

UNIVERSITY OF CAPE TOWN

SCHOOL OF ECONOMICS

THE ECONOMIC AND FINANCIAL POLICIES
OF LOCAL GOVERNMENTS IN SOUTH AFRICA :
A THEORETICAL ANALYSIS

By

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A thesis submitted in June 1983 in fulfilment of the requirements for
the degree of Master of Arts.

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David Solomon
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ABSTRACT

This thesis is a theoretical enquiry into the financial policies of local governments in South Africa.

The basic principles governing this issue are presented in Chapter Six. The theory of corporate debt capacity is drawn upon and an analagous model of local government debt capacity is presented. The Modigliani-Miller approach is adapted, and the conclusions of this model applied in the local government context. The implication is drawn that local government officials see the incurment of debt as increasing the financial riskiness of the local area, just as corporate executives see corporate debt as increasing the riskiness of the firm. It is hypothesised that local governments which are very loosely linked, politically and economically, to the people they serve will be more risk averse than fiscally or electorally sensitive governments, and will display greater reluctance to incur debt. In so doing, they will sacrifice opportunities to improve the area by favourable capital development, financed by a judicious combination of debt and current revenue. Current available data on a cross section of local governments is presented which tentatively confirms this hypothesis.

Chapter Seven contains an analysis of the currently experienced shortage of funds for local government. It is concluded that the curtailment of borrowing has been largely responsible for this shortage.

Chapter Eight makes use of the framework developed to critically examine the trend towards internal financing. The shortcomings of this policy are presented, and some claimed advantages examined and rejected. Some specific methods of internal financing are identified and examined individually.

Chapter Nine broadens the discussion beyond purely finance issues to the question of the constitutional position of local governments. The recommendations of the President's Council are examined critically, particularly those concerning tax sharing and metropolitanisation.

The first section of the thesis, chapters One to Five, is concerned with presenting the theoretical basis on which the analysis of local governments rests. Chapter Two presents an historical introduction to

the theory of public enterprise, beginning with the Italians, covering the modern 'pure theory of public goods' and focusing ultimately on the Public Choice school and the positive theory of public goods. This approach enables us to view government as a part of the institutional framework of the economy, rather than as a separate force. Public goods are seen as those commodities which can more efficiently be provided in an institutionalised, collective manner. Chapter Three presents the local municipal authority as one such institutional form, which exists in competition with other municipalities and with other institutional forms. This competition, it is suggested, becomes expressed in the value of properties within the local jurisdiction. Evidence supporting this capitalisation hypothesis is presented.

Chapter Four presents the theoretical underpinning of the approach to revenue sources presented later in the thesis. Various funding options are examined, including taxing, user charges, borrowing and grants. The arguments surrounding the property tax and its incidence are presented in Chapter Five. The site value tax is placed under a spotlight, to see whether it really does have the potential to encourage development of buildings and improvements in a local area.

PREFACE

The problem of local government financial policies first came to my attention in 1981, while employed as a researcher by the Urban Problems Research Unit of the University of Cape Town. The Unit was approached for help by a group of residents from Kleinvlei, a small community in the Stellenbosch Divisional Council area. They presented a problem which has become very familiar: their community was small and isolated and lacking in the most fundamental facilities. A field survey revealed that drainage was a very severe problem, particularly during the wet Cape winters. The area, as the name suggests, consists of very flat, low-lying, sandy terrain, with a high water table. Houses are often surrounded with water, roads are frequently impassable. Sewerage disposal, too, was badly provided, being by individual pressure tanks for the privately owned houses, and by bucket system for the council's sub-economic letting units.

My initial response was to 'blame' this state of affairs on the relative poverty of residents, and on the high cost nature of the area as a location for residential housing. The explanation flowing from this would have concentrated on the income inequality of the coloured population group and on the nature of the location decision, of course a bureaucratic one.

While this line of inquiry would doubtless have been as fruitful for me as it has been for others, I was not able to ignore some of the features of the problem that drained force from this argument. Most importantly, the residents of Kleinvlei were not, for the most part, of the lowest income groups, but of medium, even of high income categories. The houses they occupied, aside from those of the sub-economic housing schemes, are of a price and quality indistinguishable from many properties in the nearby white suburbs of Brackenfell and Kraaifontein, which are very much better served. The population was at that stage growing very rapidly. The tax base was therefore, although small in extent, very promising.

The problem presented by Kleinvlei was, therefore, indistinguishable from the problems presented by any housing 'estate' in its early formative years. These problems are, in the case of white communities, inevitably solved. In the case of coloured communities they seem to

persist, and are ultimately resolved, if at all, by a massive injection of government aid.

It was quite understandable, therefore, that the community should seek the professional help of the Unit in presenting its case to the various government bodies involved. A successful application for massive grants would certainly have solved Kleinvlei's problems, but would have brought only disappointment to those many similar local areas with whom Kleinvlei is forced to compete for scarce government aid.

From the perspective of the Economist and Social Scientist, therefore, the problem remained unsolved. Indeed, its importance has increased as the present constitutional debate focuses more and more strongly on the local authority as the grassroots of democracy. The problem of financing their capital development takes on corresponding significance. It was in an effort to contribute to the solution of this problem that my attention turned in particular toward the debt policies of Kleinvlei. I found that the community was in the 'happy' position of being almost debt free. This fact alone, I believe, provides the beginning of an explanation for the poor level of local amenities. The remainder of the explanation must certainly emerge from a study of the local authority as an institution operating within the economic and bureaucratic environment.

This thesis, it is hoped, constitutes such a study, and, as such, provides a framework with which to answer many of the pressing social problems that confront South Africa.

	<u>Page</u>
Acknowledgements	(i)
Abstract	(ii)
Preface	(iv)
Contents	(vi)
List of Tables	(ix)
<u>Chapter One: Introduction</u>	1
<u>Chapter Two: The Theory of Public Goods</u>	7
1. Introduction	7
2. Roots of the Modern Theory of Public Goods	7
3. Demand for Public Goods	9
4. The Theory of Voting	15
5. The Theory of Voting Rules	17
6. Supply of Public Goods	20
7. Institutions	20
8. The Theory of Clubs	27
9. Conclusion	30
Notes	31
<u>Chapter Three: Local Public Goods</u>	34
1. What is a Local Public Good?	34
2. Articulation of Demand for Local Public Goods	38
3. Capitalisation	40
4. Competition and Politics	44
5. Migration	45
6. Conclusion	46
Notes	47
<u>Chapter Four: The Funding of Local Government</u>	49
1. Sources of Funds	49
2. Relative Merits of Alternative Sources	49
3. Taxes	51
4. Fees and User Charges	57

5. Subsidies from Central Government	58
6. Conclusion	60
Notes	61

Chapter Five: Local Taxes 62

1. The Incidence of the Property Tax	62
2. The Site Value Tax	72
3. General Sales Tax	78
4. Selective Sales Tax (Excise Tax)	79
5. Local Income Tax	81
Notes	83

Chapter Six: A Model of Local Authorities' Debt Carrying Capacity 85

1. The Role of Debt in Financing Local Expenditure	85
2. Theoretical Approaches to Corporate Capital Structure	89
3. Application of Corporate Theory to Local Authorities	96
4. Substitutability of Local Government and Personal Debt	100
5. The Amount of Debt	107
6. Rating of Local Authority Debt	107
7. Implications	108
8. Evidence	109
9. Conclusion	113
Notes	114

Chapter Seven: The Shortage of Funds for Local Government in South Africa 115

1. Introduction	115
2. Fiscal Role of Local Government in South Africa	115
3. Trends in Local Government Finances	123
4. Conclusion	125
Notes	126

<u>Chapter Eight: Internal Financing of Local Investment:</u>	
<u>A Critical Appraisal</u>	127
1. The Browne Committee	127
2. The Shortcomings of Internal Finance	128
3. Some Claims made for Internal Financing	134
4. Methods of Internal Financing	138
5. Conclusion	143
Notes	144
<u>Chapter Nine: Local Government Reform in South Africa:</u>	
<u>A Critique of the President's Council Proposals</u>	146
1. Metropolitan Government	146
2. Revenue Sharing	151
3. Black Local Authorities	156
4. Conclusion	158
Notes	160
<u>Chapter Ten: Conclusion</u>	161
1. Summary	161
2. Political Context	163
3. Requirements for Effective Local Autonomy	164
Notes	170
<u>Bibliography</u>	171

<u>List of Tables</u>	<u>Page</u>
Table 2.1 Cycling	16
2.2 Logrolling	17
4.1 Central Government Subsidies as a Proportion of Total Expenditure	59
6.1 Some Financial Ratios of Local Authorities in South Africa: 1977	110
6.2 Some Key Financial Ratios of Local Authorities in the Five Metropolitan Areas of South Africa: 1977/78	112
6.3 Some Key Financial Ratios of Selected Local Authorities in the Cape 1980	112
7.1 Local Government Finance in a Number of Countries	117
7.2 Contribution of Local Authorities to Gross Domestic Product (at Factor Cost)	119
7.3 Central Government's Share of GDP (at Factor Cost)	120
7.4 Contribution of Local Authorities to Gross Domestic Fixed Investment	121
7.5 Some Ratios, All Local Authorities	123
7.6 Local Authorities' Liabilities: Financing of Gross Additions	124
8.1 The Financing of Fixed Capital Assets of Durban according to the Balance Sheet 1960-1978	127

CHAPTER 1: INTRODUCTION

The social problems facing South African communities have increased rapidly with accelerated urbanisation and the creation of new towns and villages. This, in conjunction with the limitations of the Group Areas Act and the decentralisation policies, has placed severe strain on the members of many communities, particularly on their finances.

Communities have voiced their anger and frustration at the limited scope of state housing, and at the performance of local governments in the administration of subsidised housing schemes. As a result several changes have been made regarding state housing policy, most of which display an increasing tendency to move towards private and local government involvement.

This concentration on local authorities, together with the concomitant demands made on their finances has come at a time when they are experiencing increasing difficulty in adjusting their policies to cope with inflation. This, for them, has been characterised by escalating costs, high nominal interest rates and a lagging base on which to levy property taxes, their principal revenue source.

In response to the resulting distress calls, the Browne Committee was appointed to enquire into the finances of local government.¹ The report of this committee offered little relief, however, recommending no new revenue sources, suggesting that authorities put their houses in order administratively and that funds for capital development should come from internal sources, through the 'Capital Development Fund'. These recommendations were not well received by local administrators, and the issue continues to receive attention from the Croeser working group.²

The role of the local government as a political institution in South Africa received considerable further attention from the President's Council, who, in their report³ recommended that the direction of constitutional change in South Africa should be toward greater local autonomy: "... at the level of local government, the principle of maximum devolution of authority and decentralisation of administration be accepted as a matter of policy".⁴

Despite their exclusion from the terms of reference of the Presidents' Council deliberations, Black local government was not neglected in the legislature. The Black Local Authorities Act no.102 of 1982 was promulgated, providing for the establishment of Black local governments in urban and rural areas.

Local autonomy is thus widely recognised as one of the paths to constitutional reform in South Africa. Its advantages are very clear:

- local governments are more responsive to local needs;
- local officials are more accountable to citizens;
- a wide variety of divergent needs can be catered to;
- local preferences do not have to take second place to national interests;
- residents have a greater feeling of participation in decision making and do in reality have greater potential to affect outcomes.

The dangers are however equally apparent:

- that authorities will not be truly autonomous but merely be segregated, powerless entities;
- that the parameters within which authorities operate, i.e. location, population mix, housing type etc, will be dictated from central government, not left to local discretion
- that these parameters will become ossified as a result of the constraints on mobility and a property ownership that are presently in operation;
- that the financial resources of local authorities will be inadequate, and will be incapable of expansion due to the many artificial constraints imposed on them.

It is in this light that the present difficulties experienced by local governments take on a special significance. If we cannot understand their problems, the likelihood is that the problems resulting from the type of constitutional reform presently envisaged will go unsolved.

This thesis is an attempt to address the problems of the financing of local government. It is a problem that has arisen not in the academic environment, but in the 'real world' of people and money. In so doing

This area is identified as the most promising one to look into for an answer to the question of why many communities, even those of middle to high income groups, are badly served with amenities.

The model developed presents the hypothesis that this may result from exaggeratedly risk-averse behaviour on the part of local officials, with respect to their borrowing for capital development. It is further hypothesised that such risk-averse behaviour is a concomitant of the non-representative nature of some local governments. The implication is therefore that sound financial policies, and therefore maximum local development, can only be achieved within a suitable system of political representation.

While this thesis does not attempt to prove this empirically, the ground work is hopefully laid for the more precise econometric specification of the hypotheses with a view to testing them in the future.

Chapter Seven takes a closer look at the avowed shortage of local government funds, and identifies a movement away from external financing as the fundamental reason for it, partially confirming the proposition of Chapter Six. Also identified is a movement away from local government, toward central government, a contradiction of the stated intention of the present administration.

Chapter Eight makes use of the theoretical framework developed to provide a critical appraisal of the growing movement away from external financing through borrowing, towards internal financing along the lines recommended by the Browne Committee and practised by several local governments in South Africa.

