABRD PROGRAM TERMINATED, AND 1981-82 ACTUAL ROAD EXPENDITURE, BY STATE AND BY ROAD CATEGORY (CONSTANT 1981-82 PRICES)

($million)

Categories	*NSW*	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*NT*	*Total*
Construction								
National roads	-24.2	-13.2	-11.4	-5.8	-5.2	-3.5	-1.9	-65.2
Rural arterial roads	7.6	-5.8	-8.6	-1.1	-2.3	1.7	-0.1	-8.6
Rural local roads	-14.1	-5.2	-7.9	-1.4	-4.1	-0.3	0.6	-32.4
Urban arterial roads	-6.7	1.2	-4.6	-1.7	-1.7	-15.6[a]	-0.2	-29.3
Urban local roads	-8.6	-3.9	-3.0	-1.5	-2.2	-0.7	0.0	-19.9
Total	-45.9	-27.0	-35.5	-11.6	-15.6	-18.5	-1.6	-155.7
Maintenance								
National roads	-3.8	-1.1	-5.0	-1.1	-3.1	-0.4	-0.3	-14.8
Rural arterial roads	8.2	3.3	-0.2	2.6	1.6	1.3	0.3	17.1
Rural local roads	-4.4	-4.1	-4.0	-2.2	-2.6	-0.8	0.0	-18.1
Urban arterial roads	3.4	2.2	0.0	1.1	0.3	0.3	0.1	7.4
Urban local roads	-7.0	-5.4	-2.8	-1.5	-1.0	-0.7	-0.2	-18.6
Total	-3.7	-5.1	-11.9	-1.1	-4.8	-0.3	-0.1	-27.0
Total	-49.6	-32.0	-47.6	-12.6	-20.4	-18.9	-1.7	-182.8

a. Decline mainly due to completion of second Hobart Bridge.

Notes: 1. Negative figures signify lower expenditure in 1989-90.
2. Figures may not add to totals due to rounding.
3. Does not include Australian Capital Territory road expenditure.

(by 2 to 3 per cent per annum). Table 6.3 also shows that road construction is where the most reduction might occur, particularly in New South Wales and Queensland in the national road, rural local road, and urban arterial road categories. Overall, rural arterial roads would receive more funds because the increase in maintenance expenditure for this category would more than compensate for the decline in construction expenditure.

Projection B

Table 6.4 shows the situation that might occur in 1989-90 if current expenditure patterns continued and the ABRD program was extended past 1988. It indicates that while the total levels of expenditure in 1981-82 and 1989-90 are similar there would be some reallocation of funds among States and categories. New South Wales and Victoria are the main States gaining funds with Tasmania the main State losing funds. The gain by New South Wales and Victoria is due to their 1981-82 State expenditure levels being furtherest below their ABRD base amount. Overall the road construction category gains while road maintenance falls. This result is mainly due to the ABRD program under which funds are available for construction only.

As noted previously, the ABRD program has resulted in a move towards the efficient allocation of road funds identified in the 1979 BTE report (BTE 1979). This move is reflected in the category projections in 1989-90 with the ABRD program extended. The main categories to gain are urban and rural arterial roads and national roads while both local road categories would receive less funding.

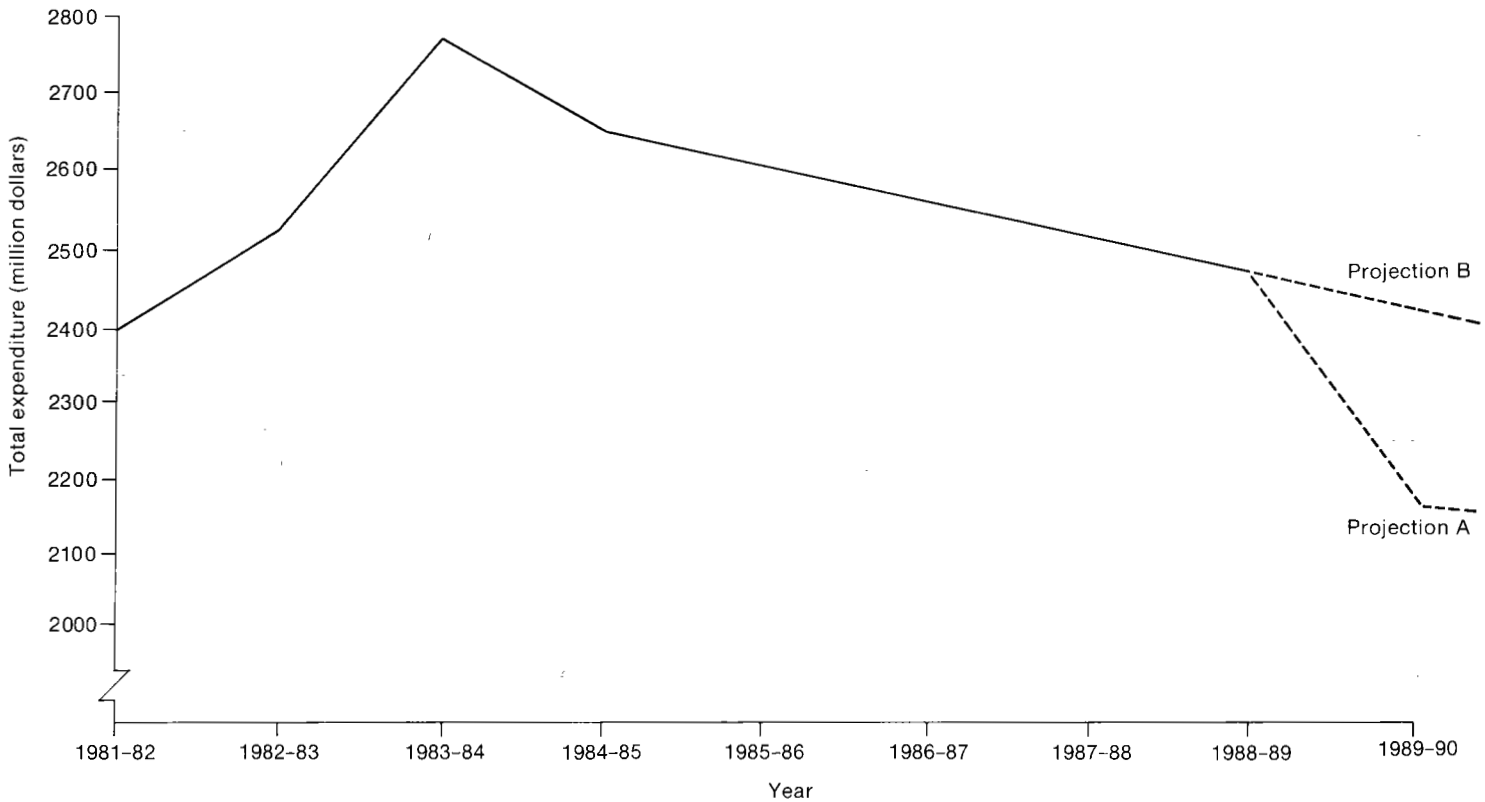


Figure 6.1—Projected total road expenditure in Australia, 1981-82 to 1989-90 (constant 1981-82 prices)

TABLE 6.4—PROJECTION B—DIFFERENCE BETWEEN PROJECTED 1989-90 ROAD EXPENDITURE, WITH ABRD PROGRAM CONTINUED, AND 1981-82 ACTUAL ROAD EXPENDITURE, BY STATE AND BY CATEGORY (CONSTANT 1981-82 PRICES)

($million)

Categories	*NSW*	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*NT*	*Total*
Construction								
National roads	9.5	2.2	9.4	0.2	5.0	-0.7	1.5	27.1
Rural arterial roads	17.8	2.6	-1.0	1.5	2.2	3.0	0.2	26.3
Rural local roads	-13.9	-5.1	-7.8	-1.2	-4.0	-0.1	0.9	-31.2
Urban arterial roads	12.6	16.9	9.7	3.3	6.9	-13.2[a]	0.5	36.7
Urban local roads	-1.2	1.3	2.0	0.3	1.5	0.4	0.9	5.2
Total	24.9	17.8	12.3	4.0	11.5	-10.7	4.0	63.8
Maintenance								
National roads	-3.8	-1.1	-5.0	-1.1	-3.1	-0.4	-0.3	-14.8
Rural arterial roads	8.2	3.3	-0.2	2.6	1.6	1.3	0.3	17.1
Rural local roads	-4.4	-4.1	-4.0	-2.2	-2.6	-0.8	0.0	-18.1
Urban arterial roads	3.4	2.2	0.0	1.1	0.3	0.3	0.1	7.4
Urban local roads	-7.0	-5.4	-2.8	-1.5	-1.0	-0.7	-0.2	-18.6
Total	-3.7	-5.1	-11.9	-1.1	-4.8	-0.3	-0.1	-27.0
Total	21.2	12.8	0.2	3.0	6.7	-11.1	3.9	36.7

a. Decline mainly due to completion of second Hobart Bridge.

Notes: 1. Negative figures signify lower expenditure in 1989-90.
2. Figures may not add to totals due to rounding.
3. Does not include Australian Capital Territory road expenditure.

FUTURE OPTIONS

The projections just presented and the conclusions reached in earlier chapters concerning funding levels and financing arrangements all point to a number of issues for consideration in future Commonwealth roads legislation. The most important of these issues are enumerated below.

Major Issues

It was pointed out previously that the type of road financing options that are appropriate for the government to adopt depends on the objectives the government seeks to achieve. The broad types of objectives were also discussed and they were classified as either efficiency objectives or equity objectives. Thus one of the main issues to be addressed in future Commonwealth roads legislation is the degree to which these two broad objectives are sought.

If efficiency is the overriding objective then the following measures and mechanisms could be adopted:

- allocation of grants to States and road categories based on the results of benefit cost analyses;
- total State quotas set at a level to ensure that State governments do not substitute Commonwealth funds for their own funds, and adjusted for inflation;
- category quotas to ensure States find it difficult to shift funds to counter Commonwealth allocations (where they are based on efficiency); and

- project approval requirements to ensure that the projects with the highest benefit cost ratio receive funds first.