This application of conventional financial and investment theory leads to the conclusion that self sufficiency in finance, as in all other things, is not an optimising policy. Communities would be better served if their officials followed the signals of the market place as embodied in interest rates.

Because this conclusion meets with such an unenthusiastic reception among policy proponents, despite its ready acceptance in other fields, the specific claims made on behalf of internal financing have been subjected to special scrutiny and found, for the most part, to be wanting.

Also receiving the analytical attention of the institutional choice approach to public goods are the proposals put forward by the President's Council. In Chapter Nine, some specific proposals are examined, including those concerning a metropolitan tier of government, and revenue sharing schemes. These are also found to be wanting in analytical foundation, and are shown to have detrimental consequences for local areas that adopt them.

It is hoped that this thesis will make a positive contribution to the ongoing constitutional debate in South Africa, in which local government is playing a major role. It has become clear that the discussion of local autonomy is in need of a conceptual framework, which this thesis will help to provide, while at the same time, addressing explicitly the policy issue of capital finance.

NOTES TO CHAPTER ONE

1. Browne, G.W.G., Report of the Committee of Enquiry into the Finances of Local Authorities in South Africa (Government Printer R.P. 80/1980).
2. The report of the Croeser Working Group was released on the 30th March 1983, too late to be commented on in this thesis.
3. Joint Report of the Committee for Economic Affairs and the Constitutional Committee of the President's Council on Local and Regional Management Systems in the Republic of South Africa (P.C. 1/1982).
4. P.C. 1/1982, op cit, p.105.
5. Buchanan, J.M., The Demand and Supply of Public Goods (Rand McNally, Chicago, 1968).

1. Introduction

Before we can discuss the financial arrangements surrounding the operations of local public bodies, we need to situate these institutions within a broader framework of analysis. We need to understand why they exist and under what constraints and for what objectives they operate. To this end we shall begin in this chapter with a review of modern economic analysis of public goods, tracing its roots in the European tradition of the late 19th century, and following it through to the current state-of-the-art which is practiced by the Public Choice school.

In the following chapter, the Institutional analysis of this school will be linked to the well known "voting-with-the-feet" model of C. M. Tiebout as an approach to the specific analysis of local authorities.

2. The Roots of the Modern Theory of Public Goods

Much current thinking on the subject of Public Economy, particularly that in the Public Choice paradigm, is indebted to the Italian economists of the late 19th century, a fact which is handsomely acknowledged by J. M. Buchanan.¹ Unlike the economists of the post-Marshallian era, the Italian theorists saw the public economy as a two handed entity with both a revenue side and an expenditure side, i.e. as an entity which exacts payments in order to provide goods and services. Sax² and Mazzola³ made an early attempt (1880) to distinguish this process from the provision of private goods which also involves paying a price and receiving goods and services in return. Their analysis identified the collectivity of wants and of production as the distinguishing feature. Pantaleoni⁴ made pioneering use of the (then) new marginal analysis to explain the actions of the taxing-spending authority in its budgeting choices. De Viti de Marco⁵ extended this approach to cover the situation where both suppliers of public goods and receivers of public revenue are part of the same community.

The strongest contribution of the 19th century, however, came from Knut Wicksell.⁶ He too viewed the revenue and expenditure functions of government in an integrated way, but went further than the Italians in pointing out that the fiscal decisions are themselves the result of a social process, not the arbitrary decisions of a king or despot. His analysis concentrated on the actual institutions through which the choices are made, rejecting the concentration on tax-fairness and allocative efficiency which were to become the primary concern of later writers. Perhaps his greatest contribution was to make a comparison of the private transacting process; involving two co-operating parties, a buyer and a seller, as well as all the many consenting potential buyers and sellers, and the political decision making process involving numerous voters. His seminal contribution was to point out that the private transaction involves implicit unanimity between buyer, seller and all consenting potential buyers and sellers. In order to replicate the private process in the public sphere, an equivalent unanimity rule should apply. Only in this way can the public sector approach the kind of optimal position suggested by Wicksell's contemporary, Vilfredo Pareto.

This normative position laid the ground-work for the subsequent work of Lindahl⁷ who attempted to clarify the link between the political bargaining process and economic efficiency. This work will be examined in more detail below.

This voluntary exchange theory of public finance was introduced into the American economic tradition through the work of R. Musgrave⁸ who subjected it to a critical evaluation. There followed, in the 1950's and 1960's, a period of rapid development, which Buchanan⁹ places into four categories: The Demand for Public goods, in which Samuelson built on the work by Lindahl to analyse the necessary marginal conditions for allocative efficiency of Public goods; The Theory of Voting in which the unanimity condition imposed by Wicksell is expanded; The Theory of Voting Rules or Constitutions in which the Wicksellian consensus requirement is pushed back a step to include only consensus on the constitution; and The Supply of Public Goods, which concentrates on the responses of public bodies to anticipated demand for public goods.

We shall discuss these categories in more detail and shall conclude this chapter with a presentation of the institutional approach.

3. Demand for Public Goods

Lindahl:-

The absence of familiar preference revelation mechanisms inherent in the market process makes the discussion of the demand for public goods a far more complex one than the corresponding question of the demand for private goods. Lindahl addressed this question from the perspective of voluntary, unanimous exchange between individuals who demand public goods and pay taxes. Mueller¹⁰ following Johansen¹¹ and Slutsky¹² presents the following formulation:-

Consider a world with two individuals, A and B. Both have preferences for public goods which relate to the amount of private goods to be sacrificed for them. Mapping their preferences from Public good - Private good space to Public good - tax space, we derive indifference curves for A and B. (Fig. 2.1).

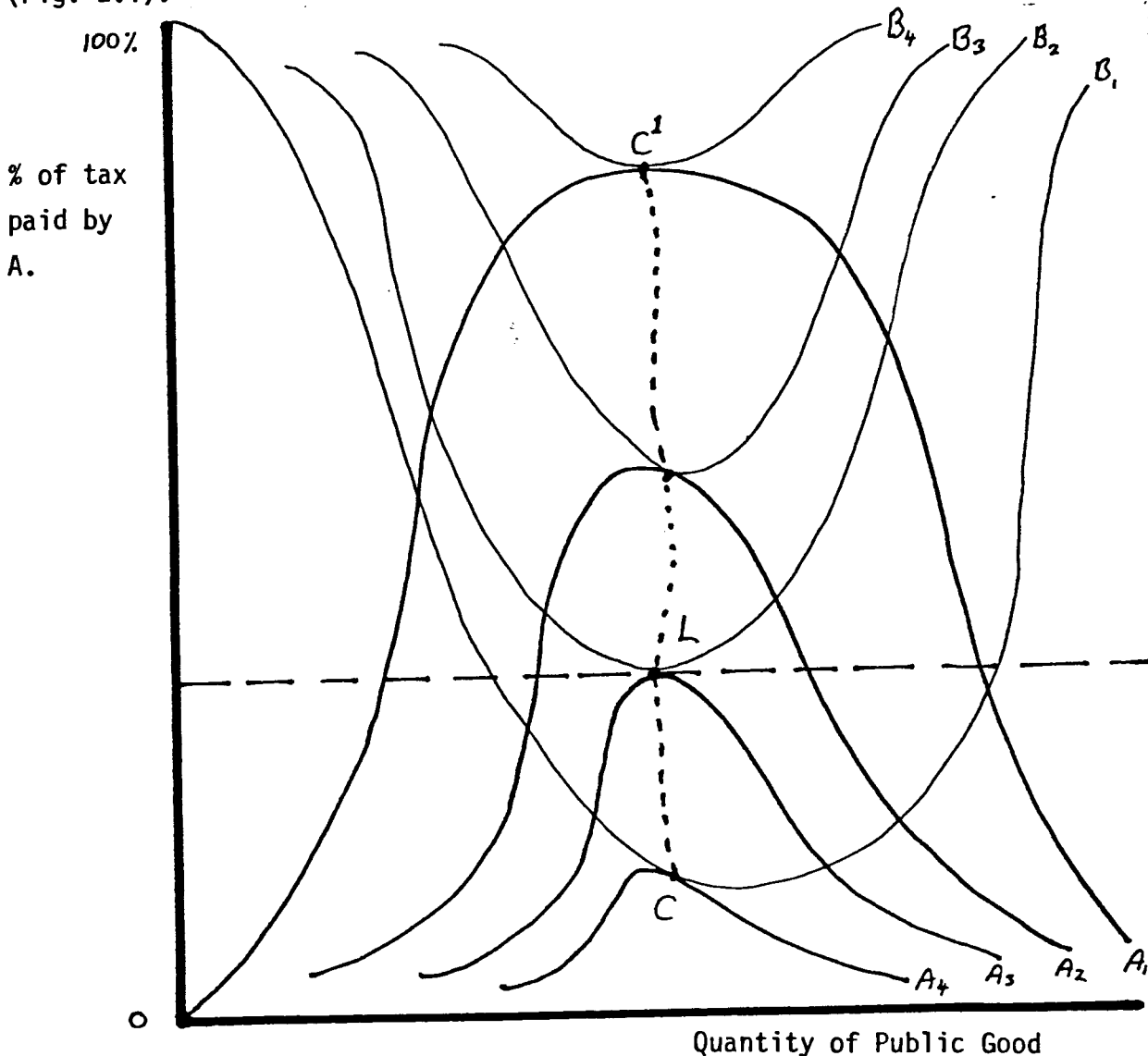


Fig. 2.1

A_1 is naturally a preferable state to A_2 since it involves less tax and more goods. The characteristic shape of the indifference curves derives fundamentally from the changing elasticity of demand for public goods with respect to taxes or private goods forgone. A_1 and B_1 show a level of utility equivalent to the absence of any tax or public good. If A_1 and B_1 cross, then there exists scope, within the "eye" formed by the two curves, for mutually beneficial tax-share, public good arrangements. These agreements may, as in the orthodox Edgeworth Box formulation lie on the locus of the points of tangency between A's and B's utility functions i.e. between C and C'. Precisely where will depend on the relative power positions of the two parties concerned. A would naturally prefer to be at C, while B would prefer C'. A unanimity voting rule would require that, in the first position, both indifference curves are tangential not only to each other but also to the tax share line running horizontally across the diagram. Where this takes place (at L) will be the Lindahl equilibrium, to which all parties will give consent.

This analysis assumes, among other things, the absence of strategic behaviour on the part of participants. A and B are assumed to reveal their true feelings in the agreement procedure, showing no inclination to seek a free ride. The extreme restrictiveness of this assumption, together with the high cost inherent in the unanimity requirements led Black¹³ and Buchanan and Tullock¹⁴ to examine the voting process in greater detail.

Samuelson:-

Samuelson, in his seminal article developing the "pure" theory of Public Goods, examines the conditions for Pareto Optimal supply of Public Goods.

He initially defines the two categories of goods:

$$\text{Private: } X_1 = X_1^1 + X_2^2 + X_1^3 \dots + X_1^n$$

$$\text{Public: } X_2 = X_2^1 = X_2^2 = X_2^3 \dots = X_2^n$$

Following Wicksell¹⁶ he rejects the idea of the "mind of a benevolent despot" as a device to artificially suggest a coherent social indifference map. He creates in his diagrammatic exposition¹⁷ a two person universe in which each person has a distinct preference map for Public and Private goods.

Fig. 2.2. represents man 1's preference map for Private (X_1^1) and Public (X_2^1) goods.

Fig. 2.2

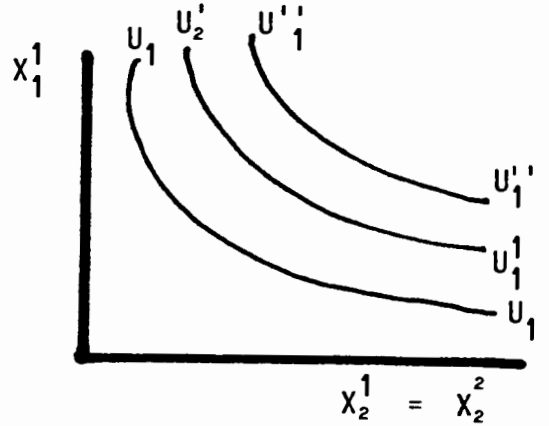


Fig. 2.3 represents man 2's preference map for Private and Public goods.