If equity is considered the overriding objective, the following measures and mechanisms would be more appropriate:

- allocation of grants to States and road categories based on equity (however defined), possibly by a formula approach; and
- quotas based on equal road expenditure effort.

Some other objectives and mechanisms were also discussed including the question of absorption of road grants into general revenue grants, the use of trust funds and funding road expenditure from loans.

There are clear conflicts between some of the mechanisms that could be used to achieve efficiency and equity objectives. In these cases it is important at the outset to identify the overriding objectives. As discussed in Chapter 4, this has not always been done in the past. There has been some inconsistency in the use of these mechanisms which reflects either the lack of clear objectives or the fact that the same mechanisms are being used in an attempt to achieve different objectives. At other times it seems as though many different objectives have been sought simultaneously with the result that it is difficult to analyse whether objectives have been met. It was also noted that the objectives of the Roads Grants Act and the ABRD program were different in many respects and therefore, understandably, so also were the financing mechanisms used. However, to some degree the two Acts interact with one another. As a consequence the arrangements in one Act may result in the objectives sought in the other Act not being fully achieved.

The road funding issues listed below are the more important matters identified in this paper:

- need to define the extent to which category and State allocations should be based on efficiency;
- whether differences between arrangements under the Roads Grants Act and ABRD program need to be made compatible;
- need for quotas to be both indexed for inflation and related to effort;
- whether categorisation of grants can be successful without category quotas and project approval; and
- whether local road formulae can be improved or whether local roads grants should be absorbed into general revenue grants.

The discussion following draws together the material in earlier chapters on these issues and identifies possible points for consideration in the 1985–86 legislation.

Alternative Options for 1985–86 Legislation

Allocation of Funds

The alternative patterns of road funding projected for 1989–90 were influenced to a large degree by the ABRD program. The termination of the program on 31 December 1988 would lead to a significant fall in total road expenditure in 1989–90 (as demonstrated in Figure 6.1). Therefore, important financial issues for consideration are the possible extension of the program beyond 1988, or ways in which the transition to a lower level of funding can be easily facilitated[1].

Even if the ABRD program was extended beyond 1988, as assumed in Projection B, road expenditure is still projected to decline at about 2 per cent per annum.

1. The alternatives include making suitable provision in the new Roads Grants Act or controlling the annual expenditure from the ABRD trust fund so that the program is reduced gradually (say over the period 1987–91).

The main reason for this decline in the level of road expenditure is the assumed maintenance of the rate of hypothecated fuel excise under the ABRD program at two cents/litre. Since the level of motor fuel consumption is expected to increase by only 2 to 3 per cent per annum after 1983–84, receipts of the ABRD fund are likely to increase slowly in money terms.

Another key factor dependent largely on the ABRD program and reflected in Projection B is the decline in the level of maintenance expenditure projected for 1989–90. It needs to be stressed, however, that this projected decline is based on the assumption that the current allocation of grants to road categories by all levels of government are continued.

If the decline in real funds available under the ABRD program and in maintenance expenditure is seen to be important then consideration could be given to changing the level of excise hypothecated to the ABRD fund and allowing road maintenance to be eligible for payment from the fund. Funding road maintenance under the ABRD program would, however, be contrary to the stated objectives of the scheme. An alternative to both of these suggestions is, of course, to change the level of funding provided under the Roads Grants Act.

Arrangements

The major issue identified concerning current road funding arrangements was the difference, in a number of areas, between the arrangements contained in the Roads Grants Act and those in the ABRD program. The major areas are the matching conditions and the program approval procedures under the two Acts.

The quotas under the Roads Grants Act were abolished in 1981 but fairly stringent quotas were subsequently introduced under the ABRD program. The latter are well designed to avoid the States substituting ABRD funds for their own funds but do not encourage similar road funding effort among the State governments. It has been shown that both of these objectives can be met simultaneously. Therefore, if there is a concern to achieve horizontal equity, the quotas under the ABRD program could be altered to encourage similar road expenditure effort among the States (rather than continue with quotas based on historical expenditure patterns). The CBR's 1975 report (CBR 1975) offers a comprehensive methodology for developing quotas to reflect both efficiency and equity objectives.

The differences in program approval procedures between the two Acts are likely to make the procedures in the ABRD program ineffective if they were introduced with efficiency objectives in mind. There are tight project approval procedures for both arterial and local roads under the ABRD Trust Fund Act but no approval conditions for arterial or local roads under the Roads Grants Act. Therefore, the States are free to spend Commonwealth funds on uneconomic projects under the Roads Grants Act and save the 'best' projects for the ABRD program. In these circumstances the only real effect of the ABRD project approval procedures, from a total road system perspective, is the identification of those projects actually funded from the ABRD funds. Of course, this objective may have been the reason for introducing these procedures rather than any concern with efficiency. It was shown in Chapter 4 that from an efficiency viewpoint, program approval procedures have only really been effective for national roads. This is because the Commonwealth has almost complete control of how the funds are spent and there is no possibility of State substitution of funds, since the Commonwealth almost fully funds these roads.

If there are objectives besides efficiency behind project approval procedures under the ABRD program then these should be clearly identified and the ABRD approval conditions reassessed to determine if these objectives are being fulfilled. If the reasons behind project approval procedures are efficiency related, then the effectiveness of the procedures should be examined and consideration should also be given to

reintroducing project approval procedures for all categories under the Roads Grants Act.

One issue that is common to both the current Roads Grants Act and the ABRD program is the possibility of the States countering stated Commonwealth category allocations. In the past the States have countered moves by the Commonwealth Government to alter its funding priorities. Therefore, if efficiency is sought as an objective then category quotas are required. Alternatively, it has been suggested that category substitution could be reduced by introducing a global funding plan in which expenditure levels by each level of government are set in consultation. However, somewhat more co-operation than has been exhibited to date between the three levels of government is required to make such a plan workable.

The potential conflict between efficiency and equity objectives has been shown starkly in discussions on local road funding. Local roads are generally characterised by low traffic levels so that improvements result in low economic benefits. In contrast, there appear to be social or political reasons for providing a higher level of funding for local roads than possibly justifiable on economic efficiency grounds alone.

Since 1974, the basis for Commonwealth funding for local roads has changed considerably. The total allocation for local roads in 1974 was based on the CBR's benefit cost assessment. Later considerably greater funds were allocated to local roads than was shown to be efficient. In the ABRD program the share of total funding allocated to local roads was cut, in line with efficiency considerations. Project approval procedures in the 1974 legislation were gradually replaced by a formula under the Roads Grants Act but were reintroduced under the ABRD program. It is not clear what are the main Commonwealth objectives for local roads; whether efficiency or equity considerations predominate.

The Commonwealth Government should consider whether it really needs to fund local roads directly or simply supply additional funds as general revenue grants and leave local government authorities free to spend them as they wish. This is because the bulk of funds for local roads which are provided under the Roads Grants Act are currently distributed to local government authorities with little concern for particular roads. However, the analysis in Chapter 5 indicates that if the funds are not tied to roads a proportion is likely to be spent on other projects. If local government road grants were to be absorbed into the current PITS grants this would have important implications for the distribution of these funds. These implications would need to be considered carefully. Should absorption be unacceptable then a special formula could still be used. However, the objectives of the formula should be specified more clearly than at present.

This latter point is the essence of this Paper. The distribution of grants among States and categories and the legislative arrangements for the allocation of these funds should be appropriate to the objectives the Commonwealth Government wishes to pursue.

The objectives which the Commonwealth Government has been trying to achieve with past road financing arrangements have not always been clear. Of course, it is unrealistic to expect any government to state explicitly the objectives behind each and every action. Nevertheless, it is useful to examine at least those objectives that have been announced or alluded to. Identifying possible conflicts between objectives or failure to achieve objectives gives a basis on which to assess current road financing arrangements. The Government can then decide whether the conflicts or failures identified are intentional or accidental and assess the available options to improve future legislation.

APPENDIX I—REVENUE AND EXPENDITURE OF COMMONWEALTH, STATE AND LOCAL GOVERNMENTS

This Appendix presents a number of tables which provide the detailed information on which the analysis contained in Chapter 3 is based.

TABLE I.1—FLOW OF COMMONWEALTH FUNDS TO STATE AND LOCAL GOVERNMENT, 1972-73 TO 1981-82 (CONSTANT 1981-82 PRICES)

	1972-73	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*[a]
State government												
Commonwealth specific purpose grants ($m)	2 524.4	3 711.9	5 933.9	7 222.2	6 360.0	6 457.3	6 037.1	5 711.2	5 881.9	4 529.6	5 209.6	5 598.8
Commonwealth general purpose grants ($m)	7 270.7	6 596.8	7 201.8	7 656.7	7 939.0	8 382.1	8 390.5	8 098.7	8 076.4	8 321.2	8 340.4	8 564.8
Commonwealth loans ($m)	1 987.7	1 391.7	1 381.8	1 496.8	1 413.2	1 387.3	1 286.5	1 007.3	960.9	871.5	824.6	681.5
State sources ($m)	5 397.1	6 217.1	6 989.1	6 408.6	7 785.5	8 638.6	9 041.4	9 776.9	11 001.0	12 592.8	na	na
Total state budgets ($m)	17 179.9	17 917.5	21 506.6	22 784.3	23 497.7	24 865.3	24 755.5	24 594.1	25 920.2	26 315.1	na	na
Per cent from Commonwealth	68.6	65.3	67.5	71.9	66.9	65.3	63.5	60.2	57.6	52.1	*na*	*na*
Local government												
Commonwealth specific purpose grants ($m)	6.0	14.1	98.4	185.2	21.0	20.6	23.0	19.3	23.9	27.2	53.3	72.5
Commonwealth general purpose grants ($m)	–	–	112.7	139.0	218.9	240.0	241.5	269.1	331.6	350.9	382.4	379.6
Passed on by States ($m)	133.4	227.5	271.8	273.1	190.3	198.2	187.7	178.4	174.3	181.5	180.1	na
Local sources ($m)	2 557.3	2 421.8	2 616.1	2 749.0	2 777.1	2 897.8	2 966.1	2 961.4	2 978.8	2 086.8	na	na
Total local budgets ($m)	2 696.7	2 663.4	3 099.0	3 346.3	3 207.3	3 356.6	3 418.3	3 428.2	3 508.6	3 646.4	na	na
Per cent from Commonwealth	5.2	9.1	15.6	17.8	13.4	13.7	13.2	13.6	15.1	15.3	*na*	*na*

a Budget estimate.
– nil or rounded to zero
na not available

Notes: 1. Price deflator used was the ABS implicit price deflator for expenditure on Gross Domestic Product.
2. Figures may not add to totals due to rounding.