Fig. 2.3

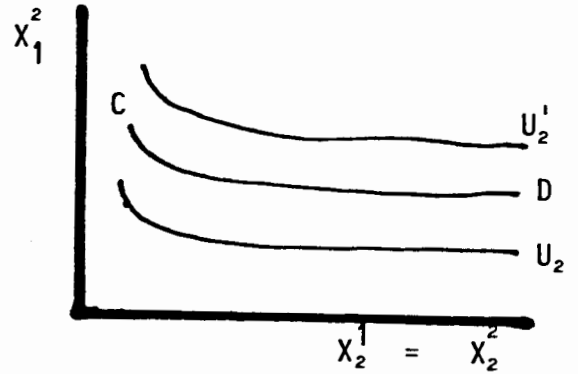
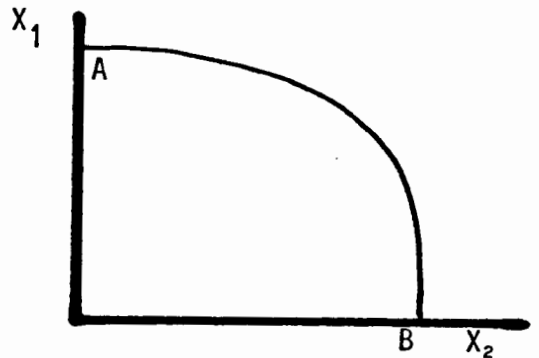


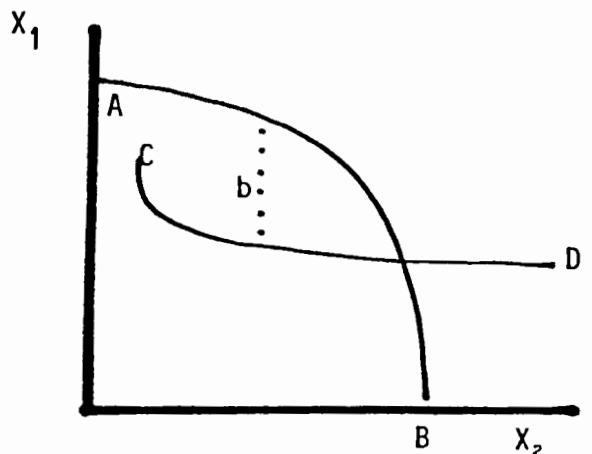
Fig. 2.4 represents the societies' transformation function for Private and Public goods, X_1 and X_2

Fig. 2.4



The two individuals are perceived to act in isolation. Man 1's supply of goods is seen as the residue after satisfaction of Man 2's demand. CD represents one of Man 2's indifference curves. When his demand is satisfied to this level, amount b of X_1 , the private good, remains for Man 1.

Fig. 2.5



The amount of X_2 , the Public good, is undiminished. A point such as point E exists for each successive indifference curve in Man 2's map.

Together these points, cd, constitute a supply function for Man 1. This will be reconciled with his utility function at P, the point of tangency. This represents a Pareto optimum in terms of the allocation of resources between Private and Public goods. There is an optimum of this kind for each pair of Man 1 and Man 2's indifference curves, so that a utility frontier pp can be generated illustrating the conflict between the individuals. Any point on this frontier is a Pareto Optimal point, in that no-one can be made better-

off except by making someone else worse off. The choice of an optimum optimum', g involves imputing a Social Welfare function, WW, incorporating interpersonal value judgements.

Samuelson does not therefore depart substantially from Lindahl's position, in that the public good question is placed within a framework of individual choice and exchange. The problem reduces to one of the absence of any mechanism for revealing preferences and establishing a working set of interpersonal comparisons. Resources do get allocated to private goods in practice because choices are expressed in an historical context, given an existing allocation of goods and the rights to dispose of them. No normative approach can resolve the question of what is efficient Public Goods production unless it accepts a Social welfare function, which implies a set of interpersonal normative conditions, as given.

Lindahl implicitly did this by assuming, as a starting point, equal political power. Under these circumstances, a bargaining solution resulted, in which each party's demand was seen by the other as supply.

Fig. 2.6

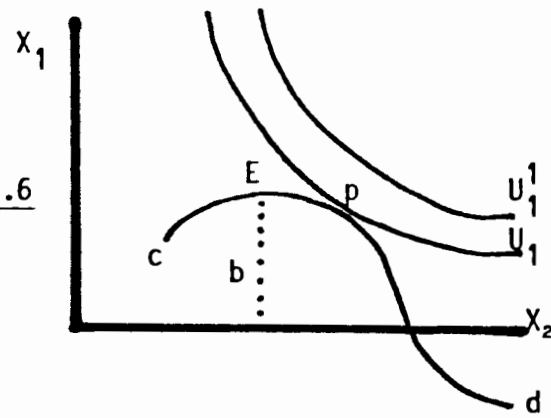
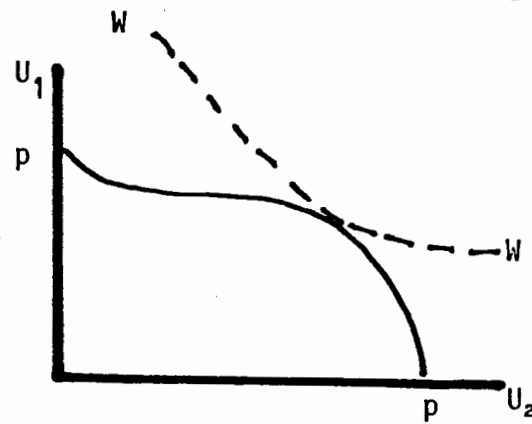
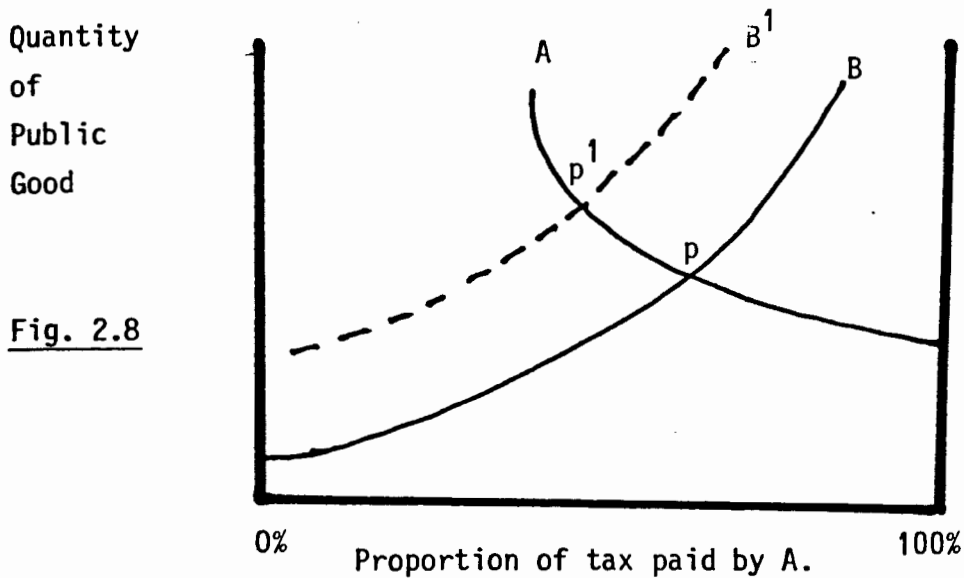


Fig. 2.7



Presenting the Lindahl argument developed above in slightly different terms:-



Thus line B is the Price-Quantity relationship facing A, with respect to the supply of Public goods, and line A is the supply curve facing B. Point P represents the community's equilibrium Quantity of Public goods and equilibrium "Price" in terms of relative cost shares paid by A and B. In the presence of exogenously determined concentration of political power in the hands of A, A will be able to force on B, his own preferences for Public Goods. A solution P^1 will be derived as if B's demand for Public Goods was increased to B^1 .

Lindahl concluded, rather lamely, that this exercise of power has political "cost" and that the weaker classes can redress the imbalance by convincing the powerful that their behaviour is "unjust".

Samuelson has moved no further, therefore, than Lindahl did, except in so far as he added rigour and exactness to the theory of Public Goods.

The real weakness of the Samuelson approach lies paradoxically in the very area which has won him acclaim, i.e. in the definition of a public good.

Samuelson concentrates on public goods as a specific category of commodity, recognizable by its characteristics, and more or less distinguishable from "ordinary" private goods. Private goods ($X_1 \dots X_n$) can be parcelled out among different individuals (1,2 ... i ... s) according to the relations:

$$X_j = \sum_1^S X_j^i$$

That is to say, they are divisible, rival, in that one person's consumption diminishes the possible consumption of others, excludable in that they may be "packaged" and sold to an individual so that effective ownership changes in exchange for money or goods of equal marginal value. In short, private goods are goods which may be unambiguously designated as private property, and may accordingly be adequately allocated through the price mechanism. Public goods on the other hand are goods which essentially fail to qualify as private goods and consequently became the responsibility of the "public" or the government. Their "publicness" rests, therefore, on their quint-essential nature. This consists of the relationship that

" ... each individual's consumption of such a good leads to no subtraction from any other individual's consumption of that good, so that $X_{n+j} = X_{n+j}$ simultaneously for each and every i th individual and each collective consumptive good." 19

A public good is in this way distinguished from a private good. It is thus possible to refer to goods which are "Public" but which are in some specific circumstances privately produced, such as police or security services, or to goods which are by their nature private, but which through historical process are produced by government, such as electricity, education or old age pensions.

By presenting such a polarised view of Public and Private Goods, Samuelson laid himself open to considerable criticism from, amongst others, Margolis,²⁰ who pointed out that the majority of goods which are publicly provided do not match Samuelson's rigorous description. "Clearly this is not the case in such common public services as education, hospitals, and highways."²¹ Houghton, commenting editorially on the debate, says:

"The public good concept has not passed easily into general acceptance: a dearth of real world goods and services portraying the characteristics of pure publicness has been an embarrassment ... "22

What has been embarrassing, however, has not been the absence of pure public goods. (Economists' constant task is the construction of straw men and "straw goods", to be struck down or fleshed out in the course of enquiry). The most important shortcoming of Samuelson's approach has been its inability to integrate an explanatory model of the public sector into the body of positive economic theory. Instead, Samuelson is led to the lame but nevertheless important conclusion that

" ... no decentralized pricing system can serve to determine optimally these levels of collective consumption."23

Samuelson is left, as was Lindahl, with the necessity of invoking the welfare economist's deus ex machina, the objective social welfare function, the expression of society's "real" needs and preferences. This, it is hoped, is more or less adequately exposed and given substance in the political process.

4. The Theory of Voting

Because of the central role of political decision making in deciding economic outcomes, attention turned to the logic and rationality of voting, and the stability of democratic outcomes.

Median Voter:

Hotelling²⁴ and Downs²⁵ presented a model in which the outcome of the voting process will go to the candidate who chooses a platform closest to the position of the median voter, i.e. no.50 to 51 in a field of 100. The assumptions of this model were, however, unduly restrictive, in that it assumed no abstentions, and a unidimensional issue set. Voters were held to be deciding on one issue only: liberalism vs conservatism. The implications of relaxing these assumptions have been carefully examined.

Cycling

Black²⁶ and Arrow²⁷ examined the possibility that in a multi-issue election, with a majority rule constitution, there may not be a stable political solution which expresses the preference of the majority. For example, if a community were to choose among three alternative uses of a piece of land: rugby field, bowling greens or tennis courts. The preferences of the members of the community can be expressed as in table 2.1.

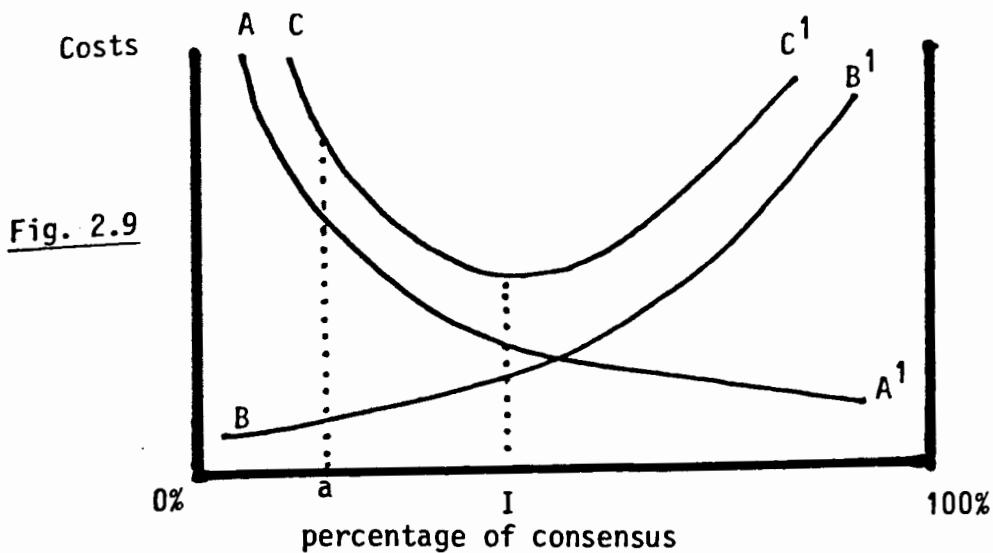
Table 2.1

Voters	Rugby	Bowls	Tennis	Rugby
A	>	>	<	
B	>	<	>	
C	<	>	>	
Community	>	>	>	

In a pairwise vote, i.e. a vote on two issues at a time, no clear solution would emerge. Despite the fact that individuals' preferences are rational and transitive, the community's preferences are not transitive, when tested on a pairwise basis. As a result, cycling occurs in which a new outcome is generated by each vote.

Logrolling

Majority rule has the well-known defect of not taking any account of the intensities of individual votes. As a result an apathetic majority can do harm to a minority who feel very strongly on the issue. As a consequence, scope exists for vote trading or 'logrolling.'