Sources: ABS (1983). Commonwealth of Australia (1973-84).

TABLE I.2—COMMONWEALTH BUDGET RECEIPTS, 1972-73 TO 1981-82 (CONSTANT 1981-82 PRICES)

($million)

	1972-73	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*[a]
Taxation revenue												
Customs duty	1 391.6	1 429.1	1 681.0	1 815.1	1 990.8	1 788.1	1 960.7	1 976.9	2 077.6	2 157.0	1 893.7	1 802.6
Excise duty	3 437.4	3 675.2	3 458.0	4 055.5	3 885.9	3 967.8	5 174.7	6 025.5	6 431.3	5 993.0	6 131.5	6 484.8
Sales tax	2 073.2	2 290.3	2 308.6	2 449.7	2 579.8	2 568.8	2 382.1	2 263.4	2 317.9	2 854.0	3 144.1	3 288.7
Individuals	11 082.7	12 979.2	15 428.0	16 033.7	17 279.5	17 603.8	17 232.6	18 252.4	19 342.0	21 225.0	20 691.0	20 475.2
Companies	4 231.2	4 619.2	4 717.6	4 387.5	4 415.4	4 492.5	4 086.8	4 133.5	5 176.1	5 053.0	4 295.5	3 425.9
Withholding tax	196.8	187.2	176.2	165.2	150.7	171.1	153.6	171.1	177.5	205.0	233.0	244.6
Other taxation revenue	606.5	691.3	413.0	400.4	416.0	418.6	364.5	315.5	274.6	299.0	398.2	794.3
Less remissions	(16.0)	(14.2)	(13.2)	(14.3)	(13.3)	(12.1)	(11.2)	(1.2)	(1.5)	(2.0)	na	na
Total taxation revenue	23 003.3	25 857.2	28 169.2	29 292.4	30 704.7	30 998.6	31 343.2	33 137.2	35 795.5	37 784.0	36 784.4	36 516.2
Other revenue	2 791.1	2 516.1	2 376.2	2 489.9	2 722.2	3 062.8	3 066.9	2 859.2	2 954.5	3 006.0	3 310.8	3 439.1
Total	25 794.3	28 373.3	30 545.4	31 782.3	33 426.9	34 061.4	34 410.4	35 996.4	38 750.0	40 790.0	40 098.2	39 955.4

a. Budget estimate.

na not available

( ) indicates negative

Notes: 1. Price deflator used was ABS implicit price deflator for expenditure on Gross Domestic Product.

2. Figures may not add to totals due to rounding.

Source: Commonwealth of Australia (1973-84).

TABLE I.3—COMMONWEALTH BUDGET EXPENDITURE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

	1972–73	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*	*1982–83*	*1983–84*[a]
Defence	3 417.2	3 261.9	3 329.7	3 262.3	3 442.3	3 424.4	3 484.4	3 650.4	3 910.0	4 133.7	4 308.6	4 363.9
Education	1 216.9	2 102.9	3 418.4	3 366.2	3 407.1	3 393.1	3 333.4	3 167.8	3 227.4	3 340.5	3 425.2	3 480.0
Health	2 169.5	2 317.1	2 624.7	5 198.9	4 010.4	3 888.2	3 878.5	3 846.1	4 019.8	2 912.4	3 085.9	3 550.1
Social security and welfare	5 816.3	6 085.8	7 573.4	8 823.9	10 143.1	10 792.9	10 887.4	10 659.0	10 922.0	11 501.3	12 713.9	13 921.0
Housing	351.0	825.4	1 435.0	989.4	865.6	728.4	510.8	415.7	375.7	458.3	666.9	753.4
Total	1 297.9	14 593.1	18 381.2	21 640.7	21 868.5	22 227.0	22 094.5	21 739.0	22 454.9	22 346.2	24 000.5	26 068.4
Economic services												
Transport and communication												
Road	868.4	866.5	837.4	885.9	768.0	782.9	733.6	726.1	723.2	722.4	813.2	988.3
Rail	29.4	12.7	73.4	167.4	112.3	127.7	140.9	117.5	95.2	97.1	116.7	70.7
Sea	36.8	24.2	134.0	161.4	47.8	26.8	10.3	41.0	31.2	43.7	52.4	30.9
Urban public transport	–	–	92.6	60.6	92.1	73.5	56.0	51.1	48.6	1.5	–	–
Other	1 144.9	1 222.0	1 502.3[b]	1 064.3	538.2	219.7	26.6	44.2	191.4	315.5	603.6	319.5
Other economic services	1 591.7	1 693.6	2 170.8	1 273.6	957.3	1 081.8	1 266.2	1 258.3	1 524.8	1 577.3	1 795.0	1 996.8
Total	3 671.2	3 819.0	4 810.5	3 613.2	2 515.7	2 312.4	2 233.6	2 238.2	2 614.4	2 757.5	3 380.9	3 406.3
Other expenditure[c]	11 695.6	11 648.4	13 290.2	13 230.6	13 664.3	14 079.7	14 502.0	14 445.4	14 898.8	16 237.3	16 546.8	17 391.3
Total	28 337.7	30 060.6	36 481.8	38 484.2	38 048.4	38 619.0	38 830.1	38 422.6	39 968.1	41 339.4	44 128.2	46 866.0

a. Budget estimate.
b. The rapid decline in 'other' Transport and Communication after 1974–75 is the result of the formation of Telecom and Australia Post and their move out of the Budget sector.
c. Includes general purpose grants to the States and Local Government.

– nil or rounded to zero

Notes: 1. Price deflator used was ABS implicit price deflator for Gross National Expenditure.
2. Figures may not add to totals due to rounding.

Source: Commonwealth of Australia (1973–84).

TABLE I.4—STATE GOVERNMENT REVENUE BY SOURCE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

Sources	*1972–73*	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*[a]
State taxes										
Roads	759.1	702.6	680.0	691.5	716.6	747.2	754.8	724.4	740.5	42.0
Other	4 068.0	4 513.9	4 904.4	5 342.6	5 494.9	5 494.9	5 501.6	5 632.9	5 889.8	6 224.4
Total	4 827.1	5 216.5	5 848.4	6 034.1	6 211.5	6 242.1	6 256.4	6 357.3	6 630.3	7 066.3
Commonwealth payments[b]	7 539.6	8 113.5	10 289.6	12 146.3	11 954.8	12 662.1	12 559.6	12 482.8	12 670.8	12 614.3
Borrowing	2 741.7	2 715.4	34 444.4	3 564.5	3 283.4	3 390.3	3 041.1	3 189.3	3 522.2	3 522.1
Other	2 071.5	1 872.1	2 188.2	1 039.4	2 093.2	2 662.7	2 549.0	2 712.9	3 429.9	3 112.2
Total	17 179.9	17 917.5	21 506.6	22 784.3	23 497.7	24 865.3	24 755.5	24 594.1	25 920.2	26 315.1

a. Preliminary estimates.
b. Figures based on ABS definitions and differ from those in Table I.1 which are based on Commonwealth Treasury budget definitions.

Notes: 1. Price deflator used as ABS implicit price deflator for expenditure on Gross Domestic Product.
2. Does not include the Northern Territory.
3. Figures may not add to totals due to rounding.

Sources: ABS (1983). BTE (1984).

TABLE I.5—STATE GOVERNMENT EXPENDITURE, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

Sources	*1972–73*	*1973–74*	*1974–75*	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*	*1980–81*	*1981–82*[a]
Social infrastructure										
Education	4 648.8	5 247.7	6 555.2	6 762.3	7 012.9	7 273.3	7 411.0	7 213.3	7 182.6	7 702.7
Health	1 890.6	2 250.1	2 885.7	3 807.6	4 011.8	4 046.4	4 080.1	3 989.2	4 155.9	4 160.2
Welfare	167.6	172.4	200.0	207.2	214.8	227.4	244.5	260.5	295.8	287.1
Housing	228.8	284.6	559.1	470.6	399.7	448.1	334.2	313.6	338.0	315.3
Total	6 935.7	7 954.5	10 200.0	11 247.7	11 639.3	11 995.2	12 069.8	11 776.6	12 022.4	12 465.3
Utilities										
Electricity & gas	885.0	830.3	895.9	952.3	1 030.0	1 210.1	1 436.2	1 591.0	1 886.8	2 448.7
Water supply	391.1	372.4	409.6	426.9	415.3	405.0	361.8	311.0	300.9	341.5
Sewerage & drainage	562.6	576.0	606.1	576.6	535.0	500.0	448.0	413.2	373.5	370.4
Total	1 838.8	1 778.7	1 911.7	1 955.8	1 980.3	2 115.1	2 246.0	2 315.3	2 561.1	3 160.6
Transport infrastructure										
Rail	390.9	341.1	447.6	490.3	494.3	557.9	588.9	553.9	562.0	686.8
Sea	169.3	163.1	164.0	156.7	156.8	175.6	197.1	191.8	273.8	354.0
Road	1 180.6	1 150.1	1 207.6	1 232.4	1 239.7	1 215.9	1 197.2	1 206.4	1 217.7	1 231.2
Urban transport	17.7	14.2	31.9	43.3	40.1	45.7	49.6	56.0	46.3	50.6
Other	4.2	5.6	6.3	9.3	7.9	7.3	7.9	7.4	8.5	8.6
Total	1 762.6	1 674.1	1 857.5	1 932.0	1 938.8	2 002.4	2 040.6	2 015.5	2 108.3	2 212.8
Interest	2 504.2	2 371.1	2 215.1	2 169.9	2 329.0	2 470.3	2 613.9	2 676.8	2 907.2	3 158.0
Other	4 519.4	4 752.3	5 805.9	5 759.9	5 821.8	6 102.7	5 619.7	5 780.0	6 292.7	5 318.4
Total	17 560.7	18 530.8	21 990.2	23 065.3	23 709.1	24 685.9	24 590.0	24 564.2	25 891.6	26 315.1

a. Includes state expenditure from Commonwealth road grants.