The horizontal axis models the level of consensus, ranging from 0 to 100%. The vertical axis represents costs, in real terms. Cost function AA^1 models the cost of reaching decisions which are unfavourable to some members i.e. conformance costs. These are naturally highest when the decisions are made by a very small proportion of the population. This situation at a , for example, presents a very great potential for decision makers to harm non-decision makers. Where 100% consensus is required on the other hand, no-one can be harmed by the collective decision.

Cost function BB^1 represents "participation costs" i.e. the cost of reaching a decision at a certain level of consensus. These costs are low for a single decision maker, but are high where unanimity is required.

The summation of these two costs, CC^1 , will be at a minimum at some intermediate point, I . The precise position of I will depend on the potential of the issue at hand to affect the individual's welfare, and on the ease or difficulty of reaching a decision, given the specific mix of individuals.

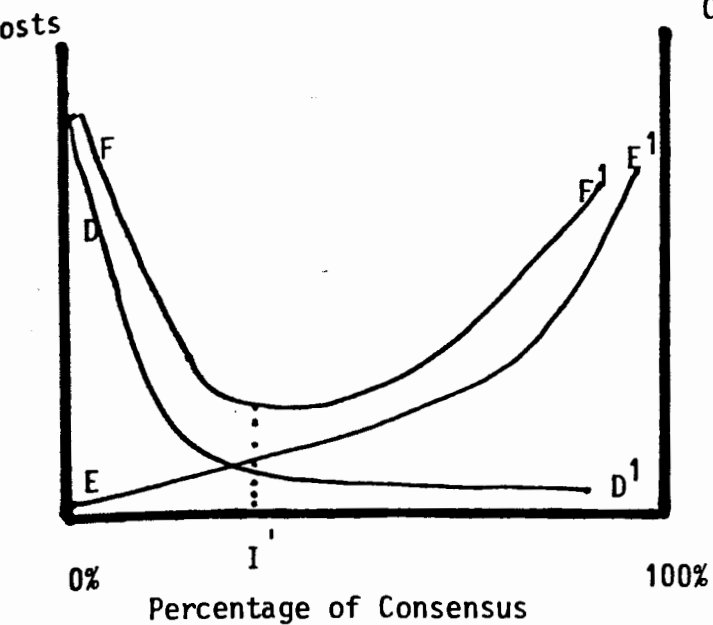


Fig. 2.10

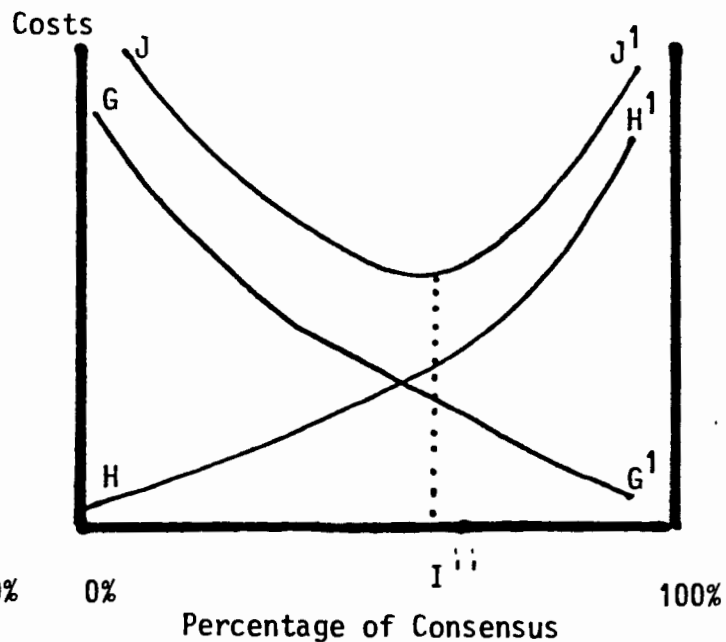


Fig. 2.11

In fig. 2.10, depicting a decision of a technical nature, such as the building of a sewerage works, costs are very low, since people tend to be fairly homogeneous as regards their demand for sewerage disposal. The decision of any one individual is likely to be a close proxy for the community as a whole. In this case collective decision making costs are also very low, but rising as high levels of consensus are reached. One would expect, therefore to find such decisions being delegated to a relatively small group of people, and this is indeed the rule in local governments.

Fig. 2.11 illustrates a decision with a great potential to do harm to individual interests. The conformance costs are accordingly high. High also are the costs of reaching consensus among a population which is heterogeneous with respect to the issue. The minimum cost situation I'' is likely, therefore, to be at a level of high consensus.

Buchanan and Tullack show, therefore, that it is completely rational to forgo the safeguard of the individual veto for the sake of cheaper and more expeditious decision making. Conceptually, they shift the Wicksellian unanimity requirement from the level of specific decisions, to the level of deciding on the decision-making procedure or the constitution.

6. The Supply of Public Goods

Thus far we have outlined various approaches to the articulation of demand for public goods. It remains to perform the same service for those who have analysed the patterns of response to this demand.

Anthony Downs³⁰ produced the seminal work in this regard, drawing an analogy between the profit maximizing firm and the vote maximizing political party, both within a competitive framework. William Riker³¹ built on this by presenting political parties as maximizing power potential, rather than vote totals. They would, for example, seek to win elections by making the minimum of concessionary promises. Small sized winning coalitions would be preferable to landslide victories, from this perspective.

The behaviour of the bureaucrat was examined by Tullock³² who saw him as a maximizing entity, responding to his own career objectives, and by Niskanen³³ who portrayed bureaucratic departments as budget maximizers.

The theory of supply of public goods is, as yet, undeveloped. It is only in the Public choice school, with its concentration on the institution, that any attempt is made to integrate it with the theory of demand.

7. Institutions

Buchanan³⁴ in his analysis of the demand and supply for public goods directs attention at the process through which this demand and supply occurs.

"Public goods are demanded and supplied through processes that are themselves selected at some stage, and apparently for reason."³⁵

The reasons he presents for the institutionalisation of decision making are essentially reasons of cost saving. For example, individual private goods purchases are often institutionalized if it is expected that the decision making costs saved by this means will outweigh the extra costs incurred, say, of having a paper delivered when it is not wanted.

While it is true that many private goods decisions are institutionalized in this way, through contractual and other means, it is in the field of Public Goods that costs of decision-making among large numbers of people become particularly important. When the outcome of a decision is indivisible, for example, the siting of a nuclear power station, the building of a public road or the provision of national defence, then large numbers of people are necessarily involved in it. As we have discussed above, such decision-making can be costly. It is rational, therefore, to create institutions which are cost-saving, for example the creation of nuclear, road-building and defence authorities with their own circumscribed frames of reference. The scope of operation of these institutions must necessarily be limited, so as to constitute a decision "rule". While the rule may yield some intra period inefficiencies, its existence suggests that it was expected to place a burden no heavier than the decision-making costs saved over the whole period considered. The nature of the "rule" or institution is, of course, defined by its frame of reference, which is commonly reviewed through either bureaucratic or democratic process, often through the appointment or election of a director, minister, management committee or council. The entire set of community decisions thus becomes concentrated, through delegation, in one single choice, that of an executive body or individual. Costs are thus saved, despite the fact that costs are also incurred as a result of delegation.

This institutionalisation of choice procedures lies, for Buchanan at the heart of the Public Goods question. The distinction between this approach and the "Samuelson" approach outlined earlier can best be illustrated by looking at their respective definitions of Public Goods.

Samuelson implicitly states that "Public Goods should be Public"³⁶, effectively avoiding a definition in favour of providing a rigorous solution to the problem of the allocation of resources between the two categories of goods:

"I explicitly assume two categories of goods: ordinary private consumption goods ... and collective consumption goods"³⁷

Buchanan's enquiry is aimed at providing an explanation of observable institutional choice. His definition is phrased in a positive way, rather than the normative way pursued by Samuelson, Musgrave et al. Buchanan asks:

"Under what circumstances will individuals as participating members of a politically organized community select collective organization as the means of supplying a particular good or service?"³⁸

In analysing the choice between lighthouses and cinema performances, the "Samuelsonian" would categorize lighthouses as clear examples of Public Goods, being non-excludable, non rival and indivisible. Attendance at the cinema performances is, on the other hand, clearly divisible, excludable and rival in that showing the film to a specific person may deprive some other person of access to the facility. Once the seats are filled, there is no space to accommodate more people. The cinema attendance is thus clearly a private good.

Having categorized the two on the basis of their characteristics, the analyst goes on to tackle the thorny question of how to allocate resources between them. If confronted with a private lighthouse or public cinemas, the analyst would presumably allude grandly to the diversity of the universe, blaming unusual political circumstances.

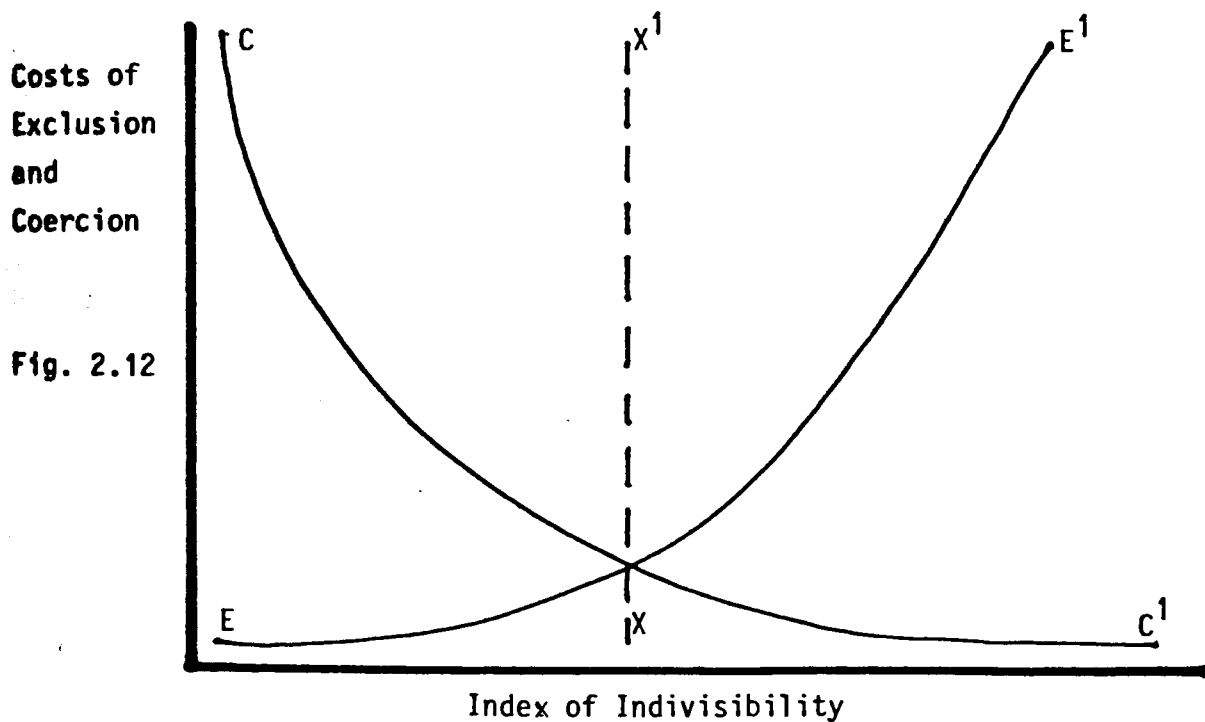
In terms of Buchanan's institutional approach, however, the question presents itself in the form: "Why are lighthouses publicly produced and cinemas privately?" In truth, both goods are collective in the sense that once they are switched on, simply looking at them does not diminish them. What does decline in the case of the cinema is its accessibility. Even an outdoor showing on a large screen would at some point become crowded and congested. Such, however, is equally true of the lighthouse in that shipping lanes can become congested. The distinction between the two goods rests not in the possession or non-possession of the characteristic "rivalness" but on the technical (and political) ability to define and enforce individual rights or shares in the final product.

The theoretical capability of doing this is almost always present. Cinema showings can be made private by the construction of a building with a ticket office, etc. A lighthouse can also be made excludable by denying access to non-payers by means of naval enforcement procedures. Again, the distinction does not lie in the possession of the characteristic "excludability", but in the relative costs of exclusion.

At this stage, it is possible to venture a tentative answer to the question: "Why are lighthouses commonly Public?" We could say it is because exclusion is expensive relative to expected revenues likely to result from private provision. Firms do not provide lighthouse services in the main because it is not profitable. It is therefore "left" to the government to do so.

Public provision itself, however, carries considerable costs in relation to private provision. Public Provision, as an institutional framework, has to be financed through coercive taxation, i.e. a reduction in other kinds of consumption. This, in relation to private provision at prices equal to Marginal Cost, imposes costs on participants in that even goods which may not be wanted must be "bought" and "paid for" in taxes.

Both private and public modes of provision of services impose costs on society. Private provision requires exclusion which is costly, while Public provision implies the indiscriminate provision to all people whether they choose the service or not, together with coercive taxation.



EE^1 is the cost function associated with private provision. This is shown as low for a good which is easily and cheaply made divisible, through the statutory definition of property rights, but is high for the goods, such as lighthouses for which the securing of property rights, although possible, can be accomplished only at high costs.