Notes: 1. Figures show expenditure by the States from all sources (including Commonwealth general revenue and specific purpose grants).
2. Deflator used was the ABS implicit price deflator for Gross National Expenditure
3. Does not include the Northern Territory.
4. Figures may not add to totals due to rounding.

Sources: ABS (1983). BTE (1984).

TABLE I.6—COMPONENTS OF LOCAL GOVERNMENT RECEIPTS, 1972–73 TO 1981–82 (CONSTANT 1981–82 PRICES)

($million)

	1972–73	1973–74	1974–75	1975–76	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82	Average annual growth rate (per cent) 1972–73 to 1975–76	Average annual growth rate (per cent) 1975–76 to 1981–82
Taxes and charges	1 369.6	1 380.4	1 461.8	1 592.0	1 676.4	1 689.7	1 700.9	1 698.9	1 759.0	1 821.0	5.1	2.3
Public enterprise income	289.4	251.8	201.4	240.5	283.9	274.2	250.3	237.1	229.3	243.5	–6.0	0.2
State and Commonwealth grants[a]	491.3	382.3	663.3	789.2	668.4	715.7	713.7	734.6	779.9	776.7	17.1	–0.3
Net borrowing	425.7	342.3	429.0	499.7	519.0	449.1	448.6	438.1	344.0	290.2	5.5	–8.7
Other[b]	120.1	306.6	343.4	224.9	59.6	227.9	304.8	319.5	396.4	515.0	22.0	14.8
Total	2 696.7	2 663.4	3 099.0	3 346.3	3 207.3	3 356.6	3 418.3	3 428.2	3 508.6	3 646.4	7.5	1.4

a. Figures based on ABS definitions and differ from those in Table I.1 which are based on Commonwealth Treasury budget definitions
b. Includes property income, depreciation allowances and funding items other than net borrowings.

Notes: 1. Price deflator used was the ABS implicit price deflator for expenditure on Gross Domestic Product.
2. Figures may not add to totals due to rounding.

Source: ABS (1983).

TABLE I.7—COMPONENTS OF LOCAL GOVERNMENT EXPENDITURE 1972-73 TO 1981-82 (CONSTANT 1981-82 PRICES)

($million)

	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	Average annual growth rate (per cent) 1972-73 to 1975-76	Average annual growth rate (per cent) 1975-76 to 1981-82
General public services	396.7	402.0	497.5	516.4	521.9	534.3	609.2	596.2	604.7	627.1	9.2	3.3
Education, health, social services and welfare	86.7	99.0	111.2	128.0	127.9	143.0	150.3	141.8	158.1	165.6	13.9	4.4
Housing and community amenities	262.3	270.2	357.5	372.7	361.7	361.4	357.5	412.6	439.5	459.5	12.4	3.6
Recreation and culture	287.0	281.4	347.2	432.2	382.8	407.3	437.2	443.0	473.8	481.5	14.6	1.8
Roads	940.7	954.5	1 055.0	1 103.0	1 008.8	989.5	1 000.1	950.1	959.3	926.6	5.4	-2.9
Electricity, gas and water	33.5	283.9	287.5	305.8	303.5	284.0	276.6	290.8	299.6	338.1	-2.6	1.7
Interest	324.4	314.2	297.3	312.5	339.7	364.4	387.3	394.4	406.7	435.2	-1.2	5.7
Other	128.3	149.4	215.3	216.9	189.7	257.5	177.3	195.1	163.0	212.7	19.1	-1.3
Total	2 756.5	2 754.5	3 168.7	3 387.5	3 236.1	3 332.4	3 395.5	3 424.0	3 504.7	3 646.4	7.1	1.2

Notes: 1. Price deflator used was the ABS implicit price deflator for Gross National Expenditure.
2. Figures may not add to totals due to rounding.

Source: ABS (1983).

APPENDIX II—THEORETICAL ASPECTS OF ROAD FINANCING ARRANGEMENTS

This Appendix provides some theoretical background to the discussion in Chapter 4 on road financing arrangements. It contains information about public finance theory of the various mechanisms available to governments for directing funds to achieve specific objectives, along with a discussion of the advantages and disadvantages of each mechanism.

ALTERNATIVE FINANCING MECHANISMS

Inter-government grants in Australia fall into two main categories; general purpose grants and specific purpose grants (see Figure II.1). The predominant feature of general purpose grants is that they are available for expenditure at the discretion of the recipient government. In this respect, general purpose grants preserve the autonomy of the recipient government as it is the recipient who, in accordance with its own priorities, determines how the grant is spent. In addition, general purpose grants may facilitate the co-ordination of national economic objectives by allowing the separation of decisions concerning expenditure and revenue raising, where such separation is required in the interests of economic stabilisation and income redistribution. Therefore, they allow for vertical co-ordination of economic policies without compromising the decision-making autonomy of the sub-national governments (Grewal 1980).

Specific purpose grants are only available for expenditure on selected programs designated by the donor. The scope of the assisted program may be fairly broad (eg a general program of assisting roads) or may be quite narrow (eg assisting specific road programs). Generally, the former is known as a block grant while the latter is termed a specific purpose grant. Grants may also be distinguished on the basis of whether they are conditional or unconditional grants. A conditional grant requires that certain minimum expenditure or tax effort requirements be met by the recipient government before the grant is given. In the case of unconditional grants such requirements need not be met.

The following types of arrangements are considered below:

- Grant types:
  —General purpose grants;
  —Specific purpose grants;
  : block grants;
- Grant allocation mechanisms:
  —Recipient expenditure requirements;
  —Project and program procedures;
  —Formula grants:
- Trust funds; and
- Loans.

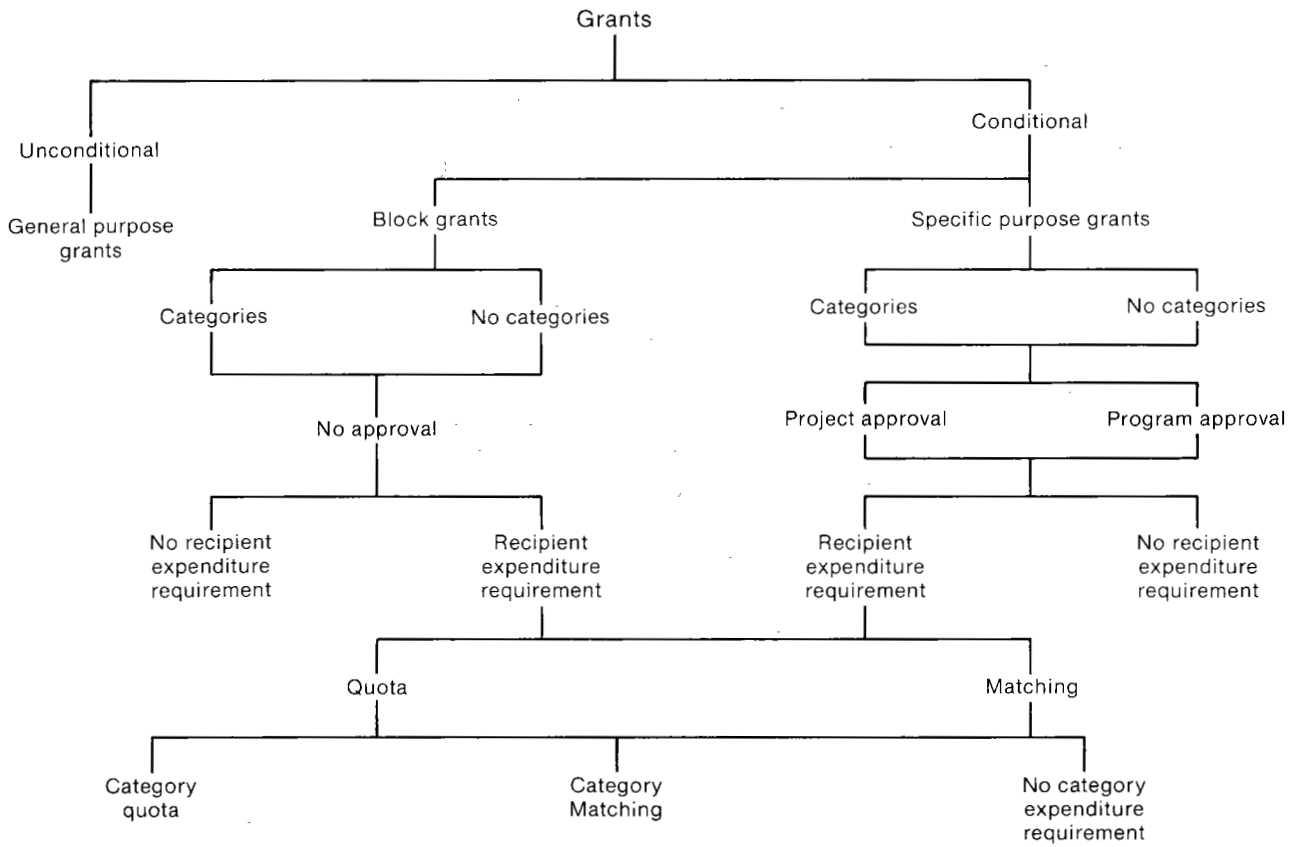


Figure II.1—Intergovernment grant structure

GRANT TYPES

General purpose grants

General purpose grants are grants provided by the Commonwealth Government to the States and local government which the recipients are free to spend as they wish: they are not tied to any expenditure area or even range of expenditure areas. They have usually been provided as part of a scheme of revenue sharing (eg sharing of tax revenue).