CC^1 is the cost function associated with public provision, i.e. the costs of coercion. These will be high for easily divisible goods for which the benefits are individual, but will be low for indivisible goods, which, like the lighthouse, bestow benefits very widely.

To the left of line XX^1 , the costs associated with Public provision are greater than those associated with Private provision. In terms of our illustration, the costs incurred by being forced to pay for films you do not watch is greater than the possible savings arising from not having to set up and pay for exclusion apparatus. Freely associating individuals will derive greatest advantage by producing these goods privately.

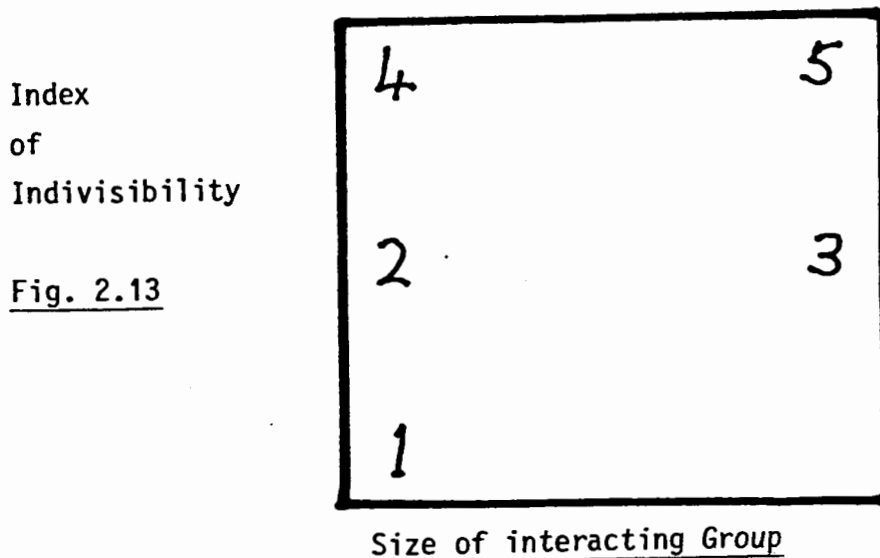
To the right of the line XX^1 lie goods such as the lighthouse, for which costs of coercion are low since even non-mariners benefit from safer, cheaper shipping. Costs associated with private provision are high. Twenty-four hour radar surveillance and naval enforcement procedures are very expensive, more expensive than the coercion costs that may be potentially saved by selecting a private institutional framework. These goods will tend to be publicly provided. If Public institutions were not yet available, this would be a strong incentive for citizens to create them through voluntary association.

This approach introduces into the question of institutional choice a calculus based on the criterion "indivisibility". While "indivisibility" is itself a problematic concept resulting in circular reasoning, (we know the goods are indivisible because they are publicly provided), this calculus does take us away from the Public-Private polarity arising from the Samuelson approach.

The significance of this departure is very great. By looking upon government or quasi-government enterprise as a rational response for the satisfaction of some human wants, Buchanan places public goods analysis on the same positive footing as private goods analysis. The need to impute a social welfare function to provide answers to the normative questions of "which goods shall be public and how shall resources be allocated to public goods?" no longer exists. Economists are able to merely look at the economic world and attempt positive explanations for what they observe. Government is brought within the realm of economic thought with the happy result that it is no longer necessary to look upon government enterprise as a cancer in the breast of Free Enterprise or as evidence of "creeping socialism".³⁹

It is also possible, within this framework, to see local government, as does Buchanan, as one among a wide variety of institutional forms generated by the economic process.

Buchanan classifies goods across a range of institutional arrangements, using the characteristics indivisibility and the size of the group over which the indivisibilities hold.⁴⁰



The classification ranges from fully private goods which are fully divisible, and whose indivisibility (being non-existent) affects a very small number of people (0). These are represented at (1) on the diagram (fig. 2.13). At the other extreme, category (5) consists of goods which are fully indivisible, affecting many people i.e. pure Public Goods in the Samuelsonian sense. Intermediate categories are described (2). These goods are partially divisible, but limited in their effect to small groups. Goods in this group are substitutable in some degree, among consumption units. The example of a Fire Extinguisher is given. If I give my neighbour my fire extinguisher, I do not fully lose its use-value. My risk of fire is still somewhat reduced, though not as much as if I had kept it at home.

Category (3) consists of goods which are only partially divisible, but which affect large numbers of people. Buchanan gives, as an example, inoculations against infectious diseases. This is only partially divisible in that some, but not all of the benefits accrue to the "purchaser" of this good, while some benefits accrue to all other members of the society, in that the risk of an epidemic is reduced.

Category (4) refers to goods which are fully indivisible but which affect only small groups of people. These kinds of goods will be normally provided through club-like organisations, sports clubs, swimming clubs being examples. The sports facilities, or the swimming pool is equally available to all members, provided that the size of the club is limited.

Buchanan's approach to Public Goods is thus broadened to include goods provided under a wide range of institutional forms. Public and Private goods are made into two polar positions in a more general theory of the organisation of Production.

Buchanan hastens to point out that this categorisation is by no means immutable and may be radically changed by circumstances. A good securely categorized as (5), a fully indivisible good affecting all people, may change its category to (4) if the size of the political unit changes, or the social and physical technology is developed for defining and enforcing property rights.

A sports facility may be a public good, category (5) with respect to a small municipality, but may become more efficiently a category (4) if the municipality were to become part of a metropolitan government. In this case one would predict an organisational change, with the facility being transferred to a club or society.

In a similar way, the structure of statutory property rights has a fundamental impact on the effective divisibility of a good or resource. In a society which recognizes and defends private ownership of land, grazing rights are fully divisible goods of category (1). In a similar situation in which private property rights in land are not recognized, grazing becomes a good of category (4) or even (5), a fully public good.

This analysis has provided the beginning of an approach which will enable us to view local authorities as an appropriate organisational framework within which certain goods and services are provided. In following chapters, the specific questions of which goods are efficiently produced on a local level, which on a private and which on a national level, will be more closely examined.

8. The Theory of Clubs

The Public Choice approach, outlined above, requires that Demand and Supply be dealt with simultaneously, since the institutional supply of a commodity establishes the means by which demand is articulated and preferences revealed. A category (1) good is supplied privately and demanded through individual purchase. Category (5) Public goods are supplied by central government and demanded through a political process such as voting. Other "intermediate" situations have their own institutional frameworks, often consisting partly of prices, e.g. membership fees, and partly political processes, voting procedures, lobbying and committee representation. Demand and Supply can only be discussed within the framework of the relevant institutional form. It is always true that producers and consumers of goods are, as De Viti de Marco⁴¹ points out, identical. To discuss demand and supply separately is to look within the institution to uncover its internal workings.

Buchanan, extending the Public Choice approach, presents us with an inside look at a specific institutional arrangement: the Association or Club.⁴² We have briefly discussed the circumstances which give rise to the club as an institutional form. We will now follow Buchanan in his analysis of optimal club size, and optimal facility size.

a) Optimal Membership

It is presumed that existing members of a club will encourage new members if the new member adds more to the total benefit of belonging to the club than he adds to the total cost. Both Costs and Benefits are presented in Fig. 2.14.

C_1 is the cost per person of membership. This decreases as the total cost of the facility is shared among more people.

B_1 is the benefit of membership per person.

This may be initially

lower than the costs, indicating that one person would not supply the facility for his own use alone. The initially rising part of this B_1-B_1' (membership) function indicates possible increasing conviviality of membership of a group of people. At point S, the maximum of this curve, congestion sets in and additional people reduce one's benefit, while also reducing cost. At point T, B-C is at a maximum. Beyond this point savings resulting from the additional members' contribution to the collective purse are insufficient to compensate for the congestion created.

Costs
Benefits
per
person

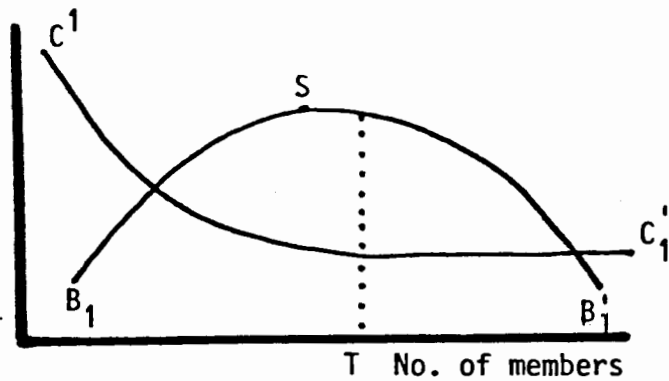


Fig. 2.14

b) Optimal size of facility:

C_1 shows the positive relationship between the size of facility and the Total Cost. This function will fall toward C_k as the membership increases.

Total
Cost per
Member

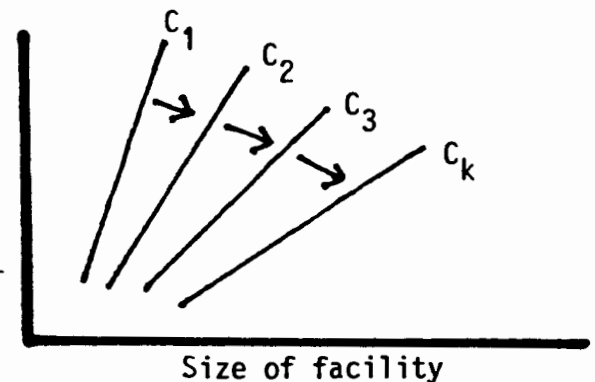


Fig. 2.15

B_1 shows the positive relationship between the size of the facility and the benefit accruing to the members. This function is also affected by membership, possibly increasing benefit at low levels of membership but reducing at high levels, towards B_k .

Total
Benefit

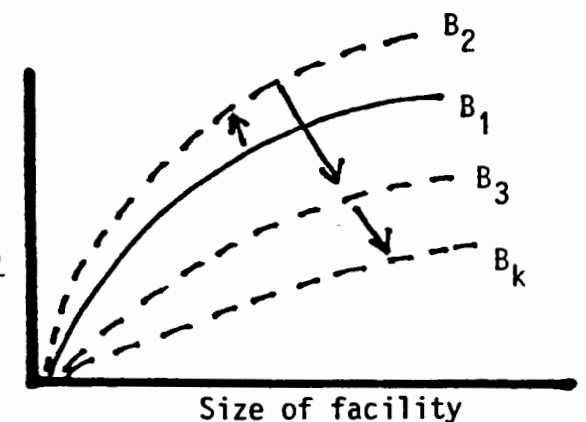
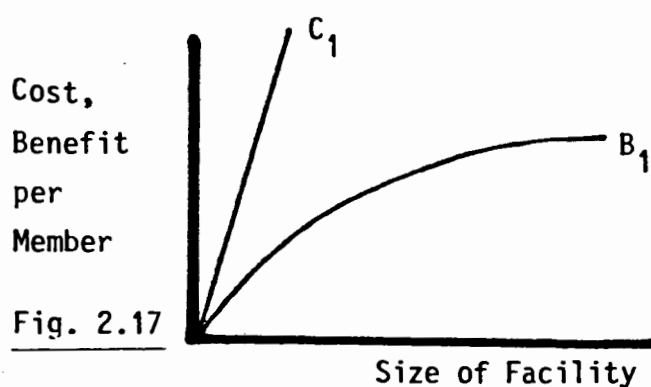


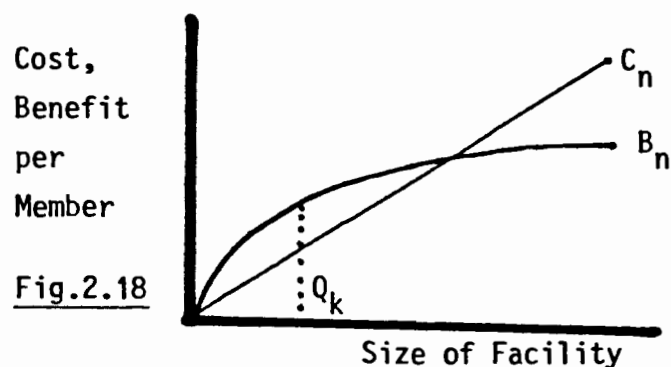
Fig. 2.16

The single member "club", may never be optimal as its cost and benefit patterns diverge with size.

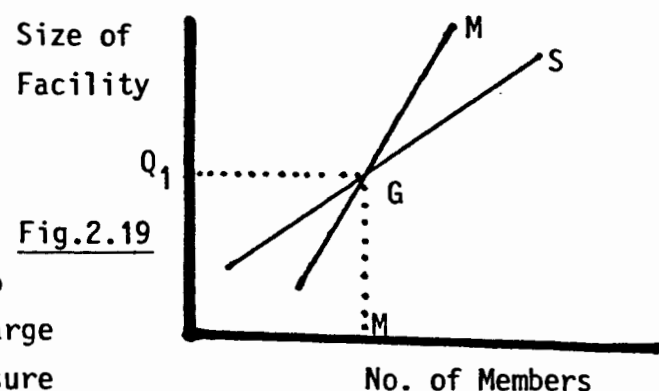


c) Size/Membership Optimum

Larger groups of people, clubs of larger membership sizes may be viable as C_n falls below B_n . The optimum size of facility which a club of n membership would choose will be at Q_k where $B_n - C_n$ is at a maximum.