It can be argued that State and local government, because they are more attuned to local needs, are better placed to determine priorities and administer programs than the Commonwealth Government and should not be forced to follow Commonwealth priorities, as set out in the terms usually attached to specific purpose grants. Following this reasoning a more efficient means of providing goods and services would be for the Commonwealth to give financial resources to State and local governments by way of general purpose grants in preference to specific purpose grants.

Current Australian revenue sharing arrangements involve the Commonwealth distributing a percentage of income tax receipts to State and local government on the basis of a set formula. The Commonwealth has in the past utilised a number of other forms of general revenue sharing. For example, in the period 1911-27 the Commonwealth made a grant of $2.50 per head of population to the States following the expiry of the Braddon Clause (Section 88 of the Constitution), which provided for a sharing of customs and excise revenue for the first 10 years after Federation. The per capita grant was replaced by the grants negotiated in the Financial Arrangement of 1927. After the Commonwealth had assumed control of income tax collections in 1942 it introduced a form of grant related to tax collections in a base year. Following World War II the Commonwealth moved to increase the grants to the States by arbitrary amounts until 1948 when a formula based on increases in State population and the percentage increase in the level of total employee wages was introduced (Mathews 1980, p46). This system was replaced in 1959 with one based on an annual growth formula based on population growth and growth in average weekly earnings with a 'betterment factor' of 10 per cent applied to average weekly earnings. In 1976 the arrangements were altered from one based on a formula to one based on a percentage share of income tax receipts. Transitional provisions existed in the 1976 arrangement to ensure that State entitlements did not fall short of the level of assistance received under the previous scheme.

The current revenue sharing arrangements impose no conditions on recipient governments as to how they should use these funds. Consequently, it is open to the recipient government to decide what they actually do with them. Therefore, the funds received may be used to substitute for State taxation or be used to expand the provision of government provided goods and services.

The main objective of revenue sharing arrangements is to correct for vertical fiscal imbalance. Hunter (1977) has listed the advantage of revenue sharing arrangements as including:

- provision of greater financial resources to lower levels of government;
- lessening of dependence on specific purpose grants;
- provision of a measure of interstate fiscal equalisation; and
- provision of more assured revenue sources to lower levels of government.

The primary criticism of general purpose grants is that they leave lower levels of government free to ignore national considerations and national objectives. There has even been some questioning of whether lower levels of government do in fact address local needs better with general purpose grants than with specific purpose

grants. Another criticism of general purpose grants is that they separate revenue raising from expenditure which can undermine overall financial management. The basis of this criticism is that the lack of responsibility for raising revenue interferes with efficiency in resource allocation, as recipient governments are less discerning in spending free grants than they are with funds raised by themselves. A further criticism is that some States are disadvantaged in terms of the amount they contribute compared with the amount they receive.

Specific purpose grants

Specific purpose grants are those which are provided by the Commonwealth for a specific purpose within a program area (eg roads). They commonly take the form of funds allocated to the States (and through them to local government) on the basis of a funding formula (eg 5 per cent of road funds to Tasmania), with recipient expenditure requirements up to a specific funding limit. They can also incorporate a system of administrative checks over State funding decisions (eg Commonwealth approval of road tenders). The Commonwealth has been providing specific purpose grants to the States for road funding purposes since 1923 (see BTE 1981 for a detailed history of Commonwealth road grants legislation).

Mathews (1980) has nominated the following as objectives for which specific purpose grants can be utilised by the Commonwealth:

- correction for spill-overs (externalities);
- furtherance of national priorities;
- the means by which the Commonweath can extend its powers into areas for which it has no or only limited constitutional authority;
- promotion of co-operative arrangements between levels of government;
- financial support for the budgetary positions of lower levels of government;
- reduction of regional economic disparities; and
- the means of encouraging innovative ideas.

Specific purpose grants have been criticised for a number of reasons (Hunter 1977) including:

- distortion of State and local government expenditure programs (which is precisely what the donor government usually intends);
- interference with State and local government autonomy;
- encouraging inflexibility in State and local government budgetary processes;
- limiting incentives for State and local government to raise revenue locally and spend it wisely; and
- duplication of administrative effort.

In the early to mid-1970s specific purpose grants made by the Commonwealth Government contributed around one-third of total State revenue. At that stage, the criticism of specific purpose grants to the States centred on concern over their distorting effects on State priorities. This related to the capacity of this form of grant to stimulate expenditure by the lower levels of government. The decline in assistance by specific purpose grants in the second-half of the 1970s, as a result of the new federalism policy of the L-NCP Government, changed the focus of State attention to the adverse revenue effects of this trend on their overall budgetary position.

Block grants

A block grant is defined as a 'grant given chiefly to general purpose governmental units in accordance with a statutory formula intended for use, largely at the recipient's discretion, in a variety of activities within a broad functional area' (Porter, Rees,

Park, Rao and Lawson, 1981, p140). Block grants are specific purpose grants in that they allocate funds for fixed program areas. In essence the only major difference between block grants and other specific purpose grants is that they do not have any project or program approval or supervision conditions attached to them. Thus, the recipient of a block grant can spend the grants in whatever 'manner' desired as long as the expenditure is spent on a given 'area' of expenditure. Nevertheless, block grants also resemble general purpose grants in that they allow the recipient government wide choice in the manner in which funds are expended within the program area designated.

Block grants share with general purpose grants the goal of permitting increased devolution of fiscal power to lower levels of government. The objectives served by block grants relate to correcting for horizontal and/or vertical fiscal imbalance. The effects of block grants tend to be highly diverse.

The main advantage which block grants offer from the donor government point of view is that they are capable of supporting broad programs with minimum administrative effort. One of the disadvantages of block grants is that, as with general revenue funds, there may be a temptation on the part of lower levels of government to spend them inefficiently since the funds are supplied without strings and with little accountability. There is also no incentive for the recipient government to support projects which have beneficial spill-over effects.

GRANT ALLOCATION MECHANISMS

Recipient expenditure requirements

Although there is a general consensus that the objective of specific purpose grants is to maintain or increase the total level of expenditure on a particular service or to introduce a new service, there is some disagreement about the most appropriate means to achieve it. It is likely that some form of requirement imposed on the recipient to also spend funds on the service being assisted is necessary to avoid the possibility that the recipient government may substitute some or all of the grant for its own expenditure on existing services. In the case of a service which is not already existing, these expenditure requirements may be considered necessary to stimulate recipient government expenditure on the service.

Recipient expenditure requirements may be considered an appropriate mechanism for the Commonwealth to use for achieving two specific objectives, namely;

- the correction of externalities (ie benefit spillovers); and
- supporting the provision of selective goods (eg roads).

If only a portion of the benefits of certain expenditure within and by a State accrues to residents of that State, then it is not in that State's interest for it to achieve a nationally efficient level of spending.

The imposition of expenditure requirements on grants is a very effective method for the Commonwealth to encourage the States to spend their own funds on the provision of its designated priorities. Utilisation of this method has led to charges that the Commonwealth has distorted State and local government expenditure patterns and that it has entered areas of responsibility which were not set aside for it in the Constitution.

Expenditure conditions can be set to achieve specific efficiency or equity objectives of the donor government. In terms of efficiency, they can be designed to limit the extent of substitution and, if set appropriately, may result in the stimulation of State and local government expenditure from their own resources above what it would have been in the absence of the grant. Whether substitution or stimulation effects should be considered as desirable or undesirable will depend on the specific objectives which the donor government intended to achieve in providing financial assistance.

The possible substitution and stimulation effects which expenditure conditions may induce from the recipient government are depicted in Figure II.2. In the absence of a grant the recipient governments' budget line is represented by AB with point C being the mix of program X and Y which is selected. Faced with this mix of output a higher level of government may seek to increase the output of program X to a point, represented by, say, X_2 and to this end provides a specific purpose grant. The diagram illustrates that a recipient government initially at point C can respond to the imposition of expenditure requirements on the grants by moving to possible points H, G or F along the respective budget lines AHI, AGJ and AFK. In the first case, a move to point H along budget line AHI indicates that partial substitution of the grant takes place as the recipient government diverts its own funds previously spent on program X to increase expenditure on the unaided program Y (Y_1 to Y_2). Thus a dollar increase in specific purpose grants for program X leads to an increase in expenditure on program X of less than a dollar.