Putting together the schedules of Membership optima, depending on size (M) and size optima depending on membership, (S) a point G is reached, a size-membership optimum. A Club which installs a large facility will find itself under pressure to expand membership. A club with large membership will tend to increase its facility size or reduce membership.



Thus Buchanan presents us with a view of the internal demand and supply relationships within a collective, co-operative institutional form, that of the club. Similar internal relationships are inherent in every institutional arrangement from the nuclear family to central government. It remains the task of economic studies to lay bare these relationships as they manifest themselves in specific instances for example in the case of membership of a local authority.

9. CONCLUSION

In choosing among institutions, and in selecting the appropriate means for reaching institutional decisions, individuals are engaged in the rational minimisation of transaction costs and internalisation of costs and benefits external to the individual. Public Goods, when seen in this perspective are simply goods which are commonly provided through the range of institutions representing "government". Changing circumstances can result in goods that were "public" becoming "private", and vice versa.

All goods can be seen as being provided through one or other institutional form, a form which is itself selected in a competitive process.

Government is, in this view, not the antithesis to Private enterprise. Both are, on the contrary, institutions which co-exist to the benefit of individual consumers.

In the following chapters we will attempt to place the institution of the Local Authority within this framework, and to examine the circumstances under which it makes decisions.

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1. What is a 'Local Public Good'?

Local Public Goods are, in terms of the approach outlined in the previous chapter, simply those commodities which are produced by the wide range of institutions known as local authorities. Precise definitions for these authorities are not easy to construct. They range in size from the government of a city like New York, which is larger and more influential than most small nations, to small school boards, water boards, or most commonly, small municipalities. The commodities which they supply are equally diverse, varying from personal welfare services, including health care, unemployment benefits or citizens' advisory services, to the provision of industrial sites or properties, and the construction of freeways. Most of these services can be provided through institutional forms other than the local authority. For example, sewerage can, and is, disposed of privately by means of septic tanks, schools are often privately and as often, nationally, provided. Even police services can be produced privately (Security Guards, private detective agencies) at local authority level or at State, Provincial or central government level. The characteristic of these goods and services that categorise them as 'Local Public Goods' is simply the fact that they are supplied and demanded through the institution of local government. Whether they are simultaneously supplied through other institutions does not concern the analysis, which examines the choice of local government as an institution. The analysis which follows is accordingly concentrated on the institution, and not on the goods and services as such.

We must however address ourselves to the question of how the production of certain goods emerges as the legitimate sphere of interest of local governments.

The institutional choice approach suggests that this will occur if the commodity in question has externalities of production or consumption which extend over a group of people which may usefully be constituted as a local jurisdiction. For example, sewerage installation can provide scale economies in production which make it worthwhile for a group of contiguously situated people to co-operate in its provision. The costs of reaching agreement between such people concerning matters such as the quality and design of such a service is likely to be very

low, and the potential to impose costs on community members through compulsory provision of an unwanted facility are also likely to be low, since there is usually consensus among neighbours regarding sanitation. As a result the costs of collective, institutional action are likely to be low, in this specific case, while the potential savings are likely to be substantial. It is for this reason that we find collective action prevailing in the competition between private and communal sewerage provision. There is always a strong incentive for people to abandon the individual institution in favour of the collective. There is however equally strong incentive for people to abandon, or try to abandon, an over-collectivised institution in favour of smaller, or individualised, institutional forms. Over the whole of Greater Cape Town, for example, there is not the degree of consensus regarding the disposal of sewerage that exists in the average white suburb or town. The very poorest members of the community have displayed and continue to display a willingness to sacrifice services such as water-borne sewerage for the sake of other goods or services, which may be of higher priority. The universal metropole-wide provision of water-borne sewerage and other services will therefore have the effect of imposing costs on these people, or any others, who do not value the service as highly as the next available alternative. The calculus described above and in the previous chapter may, as a result, disfavour the very large jurisdiction.

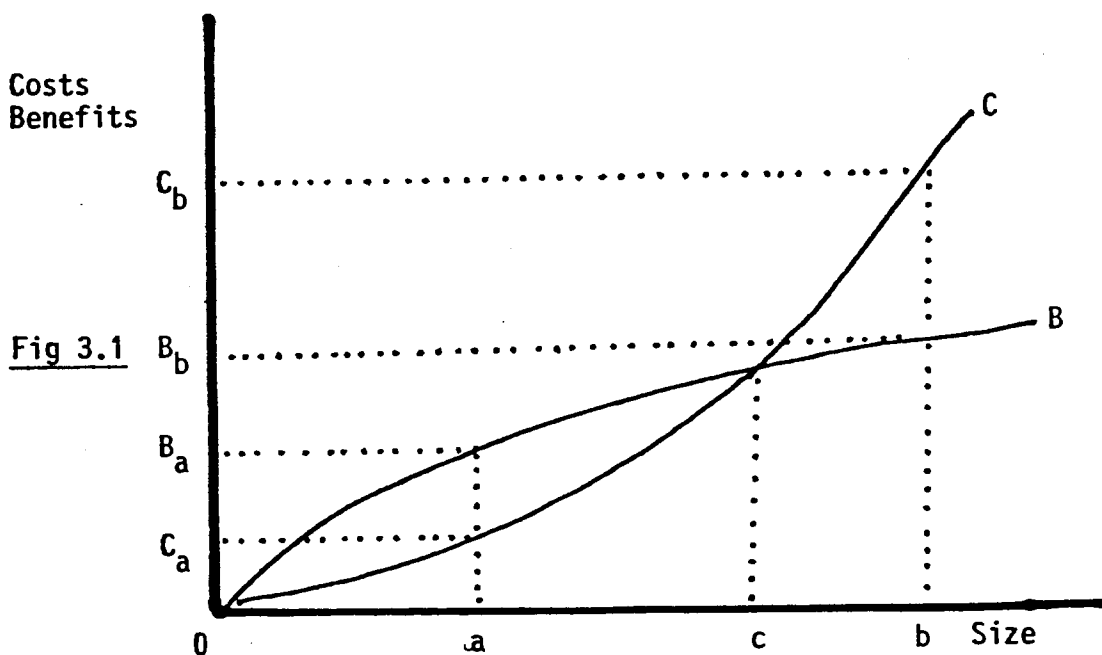


Figure 3.1 illustrates the position: on the horizontal axis is a measure of the diversity or non-homogeneity of the community, assumed to be positively related to size.

On the vertical axis are the costs and benefits (in real terms) associated with Local Public Goods. Function C = the cost function of collective decision making. This has two components, the cost of imposing unwanted facilities on some members and the cost of reaching an appropriate level of consensus through voting or other decision making techniques. Both of these are assumed to be positively related to the size of the jurisdiction. A small jurisdiction of size (a) is assumed to house people of fairly similar tastes and preferences as regards Local Public Goods. As a result the cost of reaching collective decisions and the costs of imposing these on the community will be low at C_a . The benefits to be gained from collective action are likely to be very much greater at B_a . One can predict therefore that in the absence of other dominating factors, collective action will result. On the other hand, at size b, collectivisation costs will have risen to C_b , as a result of the growing diversity of the population. Benefits resulting for example from Scale economies will also have risen, but at a different rate so that in the example they are at B_b , which is below C_b . Members of this community will seek to break their relationship with the oversized local government and establish services and private bases. In so doing the population will be reduced, and political pressures will rise to force a change of scale on the local government unit. Only at size C will a stable situation exist where there is no incentive to leave or to join the community.¹

Competition between different institutions thus results in the social solution of institutional forms appropriate to the functions they perform.

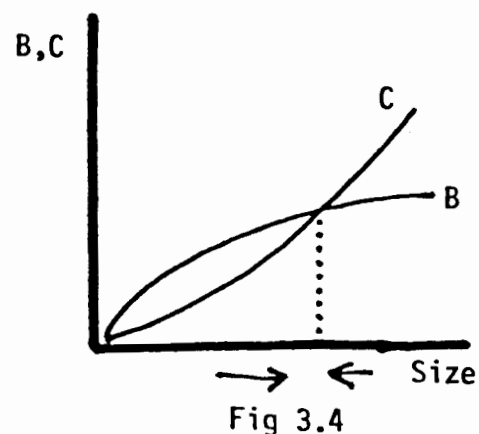
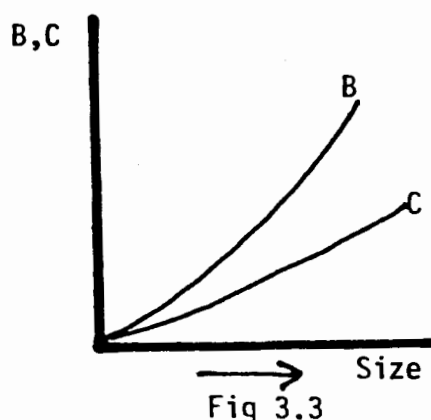
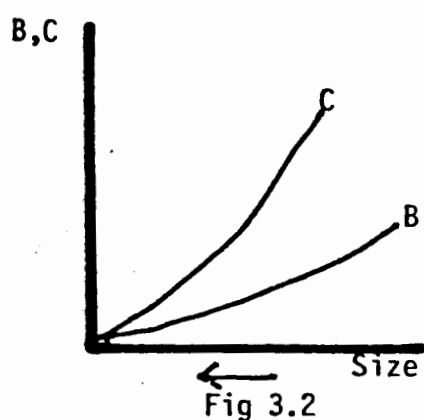


Figure 3.2 illustrates a commodity produced in a community where costs are always in excess of potential benefits. An example may be public television in a very diverse community. One would expect, and indeed, one does observe, that such services tend to favour individual, non-communal institutions (video hire, cable TV).

Figure 3.3 illustrates the situation where benefits of collectivisation are always higher than the costs, even at very large jurisdiction size. An example of this might be National Defence.

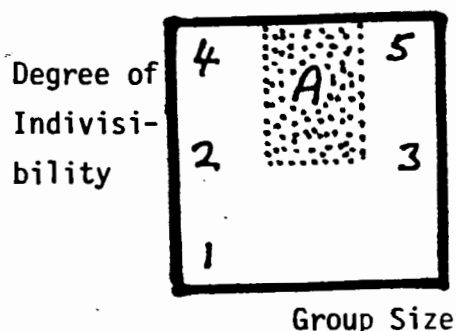
Figure 3.4 shows the situation in which the small sized collective institution is chosen.

The initial example of sewerage disposal services chosen allowed us to refer to the benefits of collective action at local level as economies of scale. This is however only one of a number of reciprocal external effects which could give rise to collective action.

Among the best-known of these are non-rivalness in consumption referred to above in our discussion of Samuelsonian Public Goods. In effect this means indivisibility in consumption. Almost all goods possess these externalities to some extent. Even clothes are indivisible in the sense that while only one person may wear them, others may look at them, with resulting benefit or cost. What distinguishes the commodity as one which is likely to be a Public Good is not therefore the mere presence of indivisibilities, but the extent of this externality and, consequently, the extent of the benefits to be gained by institutionally internalising them. Where these are expected to be greater than the extra costs associated with the institutional form of supply and demand then we are likely to observe the good being publicly provided. The consideration that makes the good a local public good, rather than, for example a national public good, is simply, as we discussed in the previous chapter, the area of land or number of people over which the kind of externality extends.

In terms of Buchanan's illustration:

Fig 3.5



Local Public Goods occupy the area A, being goods of moderate to high indivisibilities, which extend over a group of medium size.

Davis and Whinston² discuss real estate services in this context. They show that Pareto optimum service levels cannot be reached where there are reciprocal externalities related to the consumption of real estate. Prices on their own do not hold sufficient information in the presence of such externalities. Group action however can internalise these externalities, resulting in a solution which will be closer to optimum. The specific group action they examine is the zoning of property, which is seen as a collective good, providing information, creating certainty about the future, and minimising the costs of contracting.

Harvey, commenting on the Davis & Whinston model states:

'What this analysis of the housing market shows is that a free market cannot give rise to prices conducive to a Pareto Optimum and that the housing market, for reasons of its own spatial internal logic must contain group action if it is to function coherently.'³

It is the contention of this thesis that the group action involved is the provision of local public goods through the agency of the local authority.

2. Articulation of Demand for Local Public Goods

In the previous chapter we showed why Samuelson is pessimistic about societies' ability to allocate resources efficiently to public goods production. This, as we observed, is fundamentally because of an absence of any mechanism for revealing people's preferences for public goods, which is analagous to the private act of purchase. Where public goods are collective in consumption, 'free riding' is rational and refusal to pay for a good does not function as a signal of not wanting it at that price. Other means of preference articulation are needed, including voting, with its many problems such as those outlined by Black,⁴ Arrow,⁵ Buchanan & Tullock.⁶

Charles Tiebout⁷ suggests that while this may be true for centrally provided public goods, it is not so for local or neighbourhood public goods. He presents a model in which public goods are provided at a local level to residents whose domicile in the area is the outcome of a maximising decision process in the course of which a neighbourhood is freely chosen in preference to a large selection of competing neighbourhoods. Among the factors affecting this choice, such as location, proximity to work, to markets etc., local fiscal variables loom particularly large: 'The consumer-voter may be viewed as picking that community which best satisfies his preference pattern for Public Goods'.⁸

A house-seeker whose family consumption patterns are strongly influenced by the needs of the children in the family may look with favour upon a local area which taxes residents to provide schools, parks, safe walking and cycling places and other child-oriented facilities. Such a consumer would prefer a residence in a neighbourhood which is well served in this way to a residence in an area which is poorly served, or served in a non-preferred way, for example, in a 'downtown' area. In the act of choosing where to live, where to purchase housing, the resident is expressing a preference for the set of local public goods on offer. 'Spatial mobility', writes Tiebout, 'provides the local public goods counterpart to the private market's shopping trip'.⁹

There exists, therefore, in the choice between competing residential areas a potentially effective instrument for registering preferences for some categories of public goods. It is possible that under the right conditions a Pareto optimum in the allocation of resources to Local Public Goods could be reached. Included amongst these conditions are mobility between neighbourhoods, knowledge of the fiscal characteristics of different areas, heterogeneity, absence of mobility restrictions resulting from employment opportunities. There must be no externalities between communities, and long term cost structures must be such that there is an optimal community size. This will ensure that towns which are smaller than optimum will benefit their residents by attracting new members.

Within the local authority, decisions are made in relation to the property market mechanism and through the political mechanism, which may be representational, autocratic or of any other kind. The

efficiency of the decisions taken as well as the efficiency of the decision-making process will in a Tiebout world be ensured by the responses of accommodation-seekers in their choice and purchase of property in competing jurisdictions.

Having thus stated the Tiebout 'Voting-with-the-feet' hypothesis, we will turn briefly to some of the attempts that have been made to justify it empirically.

3. Capitalisation

The first real attempt to demonstrate the Tiebout Hypothesis empirically came from Wallace Oates in 1969, fifteen years after its statement in 1956. In his seminal paper,¹⁰ Oates suggested that a utility maximising consumer compares the benefits of a public programme with its costs and chooses that which gives the greatest surplus of benefits over costs.

'It is the present value of the future stream of benefits from the public services relative to the present value of future tax payments that is in this case important.'¹¹

This suggests that a tax which finances a useful public programme may not reduce net rental income to property owners, but may in fact increase it if the present value of the benefit stream exceeds the present value of liabilities generated. The capitalised value of this surplus provides a measure of the differences between the fiscal packages provided by different jurisdictions, other things (particularly tax rates) being equal. By measuring fiscal capitalisation, Oates suggests that a major proposition of the Tiebout hypothesis, that fiscal variables matter, is tested.

His empirical test, a cross sectional study of 53 New Jersey residential areas, yielded favourable statistical results showing the fiscal proxies chosen, (tax rate and expenditure per school pupil) to be significant in the explanation of house values, and to affect them in the directions predicted, i.e. taxes negatively, expenditure positively. Moreover, the magnitudes of the co-efficients supported the notion

consumers migrate into the area, congesting local services, bringing about a Tiebout equilibrium, in which no rent is earned.

In order to maintain this rent, zoning restrictions may be used to impose minimum entrance qualifications on prospective entrants. In this case the counterpart of the fiscal haven, the fiscal slum, may also earn a rent. If the demand for low cost housing exceeds supply, for example, in the wake of 'urban renewal' slum clearance, (or in the South African context squatter clearance) programmes, the price of remaining low cost housing goes up, reflecting the rent earned by a fiscal slum.

Thus although ... 'The Oates test does what he claims for it ... it should be pointed out that the results do not follow necessarily from the Tiebout hypothesis ...'¹⁴

This controversy over the precise econometric specification of the Tiebout hypothesis was further advanced by Epple, Zelenitz & Visscher in 1978¹⁵ who show that Oates does not adequately test capitalisation because the capitalisation parameters are not econometrically identified.

'... an investigation indicates that the parameter on t (Property tax rate) cannot, in general, be identified using only median voter data or without imposing particular functional forms or restrictions.'¹⁶

The essential features of the Tiebout hypothesis are individual rationality, in the sense that people choose their place to live, based on housing and fiscal variables subject to mobility and zoning constraints. The second feature of the model forms the basis of their econometric specification of the hypothesis. This is that voting-with-the-feet results in Pareto optimal allocation of Local Public Goods. In other words, the deadweight loss of taxation is eliminated by mobility.

'... the questions are whether and to what extent the mechanism of rational locational choice can reduce the deadweight loss of taxation, and whether the degree to which that reduction is achieved can be distinguished by examination of fiscal and housing variables.'¹⁷

In order to specify and test this question, Epple, Zelenitz &

Visscher set up two models, one of a Tiebout community, in which fiscal variables do not feature as explanatory variables, having been 'neutralised' by the Tiebout process. The other model is of the non-Tiebout, heterogeneous community in which voting-with-the-feet has not eliminated fiscal differentials.

Tiebout Community:

$$\log H_j = a_0 + a_1 \log I_j + \epsilon_{1j}$$

$$\log G_j = b_0 + b_1 \log I_j + \epsilon_{2j}$$

$$\log t_j = \log G_j - \log H_j + \epsilon_{3j}$$

Heterogeneous Community:

$$\log H_j = \alpha_0 + \alpha_1 \log I_j + \alpha_2 \log t_j + \mu_{1j}$$

$$\log G_j = \beta_0 + \beta_1 \log I_j + \beta_2 \log t_j + \mu_{2j}$$

$$\log t_j = \log G_j - \log H_j + \mu_{3j}$$

in which

$$H_j = \text{housing in community } j$$

$$G_j = \text{Government services in community } j$$

$$t_j = \text{tax rates in community } j$$

ϵ and μ are error terms.

Significance in the tax variable t_j would be an indication that the Tiebout model should be rejected. This test was not however carried out by the authors since, on further reflection, they found that the two models could not be distinguished from each other by reference to median voter data. They are led to conclude that 'to date no meaningful test of the Tiebout hypothesis has been conducted'.¹⁸

Subsequent papers have indicated that the Tiebout hypothesis does work,

particularly in metropolitan areas with a substantial degree of jurisdictional variety. Gramlich and Rubinfeld¹⁹ use both macro- and survey data to test the Tiebout implication that residents will group themselves as regards demand for public goods. Constructing a demand function for public goods, they find the median community income positively and significantly related to the level of spending. Looking at the variances of the demand so derived, they find significant grouping occurring. They conclude therefore that this aspect at least of the Tiebout mechanism is observable empirically.

4. Competition and Politics

Epple and Zelenitz²⁰ point out that previous studies have taken the approach of viewing jurisdictions in isolation from their neighbours. They return to the fundamental Tiebout principle of competition, concentrating on the proximity of local authorities to one another.

They attempt to establish whether the Tiebout analysis leads to a purely 'invisible hand' solution to the social welfare problem or whether the political process has a role to play. They frame their question in such a way as to eliminate the specific objectives of local officials from the optimising process:

'Does competition among a large number of local governments assure efficient public goods provision even if governments of individual jurisdictions pursue objectives that are not necessarily public-regarding?'²¹

Their answer to this question is 'no', for two separate reasons: firstly, they cite technological reasons why Pareto efficiency may not be attainable:

- a) local governments may not be diverse enough to meet the many demands of residents;
- b) the specific taxing and spending policies may be such as to cause prices for buyers and sellers to differ;
- c) economies of scale in local public good production may lead to a differential between marginal and average cost.

In the second place, local officials may be no more public-serving in their outlook than anyone else. Governments which are self-seeking in that they seek to maximise 'profits', expenditure or local property values, may to the extent that land is immobile between jurisdictions, expropriate a proportion of the rent accruing to land within their boundaries, by taxing at a high rate and expanding their activities beyond the level desired.

Epple & Zelenitz thus show that interjurisdictional competition cannot alone explain local authority behaviour. A theory of local politics must also form part of the picture.

The actions of local government, supplying local amenities, and the actions of property purchasers and sellers, demanding local amenities must be explained in an institutional context which explains both economic and political mechanisms.

Constitutional arrangements, voting rules, and the nature of relationships between various governmental bodies, are of central significance in this regard.

5. Migration

The importance of constitutional provisions for government at different levels is stressed by the conclusions of a study by Buchanan and Goetz.²² In their examination of migration as a market clearing process in the market for public goods, they set up a Ricardian increasing cost model of two regions, A and B, in which region A is more abundantly supplied with land, a fixed factor, than is B. In a migration model without public goods, labour would move, if perfectly mobile, between B and A to equalise marginal products of labour. In a model with public goods, however, the movement of labour to A reduces the tax-price of public goods in A and increases it in B, the region which the migrant is leaving. As a result, the spatial equilibrium which results will be characterised by a lower marginal product of labour in A than B, a differential which is offset by a lower tax-price for public goods in A than B.

This equilibrium may be sub-optimal because the effect of the migrants' move on the area he leaves (an increase in the tax price of public goods) or enters (a decrease in the tax-price of public goods) does not enter his calculus of utility. It is an externality which imposes costs on some and benefits on others.

Flatters, Henderson and Mieszkowski²³ comment:

'If this externality is not internalized by centralized decision making, then one region may be overpopulated and the other underpopulated.'

6. Conclusion

Thus the institutional approach to government and public goods provision is reinforced by much of the available evidence. Not only does the market for public goods require collective action on the local level, but for specific public services collective action at the central level is appropriate and necessary to approach an optimum of Social Welfare. Institutions are chosen in a process of free association which, because of the competitive process of choice among alternatives, either by voting, migration or 'bureaucratic entrepreneurship', will tend to be the most suitable ones available.

NOTES TO CHAPTER THREE

1. Completeness demands that we point out that the above position $C = B$ will only be an equilibrium if there is free entry to the jurisdiction, and will not be a private optimum. The optimal jurisdiction size from the residents' perspective will be at the point where $\frac{dC}{dSize} = \frac{dB}{dSize}$ i.e. marginal cost equals marginal benefit. This will only be achieved by controlling entry through zoning and other 'planning' measures.
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9. Tiebout, op cit, p.215.
10. Oates, W.E., The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalisation and the Tiebout Hypothesis (J.P.E., v.77, no.4, 1969, pp.957-971).
11. Oates, W.E., op cit, p.959.
12. Edel, M. & Sclar, E., Taxes, Spending and Property Values: Supply Adjustment in a Tiebout-Oates Model (J.P.E., v.82, no.5, 1974, pp.941-954).
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17. Epple, D., Zelenitz, A. & Visscher, M., op cit, p.407.
18. Epple, D., Zelenitz, A. & Visscher, M., op cit, p.424.

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20. Epple, D. & Zelenitz, A., The Implications of Competition among jurisdictions: Does Tiebout need Politics? (J.P.E., v.89, no.6, November 1981, pp.1197-1217).
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CHAPTER 4 THE FUNDING OF LOCAL GOVERNMENT

The previous chapters have situated the institution of the local authority within the context of the market economy, and have outlined in theory the process through which resources are allocated towards specific local public goods and through which local governments are selected as the most efficient institution for providing them.

This chapter will explore the different ways in which the local government can finance its activities. Various categories of taxes will be examined, as will grants, subsidies and user charges. Discussion of borrowing by local governments, a fourth source of funds, will occupy a later chapter. This will be followed by commentary on some frequently encountered practices and on some of the proposals embodied in the President's Council Report.