Complete substitution of grant funds would occur if the recipient were to move anywhere within the area ACD. A grant which produces neither substitution nor stimulation effects is shown by the point G on the budget line AGJ, since in this case the grant is used solely in accordance with the donor's intentions. A grant that has the effect of stimulating recipient expenditure (ie falls within area ECB) on a donor designated program is shown by reference to the budget line AFK. In achieving its own desired level of expenditure at point F for the aided program X, the recipient government has in this case diverted funds (ie decrease from Y_1 to Y_3) from its unaided program Y to the donor assisted program X. If the donor government wishes to avoid substitution by the recipient it needs to know the indifference curve (or preferences for each program) of the recipient. The type of

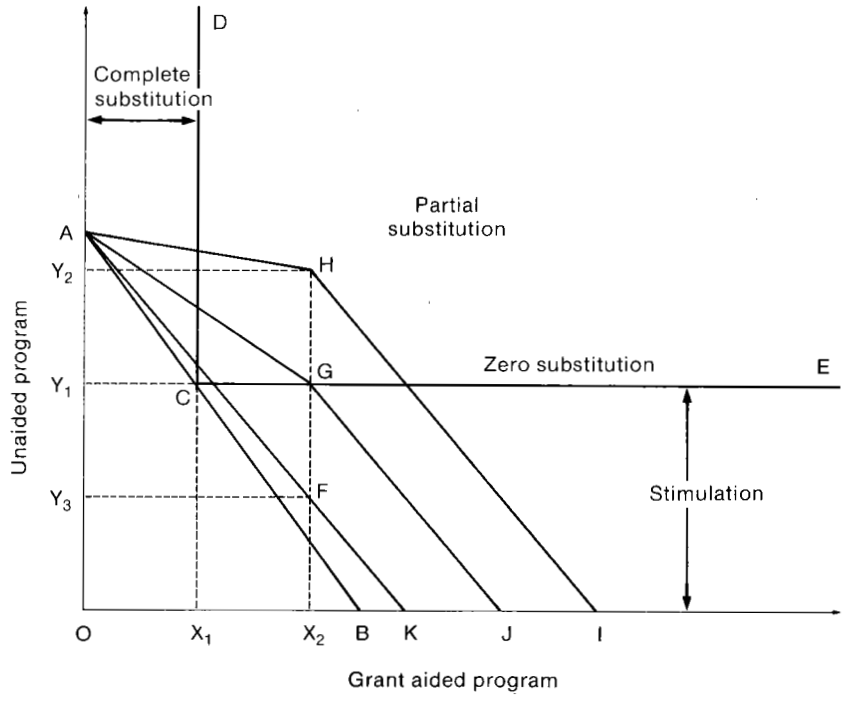


Figure II.2—Grant conditions; substitution and stimulation effects

grant required to avoid substitution will depend on the shape and position of the recipient's indifference curve (eg whether specific or general purpose grants are required and whether quotas are needed depends on whether substitution is likely to occur).

The effects of recipient expenditure requirements are highly dependent on the conditions which the donor imposes. There are numerous types of expenditure requirements such as matching, quotas, category matching, category quotas and expenditure of minimum percentages of State revenue. The most widely used forms in regards to roads are:

- matching (eg $1 for $1, $2 for $1, etc);
- quota expenditure stipulated before matching grant is payable (eg $50 million of State expenditure necessary before receiving $1 for $1); and
- category quotas.

Matching is a requirement on the recipient to match on a dollar for dollar basis donor expenditure on a designated program. The effect of this is to lower the cost to the recipient (by half) of obtaining the benefits from this program. In theory, information on the likely reaction by the recipient government to the grant conditions is required to ensure that the matching grant is set at the appropriate level to achieve the Commonwealth's desired objectives (eg stimulating recipient expenditure). In practice judgement must be made about what this response will be.

The most important problem with matching at either the total or individual category level is that the donor does not know in advance the level of grant it will have to provide. For this reason, an upper limit is usually imposed which effectively turns the requirement into a form of quota.

Quotas have been widely used by the Commonwealth in the provision of road funds to the States. Quotas may take a number of forms including those where:

- the donor is willing to match expenditure on a dollar for dollar basis only after a set minimum level of expenditure has been attained by the recipient; and
- the donor provides a fixed or maximum grant once a minimum level of expenditure has been reached. Failure to achieve this level of expenditure may result in a smaller grant.

It is the latter form of quota that has been used by the Commonwealth in its road legislation since 1969.

Category matching or *category quota* conditions are usually introduced with the objective of reducing the opportunity for recipient governments to distort donor intentions as to expenditure on specific categories of work. The conditions imposed depend on the overall objectives which the donor government wishes to achieve. Category matching may be applicable where the donor wishes to retain strong control over the actual level of category expenditure. Category quotas may be more appropriate for ensuring that minimum levels of expenditure are reached on a specific program category.

The major criticism of the use of both matching conditions and quota requirements in the Australian context has centred on the claim that they reflect the priorities of the Commonwealth rather than those of the States. If the priorities are different there may be tension between levels of governments. Even if priorities are not very different, the States can use the requirements as a defence against demands for higher expenditure in other areas. The validity of such reactions by State governments will be lessened if the contributions required from the States correspond to the expenditure they were making before the Commonwealth intervened and their required expenditure does not increase more rapidly than the resources available to them.

Project and program approval procedures

Project grants require recipients to compete for funds made available by a donor by submitting comprehensive information on proposed projects. Efficiency objectives may be enhanced using project grants because funds can be distributed on a competitive basis, thus making it possible for the donor government to screen out low benefit projects. Horizontal equity objectives can also be met as recipients of the grant will be competing on an equal basis.

Project grants are a particularly useful mechanism to fund research, development and demonstration projects (eg *Transport (Planning and Research) Act* 1975) and capital works. The Urban Public Transport Improvement Program (1973–78), initiated by the previous ALP Government, provided funds for capital improvement projects by means of project grants which gave the Commonwealth a mechanism to bring the expenditure of recipient governments into line with Commonwealth priorities.

The disadvantages of project grants are primarily threefold. Firstly, there exists the possibility that some States may not choose to apply for project grants as they consider the costs of applying are too high compared with the chances of success. Secondly, the donor government is involved in increased administrative effort and cost in oversighting and vetting projects. Finally, project grants may give rise to major alterations in the recipient's choice of investment strategy by changing relative input prices since they are selective in supporting only part of an overall expenditure program. For example, an evaluation of the effects of project grants for urban mass transportation in the United States in the early 1970s found that they gave rise to inefficiency and waste through an earlier than efficient replacement of buses (Tye 1973).

Program grants are similar to project grants but can be distinguished from them on the grounds that they involve the donor in a lesser degree of overall control. Program grants involve the donor in reduced administrative effort and cost while permitting the donor to monitor the compatibility of the program with the donor-specific objectives for providing the funds. The Commonwealth has made extensive utilisation of the program approval conditions in its roads assistance legislation since 1974–75.

Formula grants

Formulae can be used to facilitate the allocation of specific purpose, block and general revenue grants. In Australia formulae have been widely used to allocate specific purpose grants (eg local roads formula) and by the Commonwealth Grants Commission for general revenue grants.

Formula grants are particularly suited to enhancing equity objectives of a donor, for example by providing specific services to a section of the community which is considered to be in need of the service but lacks the necessary fiscal capacity to provide the service from its own sources. These grants may be an appropriate means for achieving equity objectives of fiscal balance, but are likely to be of little use in achieving efficiency objectives of the donor as the grant is generally made independently of the criteria of costs and benefits.

Donor governments are attracted to providing formula grants for political and administrative reasons. In terms of political appeal this type of grant has much to offer. Once initial agreement on the formula has been reached the possibility of political disagreement between the donor and recipients is likely to be minimised. There can also be administrative advantages. Once the formula has been agreed on implementation it is likely to involve only comparatively minor administrative effort and costs on the part of the donor.

TRUST FUNDS

The concept of trust funds has formed a major part of the debate over alternative road financing mechanisms following Commonwealth establishment of a trust fund to finance the ABRD program. Trust funds are merely a financial accounting tool to accommodate the dedicated receipts arising from a specific revenue source from which funds are spent on specific expenditure items. Hypothecation is normally a key element in the operation of a trust fund.

The objectives served by a trust fund financed from hypothecated revenue are primarily twofold. Firstly, a trust fund arrangement provides a predicted long term funding source against which State and local government can plan expenditure (which is useful in areas like roads where long lead times for major projects may be involved). Secondly, trust funds provide a means for the equalisation of disparities between expenditure and revenue over a longer time frame than is possible on the basis of annual budgeting.

The use of trust funds with hypothecated revenue sources can also have some disadvantages. Firstly, the extensive use of trust funds may reduce the Commonwealth's ability to adjust to changed circumstances within the overall economy. This may adversely effect the ability of government to establish effective counter-cyclical stabilisation policies.

Secondly, funding of a particular item from an hypothecated revenue source may place that expenditure item in a preferred position relative to other expenditure areas and lead to a misallocation of resources. The result may be that government expenditure priorities are distorted. For example, within the transport sector trust funds for one mode may lead to an overall misallocation of resources among modes when budgetary conditions are tight.

Thirdly, hypothecation into a trust fund may limit the ability of the Commonwealth to exercise periodic control over the allocation of funds to the particular expenditure area. Trust fund spending is largely outside normal Parliamentary appropriation processes.

Fourthly, once established, hypothecated programs may tend to continue in existence long after the need for them has expired. This problem, however, may be rectified by incorporating a 'sunset clause' in the legislation establishing the trust fund.

LOANS

Loans are most often used when there is a financial return from the investment projects for which the loan is established (eg electricity generation, toll roads, etc).

The Commonwealth's traditional approach to road funding has been to provide the lower levels of government with non-repayable non-interest bearing grants. This means of financing avoids any problems for the States associated with interest and principal payments.

The funding of roads by loans rather than grants may, however, serve a range of financial, efficiency and equity objectives. The alteration of existing road funding arrangements from the provision of grants to a system of loans is likely to have the following effects. Firstly, the Commonwealth budgetary position would be markedly improved in the long run with the replacement of grants by loans (although the net indebtedness of the nation may not change). Secondly, it is possible that economic efficiency in resource allocation may be enhanced, if funds for roads were provided by means of loans rather than grants, as loans provide some incentive for borrowing governments to introduce an efficient pricing shceme to recover from beneficiaries the cost of projects. Thirdly, the burden of funding roads expenditure will shift from road users to the general taxpayer.

The feasibility of moving away from grants towards loans will be dependent on the interplay of institutional, economic, political, social and constitutional objectives of the donor government. These factors influence all the decisions governments make both in road funding arrangements and elsewhere.

APPENDIX III—STATE FORMULAE FOR THE DISTRIBUTION OF LOCAL ROADS GRANTS TO LOCAL GOVERNMENT AUTHORITIES

This Appendix outlines the various formulae that have been introduced in each State for the distribution among local government authorities of local roads grants provided under the *Roads Grants Act* 1981.

NEW SOUTH WALES

The grants are initially allocated between urban and rural local roads on the following basis:

- 26.3 per cent, urban; and
- 73.7 per cent, rural.

The allocation to urban local roads is distributed as follows:

- 9 per cent for Special Works Subsidy (to be allocated by the Department of Main Roads); and
- 91 per cent distributed among individual councils on the following basis:

  —60 per cent according to road length

  —40 per cent according to population.

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 counils on the following basis;

  —80 per cent according to road length

  —20 per cent according to population.

VICTORIA

Initially the State Road Construction Authority (RCA) retains 35 per cent of the total grant with the remaining 65 per cent allocated to local government authorities for works on local, main and unclassified roads.

The allocation retained by the RCA is distributed as follows:

- two-sevenths allocated to tourist and forest roads (to be spent either by the RCA or local government authorities);
- two-sevenths for works and bridges (also to be spent by either the RCA or local government authorities); and
- three-sevenths to local government on the basis of needs and for works on roads under the direct control of the RCA.

The remaining 65 per cent of funds to local government authorities allocated on the basis of:

- 60 per cent according to road length
- 40 per cent according to population.

QUEENSLAND

The grants are allocated as follows:

- 52.7 per cent of the funds are distributed to local government authorities, with this allocation to be distributed among authorities in proportion to their 1981–82 (base) allocations as set out in Table III.1; and

TABLE III.1—THE ALLOCATION OF THE BASE GRANTS TO LOCAL GOVERNMENT AUTHORITIES IN QUEENSLAND, 1981–82

($)

Local government authority	Base grant	Local government authority	Base grant
	Shires		
Albert	249 842	Esk	78 247
Allora	30 714	Etheridge	81 704
Aramac	59 468	Fitzroy	48 066
Atherton	59 328	Flinders	110 575
Aurukun	18 203	Gatton	92 202
Ayr	173 977	Gayndah	40 740
Balonne	122 127	Glengallan	81 678
Banana	148 863	Gooburrum	52 978
Barcaldine	43 307	Herberton	55 755
Barcoo	122 384	Hervey Bay	96 353
Bauhinia	65 728	Hinchinbrook	128 598
Beaudesert	145 568	Ilfracombe	26 897
Belyando	113 620	Inglewood	64 930
Bendemere	31 231	Isis	50 084
Biggenden	26 724	Isisford	32 392
Blackall	63 283	Jericho	53 974
Boonah	83 335	Johnstone	160 360
Booringa	88 849	Jondaryan	83 598
Boulia	119 069	Kilcoy	36 353
Bowen	128 181	Kilkivan	46 059
Broadsound	60 856	Kingaroy	84 850
Bulloo	140 389	Kolan	37 017
Bungil	60 406	Laidley	57 935
Burke	86 238	Landsborough	147 173
Caboolture	171 278	Livingstone	116 928
Calliope	55 348	Longreach	91 216
Cambooya	32 158	McKinlay	90 205
Cardwell	60 159	Mareeba	197 579
Carpentaria	147 387	Maroochy	291 449
Chinchilla	82 920	Millmeran	49 762
Clifton	34 538	Mirani	55 048
Cloncurry	129 587	Miriamvale	29 996
Cook	255 498	Moreton	188 365
Crow's Nest	42 199	Monto	51 286
Croydon	54 888	Mornington Island	12 115
Dalrymple	146 602	Mount Isa City	283 850
Diamantina	176 272	Mount Morgan	47 761
Douglas	50 675	Mulgrave	191 563
Duaringa	93 650	Mundubbera	36 646
Eacham	50 490	Murgon	48 084
Eidsvold	30 321	Murilla	55 739
Emerald	66 322	Murweh	161 410

TABLE III.1(Cont)—THE ALLOCATION OF THE BASE GRANTS TO LOCAL GOVERNMENT AUTHORITIES IN QUEENSLAND, 1981-82

($)

Local government authority	Base grant	Local government authority	Base grant
Nanango	44 889	Tambo	36 114
Nebo	31 034	Tara	63 018
Noosa	84 741	Taroom	64 939
Paroo	127 030	Thuringowa	97 385
Peak Downs	31 084	Tiaro	35 256
Perry	22 582	Torres	51 230
Pioneer	225 389	Waggamba	64 393
Pittsworth	45 278	Wambo	90 830
Proserpine	66 371	Warroo	47 763
Quilpi	150 828	Widgee	84 868
Richmond	68 220	Winton	129 432
Rosalie	66 479	Wondai	55 795
Rosenthal	50 950	Woocoo	39 477
Sarina	49 112	Woongarra	73 142
Stanthorpe	109 409		
Rural cities and towns			
Bundaberg	129 613	Gympie	48 478
Cairns	154 412	Mackay	92 269
Charters Towers	40 567	Maryborough	93 558
Dalby	42 699	Roma	36 428
Gladstone	80 207	Warwick	59 805
Goondiwindi	18 137		
Predominantly urban areas			
Brisbane	3 426 094	Pine Rivers	283 478
Ipswich	379 953	Gold Coast	431 496
Logan	216 200	Toowoomba	273 535
Redland	221 787	Rockhampton	260 688
Redcliffe	173 599	Townsville	371 715
Total base grant			16 600 693

Source: Commonwealth of Australia (1982).

- 47.3 per cent are retained by the Main Roads Department and given to local government authorities by way of a program of allocations to local government authorities approved by the Minister for Transport.

SOUTH AUSTRALIA

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 metropolitan councils is on the basis of an equal weighting of population and road length.

The distribution of funds among rural authorities is on the basis of an equal weighting of population, road length and road expenditure effort (excluding these grants).

To retain some continuity in the flow of Commonwealth grants to local government authorities a 'phasing in' adjustment applied in 1982–83. Under this adjustment each authority received a minimum allocation which was the average, in current terms, of its 1980–81 and 1981–82 allocations.

WESTERN AUSTRALIA

The initial distribution of funds is:

- 13.98 per cent to metropolitan councils;
- 8.90 per cent to country town councils (including the City of Bunbury);
- 68.42 per cent to country shire councils; and
- 8.70 per cent to councils outside the Perth metropolitan region for special projects (eg bridges, flood damage and road projects beyond the financial or technical capacity of councils).

The allocation to metropolitan councils is to be distributed among councils on the basis of:

- two-thirds of the allocation to be distributed in proportion to population; and
- one-third in proportion to weighted pavement length (a weighting of two for length of sealed road and one for length of unsealed road).

The allocation to town councils is to be distributed on the same basis as the allocation to metropolitan councils.

The distribution of the allocation to country shire councils is to be in accordance with the following three components:

- Initially, every council will receive a base amount which, in 1982–83, was $32 000. This amount is to be increased in accordance with the increase in total local road grants to the State.
- A routine maintenance grant for unclassified roads will be added based on the following:
  - —shires in agricultural areas to receive $13.80 per weighted kilometre of road length
  - —shires in pastoral areas (except the Pilbara and Kimberley regions), $12.30 per weighted kilometre
  - —shires in the Pilbara region, $15.30 per weighted kilometre
  - —shires in the Kimberley region, $21.70 per weighted kilometre
  - —these rates which are for 1982–83 are to be increased each year in line with the overall increase in grants.
- Each country shire is also to receive a statutory grant distributed in proportion to population and weighted road length as set out in Table III.2.
- These statutory grants are subject to a provision that no shire should receive less than $23.37 per weighted kilometre in 1982–83. This amount is also to be indexed annually in line with the increase in total grants.

TABLE III.2—THE ALLOCATION OF THE STATUTORY GRANT TO LOCAL GOVERNMENT AUTHORITIES IN WESTERN AUSTRALIA

Local authority groupings	*Proportion to be allocated according to*	
	Population	*Weighted road length*
Agricultural shires grouped on a ward basis	1/2	1/2
Kimberley shires on a regional basis	1/2	1/2
Shires in mining and pastoral areas with population densities between 1 and 6 persons per 100 square kilometres	1/2	1/2
Shires in mining and pastoral areas with large towns	2/3	1/3
East and West Pilbara shires on a regional basis	2/3	1/3
Shires in mining and pastoral areas with population densities below 1 per 100 square kilometres	1/3	2/3

Source: Commonwealth of Australia (1983).

TASMANIA

Initially the distribution of total grants is as follows:

- 19 per cent to be retained by the Department of Main Roads (DMR) for the construction and maintenance of council bridges;
- 3 per cent to be retained by the DMR of which;

  —one-third is for repair of flood damage to council roads and bridges

  —two-thirds is for specific projects of an 'extraordinary character'; and
- 78 per cent to be distributed to local councils along with any unexpended funds from the reserves for repair of flood damage and extraordinary projects.

The allocation to local councils is to be distributed as follows:

- 73 per cent to be distributed on the basis of road length; and
- 27 per cent to be distributed on the basis of population.

A three year transition phase (1 July 1981 to 30 June 1984) has been provided, after which time the formula will apply fully to all councils. Should councils amalgamate during the transition period the formula will apply immediately to the new councils.

NORTHERN TERRITORY

The Department of Transport and Works retains 89.1 per cent of total grants for construction and maintenance of local roads in unincorporated areas. This is because a large proportion of the Territory is unincorporated.

The remaining 10.9 per cent of grants is allocated to the four local authorities on the basis of an equal weighting of population, road length and area.

APPENDIX IV—THE IMPORTANCE OF SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS IN LOCAL GOVERNMENT BUDGETS

This Appendix presents a series of tables showing the importance of various revenue sources and particular expenditure items in the overall budgets of local government authorities. Separate tables are provided for each of the six States.

TABLE IV.1—SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE AND EXPENDITURE, BY LOCAL GOVERNMENT CATEGORY, NEW SOUTH WALES

(per cent)

	Urban			*Rural*				
	Metro-politan	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
Untied revenue								
Rates	57.0	55.1	50.9	44.3	36.3	34.7	31.4	29.3
General purpose grants	7.1	9.1	9.1	10.1	11.3	13.3	12.1	11.2
Other	24.3	18.4	27.8	26.6	30.9	23.5	19.0	13.3
Total untied revenue	88.4	82.6	87.8	81.0	78.5	71.5	62.5	53.8
Tied revenue								
Specific purpose grants (roads)	1.9	1.5	0.8	3.2	4.0	6.5	9.0	11.9
Reimbursements (roads)	2.5	8.5	5.0	9.1	11.0	15.4	22.0	28.8
Other	7.2	7.4	6.4	6.7	6.5	6.6	6.5	5.5
Total tied revenue	11.6	17.4	12.2	19.0	21.5	28.5	37.5	46.2
Total revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Road expenditure								
From tied revenue	7.2	12.8	8.2	14.7	17.5	23.4	32.4	41.5
From untied revenue	19.1	18.8	22.6	19.3	18.3	18.7	20.2	22.3
Total road expenditure	26.3	31.6	30.8	33.9	35.8	42.0	52.0	63.8
Other	73.7	68.4	69.2	66.1	64.2	58.0	48.0	36.2
Total expenditure	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Source: ABS (1980–81).

TABLE IV.2—SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE AND EXPENDITURE, BY LOCAL GOVERNMENT CATEGORY, VICTORIA

(per cent)

	Urban			*Rural*				
	Metro-politan	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
Untied revenue								
Rates	54.9	50.7	43.2	36.9	38.0	37.5	39.9	32.5
General purpose grants	6.6	8.5	11.7	10.1	9.9	10.8	10.6	11.2
Other	22.2	18.6	19.2	25.6	21.6	18.0	14.3	14.5
Total untied revenue	83.7	77.8	74.1	72.6	69.5	66.3	64.8	58.2
Tied revenue								
Specific purpose grants (roads)	2.2	4.8	7.9	5.8	6.2	10.6	11.8	15.8
Reimbursements (roads)	3.5	2.5	4.7	4.9	4.2	9.0	11.8	16.1
Other	10.6	14.9	13.2	16.7	20.1	14.1	11.6	9.9
Total tied revenue	16.3	22.2	25.8	27.4	30.5	33.7	35.2	41.8
Total revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Road expenditure								
From tied revenue	8.4	10.2	14.2	14.8	13.2	23.4	26.6	33.6
From untied revenue	13.6	12.4	22.2	12.1	11.4	19.3	23.0	25.5
Total road expenditure	22.0	22.6	36.4	26.9	24.6	42.3	49.7	59.1
Other	78.0	77.4	63.6	73.1	75.4	57.7	50.3	40.9
Total expenditure	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Source: ABS (1980–81).

TABLE IV.3—SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS AS PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE AND EXPENDITURE, BY LOCAL GOVERNMENT CATEGORY, QUEENSLAND

(per cent)

	Urban			*Rural*				
	Metro-politan	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
Untied revenue								
Rates	51.4	..	44.7	38.6	43.4	34.8	31.7	28.2
General purpose grants	6.7	..	9.1	10.1	10.4	12.2	17.0	16.0
Other	27.7	..	28.6	22.7	20.7	18.9	10.5	7.1
Total untied revenue	85.8	..	82.4	71.4	74.5	65.9	59.2	51.3
Tied revenue								
Specific purpose grants (roads)	5.4	..	5.3	4.5	7.0	5.9	7.1	7.2
Reimbursements (roads)	1.1	..	3.7	4.6	8.8	14.1	21.1	25.0
Other	7.7	..	8.6	19.5	9.7	14.1	12.6	16.5
Total tied revenue	14.2	..	17.6	28.6	25.5	34.1	40.8	48.7
Total revenue	100.0	..	100.0	100.0	100.0	100.0	100.0	100.0
Road expenditure								
From tied revenue	7.2	..	10.3	9.4	16.9	21.7	28.8	35.1
From untied revenue	14.9	..	14.5	8.9	16.7	18.6	17.1	15.7
Total road expenditure	22.2	..	24.9	18.4	33.6	40.3	45.9	50.3
Other	77.8	..	75.1	81.6	66.4	59.7	54.1	49.7
Total expenditure	100.0	..	100.0	100.0	100.0	100.0	100.0	100.0

.. not applicable

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

Source: ABS (1980-81).

TABLE IV.4—SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE AND EXPENDITURE, BY LOCAL GOVERNMENT CATEGORY, SOUTH AUSTRALIA

(per cent)

	Urban			*Rural*				
	Metro-politan	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
Untied revenue								
Rates	59.3	..	46.3	52.6	53.0	50.2	47.7	47.0
General purpose grants	10.0	..	18.2	14.8	15.8	17.2	16.0	15.2
Other	20.8	..	24.0	14.9	14.2	18.3	12.3	10.4
Total untied revenue	90.1	..	88.5	82.3	83.0	85.7	76.0	72.6
Tied revenue								
Specific purpose grants (roads)	1.6	..	0.8	2.6	2.9	2.9	5.5	11.3
Reimbursements (roads)	1.4	..	0.7	3.8	3.5	2.7	5.0	6.1
Other	6.9	..	10.0	11.2	10.6	8.7	13.5	10.0
Total tied revenue	9.9	..	11.5	17.6	17.0	14.3	24.0	27.4
Total revenue	100.0	..	100.0	100.0	100.0	100.0	100.0	100.0
Road expenditure								
From tied revenue	3.9	..	1.7	6.1	7.0	6.3	11.4	17.0
From untied revenue	19.1	..	18.7	16.8	21.9	18.8	24.5	26.1
Total road expenditure	23.0	..	20.4	22.9	28.9	25.1	35.9	43.1
Other	77.0	..	79.6	77.1	71.1	74.9	64.1	56.9
Total expenditure	100.0	..	100.0	100.0	100.0	100.0	100.0	100.0

.. not applicable

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

Source: ABS (1980–81).

TABLE IV.5—SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE AND EXPENDITURE, BY LOCAL GOVERNMENT CATEGORY, WESTERN AUSTRALIA

(per cent)

	Urban			*Rural*				
	Metro-politan	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
Untied revenue								
Rates	47.7	..	..	36.3	40.1	27.7	29.5	30.5
General purpose grants	6.9	..	..	12.5	15.7	18.3	16.7	15.2
Other	31.4	..	..	25.5	21.4	24.2	23.6	17.6
Total untied revenue	86.0	..	..	74.3	77.2	70.2	69.8	63.3
Tied revenue								
Specific purpose grants (roads)	5.3	..	..	11.7	10.8	17.7	20.3	26.9
Reimbursements (roads)	3.4	..	..	3.8	7.9	3.2	4.1	4.2
Other	5.3	..	..	10.2	4.0	8.9	5.8	5.6
Total tied revenue	14.0	..	..	25.7	22.7	29.8	30.2	36.7
Total revenue	100.0	..	..	100.0	100.0	100.0	100.0	100.0
Road expenditure								
From tied revenue	10.5	..	..	19.7	20.1	24.1	25.7	33.6
From untied revenue	12.4	..	..	8.1	11.3	8.4	17.0	16.1
Total road expenditure	22.9	..	..	27.8	31.5	31.2	42.6	49.5
Other	77.1	..	..	72.2	68.5	68.8	57.4	50.5
Total expenditure	100.0	..	..	100.0	100.0	100.0	100.0	100.0

.. not applicable

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

Source: ABS (1980–81).

TABLE IV.6—SELECTED REVENUE SOURCES AND EXPENDITURE ITEMS AS A PERCENTAGE OF TOTAL LOCAL GOVERNMENT REVENUE AND EXPENDITURE, BY LOCAL GOVERNMENT CATEGORY, TASMANIA

(per cent)

	Urban			*Rural*				
	Metro-politan	*Large city*	*Medium city*	*Small city*	*Large town*	*Medium town*	*Small town*	*Country*
Untied revenue								
Rates	..	54.6	45.2	61.3	46.8	51.0	46.4	34.9
General purpose grants	..	9.6	10.2	10.3	13.4	13.3	16.6	18.8
Other	..	29.4	26.5	22.8	16.0	21.3	13.8	14.2
Total untied revenue	..	93.6	81.9	94.4	76.2	85.6	76.8	67.9
Tied revenue								
Specific purpose grants (roads)	..	3.0	6.7	2.6	9.9	8.4	10.0	23.9
Reimbursements (roads)	..	0.8	4.2	0.4	3.4	2.1	2.6	3.7
Other	..	2.6	7.2	2.6	10.5	3.9	10.5	4.5
Total tied revenue	..	6.4	18.1	5.6	23.8	14.4	23.1	32.1
Total revenue	..	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Road expenditure								
From tied revenue	..	4.6	12.9	3.5	16.0	13.6	18.9	33.6
From untied revenue	..	15.9	14.1	19.0	16.4	26.1	27.0	24.3
Total road expenditure	..	20.5	26.9	22.6	32.4	39.7	45.9	57.9
Other	..	79.5	73.1	77.4	67.6	60.3	54.1	42.1
Total expenditure	..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

.. not applicable

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

Source: ABS (1980–81).

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ABRD Trust Fund Act 1982

ABBREVIATIONS

ABRD	Australian Bi-Centennial Roads Development
ABS	Australian Bureau of Statistics
ACLGA	Australian Council of Local Government Associations
ACT	Australian Capital Territory
ALP	Australian Labor Party
AMIS	Australian Municipal Information System
BTE	Bureau of Transport Economics
CAR	Commonwealth Aid Roads
CBR	Commonwealth Bureau of Roads
DMR	Department of Main Roads
LGA	Local Government Area
L-NCP	Liberal-National Country Party
MITERS	Minor Traffic Engineering and Road Safety Improvements
PITS	Personal Income Tax Sharing
REDS	Regional Employment Development Scheme
RCA	Road Construction Authority
RGA	Road Grants Act
SLGFS	Standardised Local Government Finance Statistics
UPT	Urban Public Transport