1. Sources of Funds

There are four basic sources of funds for local authorities:

- (a) Taxes of various kinds
- (b) Fees and user charges
- (c) Subsidies from other government bodies
- (d) Borrowing

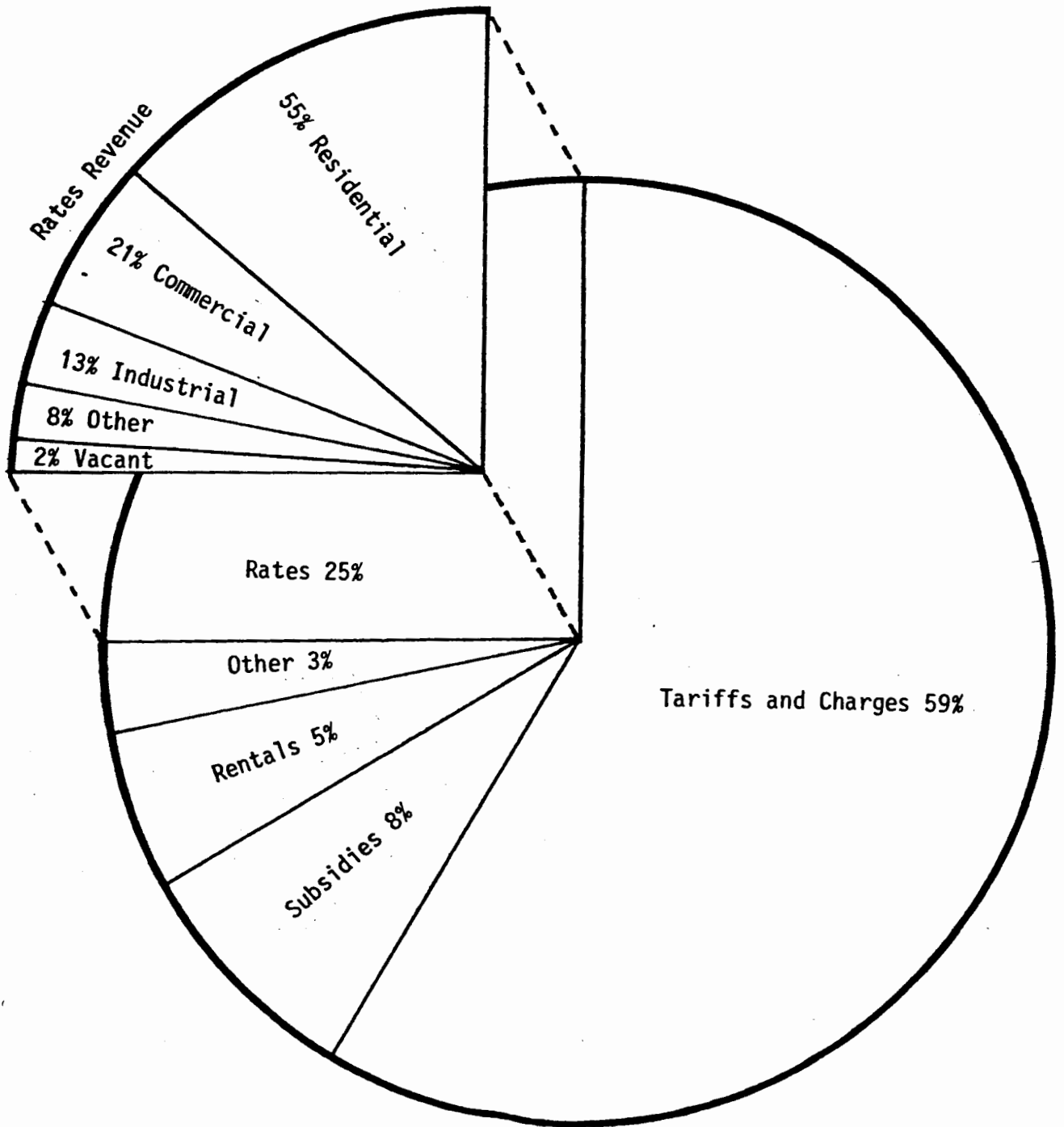
In Figure 4.1, the sources of funds for the City of Cape Town are illustrated, as an example.¹ Rates and Taxes account for only 1/4 of total revenue, while Fees and other user charges make up the lion's share at almost 60%. Both of these figures are higher than the national average of 16,3% from Rates and 56% from Trading.

2. The Relative Merits of Alternative Sources

Moak and Hillhouse² point out five criteria for evaluating a revenue system:

- a) It must be adequate to meet the needs of the community, both in the present and in likely future economic conditions.

Fig 4.1 Sources of Revenue of the City of Cape Town 1978



Source: Rating Review

- b) It must engender community consciousness, by making spenders responsive to the communities' needs.
- c) It must not harm the local economy, either by distorting resource allocation or by inhibiting growth.
- d) It must be easy and cheap to administer.
- e) It must fall fairly on the community.

In terms of these criteria, the four sources of finance all have both strengths and shortcomings.

3. Taxes

Local authorities are faced with a choice among a number of taxes from which they must choose a set which, as far as possible, meet the criteria of a good revenue system.

What this means, with respect specifically to taxes, is that they must be:³

- productive, in that they raise adequate revenue for local purposes;
- elastic, in that their productivity is linked to the burdens placed on them. Local taxes should rise proportionately to the growth of the area;
- stable. Revenue should not suffer precipitous fluctuations as a result of external effects, such as the business cycle;
- certain. There should be no ambiguities about who pays taxes or about which authority gets the revenue. Uncertainty leads to evasive behaviour which can harm the local economy;
- convenient. Payment or collection should be convenient for taxpayers;
- economical. Administration should be cheap.

- efficient. They should not adversely affect the economy;
- fair. Payment of the tax should fall in an equitable way on the population.

a) Equity

The question of equity is a thorny one, and not amenable to a simple answer. Musgrave & Musgrave state:

'Everyone agrees ... that each taxpayer should contribute his "fair share " to the cost of government. But there is no such agreement about how the term "fair share" should be defined.'⁴

Attempts to define fairness centre around concepts of "ability to pay" or "fiscal capacity", and of "benefits".

i) Ability to pay

'Correct' taxation is seen as imposing equal sacrifice on all taxpayers, whatever their level of income or of wealth. When incomes are equal, common sense tells us that taxes should be equal. This, however, holds the assumption that the marginal utility of income is the same for all taxpayers. That is that the loss of the tax is of equal significance to people of equal income. This, of course, entirely ignores the variations in personal circumstances, such as needs (reflected perhaps in the number of dependants) or differences in wealth. (A taxpayer who owns his own home is clearly better off than one who does not, despite equality of income.) Also ignored is the amount of sacrifice made to earn the income, both currently and in the past. To treat a labourer, working 60 hours a week, as the taxable equal of a professional who elects to work 3 mornings a week, is clearly inequitable.

The value of property owned is an equally unsatisfactory measure of fiscal capacity, although it is widely used. The purchase and ownership of a large house is evidence of the size of one's family, rather than one's ability to

pay taxes. Renters of property, particularly when protected by rent control, are likely to be blessed with as much 'ability to pay' as anyone else!

ii) Benefit

This approach considers a tax to be fair if those who pay it derive benefit from the services it finances. This approach does indeed sound 'fair', but on closer examination, falls short in a number of ways.

- No mention is made of how much is paid and how much benefit is received. Individual evaluations of services differ, differences which are expressed on the market in the act of purchase. No such expression takes place in the public sphere, so the fairness or unfairness of the tax remains unresolved by appeal to 'benefits'.
- If benefits are as clearly assignable on an individual basis as the benefit principle presumes, then the services could equally be provided through private institutions. It is because they are not easily assignable that the issue of equity arises: collective characteristics of the good or service result in a public institution emerging as the cheapest, most effective form of provision. This public institutional mode may derive revenue from taxes, giving rise to the issue of fair taxing. Alluding to a benefit which is in some way related to the amount of the tax is to put the cart before the horse, and to assume away the initial difficulty - non-divisibility.
- Implicit assumptions are made about the present distribution of income, i.e. that it is appropriate. No concept of redistribution flows from this principle.

As R.L. Bish points out: 'The concepts of fiscal capacity and need have proved very difficult to operationalize'.⁵ Fairness remains a term which is defined by the user. Governments which seek to tax the rich to feed the poor remain faced, as was Robin Hood himself, with the odious task of selecting victims and beneficiaries according to some criteria.

Positive economics can have very little to say about the equity of a tax.

The definition of this term remains firmly in the realm of political negotiation and bargaining.

b) Efficiency

Taxes operate on an economic base, and as such, affect peoples' economic response to the base. If imported goods are taxed, people respond to the tax, inherent in the price of the good on the market, by buying less of it, and, to some extent, more local products. If a commodity is taxed as such, people buy less of it, responding to its purchase price. By adjusting the market prices of goods and services, taxes distort the allocation of resources among them. The result is that output is to some extent diminished and welfare is forfeited for the sake of the goods to be financed from the tax. This forfeit is particularly regrettable since no one at all benefits from it. If the same objective could have been achieved without the tax, welfare would have increased in a Pareto sense.

Very few taxes are immune to the charge of inefficiency. The personal income tax discourages work and investment, while encouraging leisure and saving. Taxes on wealth discourage those who wish to provide for an uncertain future by speculative or precautionary holdings. Import duties discourage merchants from buying in the cheapest markets and passing on the savings to consumers. Almost every tax is inefficient in some way, distorting the cybernetic signalling system of prices.⁶

c) Categories of taxes

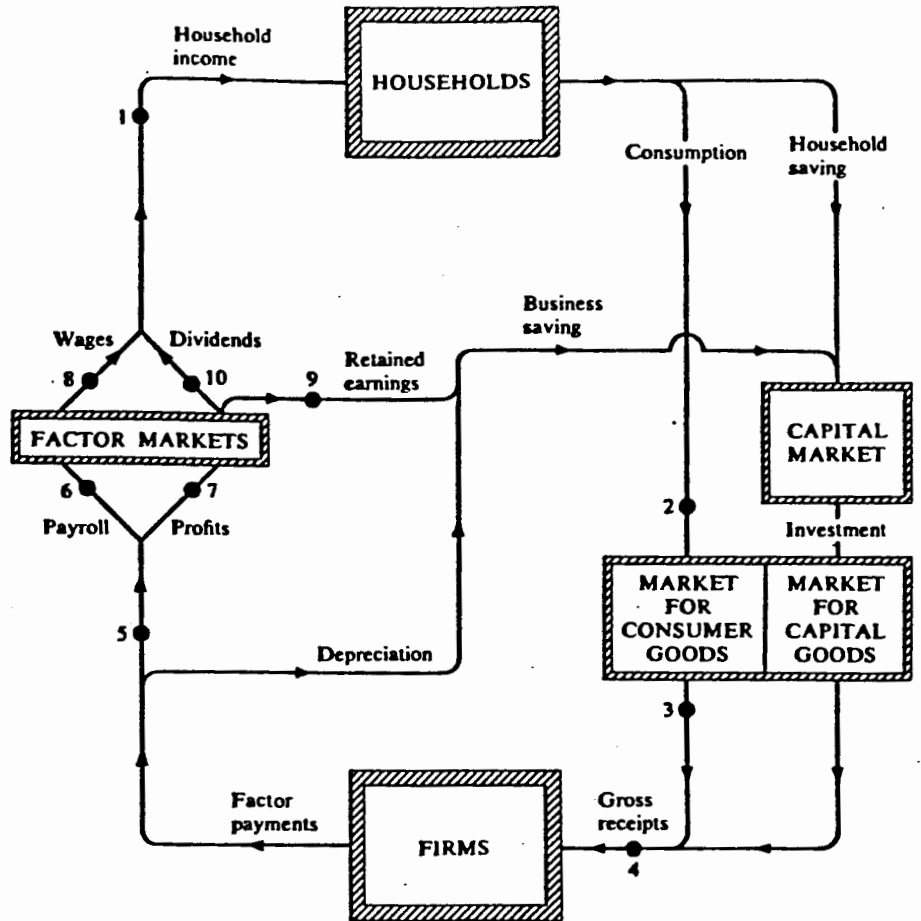
Taxes are categorised on several dimensions:

i. Current output taxes and income taxes:

There are, strictly speaking, identical, but the specific point chosen at which the tax is imposed varies.

Fig 4.2

Points of Tax Impact in the Circular Flow



The diagram 4.2 depicts the circular flow of income and expenditure in the economy. Income taxes are shown to have their formal impact at points 1 (personal) and 7 (corporate). Output taxes such as the sales tax impact at point 3.

ii. Taxes on buyers vs taxes on sellers:

Again these are formally identical, representing nothing more than the two sides of the shop counter, shown diagrammatically at point 2 and point 3. In practice, the effect of these taxes can differ because there may be some effect on the incidence of the tax.

iii. Taxes on sources vs taxes on uses:

Again these are identical, but the specific items chosen may have their own incidence characteristics.

iv. Taxes on holding vs taxing on transfer of wealth:

The distinction made is between stocks and flows of wealth. These are chosen on the basis of ease of administration and enforcement.

v. Taxes on people vs taxes on things:

Otherwise known as direct and indirect taxes, a distinction which flows more from the perspective of the tax administrator than that of the economist.⁸

d) Criteria for selecting local taxes:

Taxes which are suitable for use by local authorities are characterised by Maynard and King⁹ as follows:

- i. The subject of taxation must be widely distributed throughout the country. This eliminates the chance that owners and potential owners of the subject of the tax will avoid the area to avoid the tax.
- ii. In the interests of productivity, the local authority must be capable of varying the tax rate in order to raise enough revenue to cover rising costs.
- iii. Like all things, it must be cheap to administer.
- iv. There should be no ambiguities about who is entitled to the revenue.
- v. The yield should be appreciable in relation to expenditure.

In addition to these features, a local tax should have the effect of binding together the interests of local government and local citizens, and of giving expression to local priorities.

4. Fees and User Charges:

Harris and Seldon, in their evidence to the Layfield Commission, gave the following reasons for favouring user charges in preference to taxes:¹⁰

a. Accountability:

Users of a service signal their liking or disliking for the service by using or not using it, just as they do for any good on the market. The local authority is made very much more sensitive to the wishes of the people, wishes that they may not be able to articulate in any other way.

b. Increased Local Revenue:

User charges on local services provide an opportunity for people to pay more than the local or national subsidy and to get a better service in return. Local preferences can thus be catered for and paid for from otherwise untapped resources.

c. Efficiency:

Services which do not have a captive market, but have to serve paying customers who can, if dissatisfied, take their custom elsewhere, will be forced to be more efficient, both in the kind of service provided and in the level of costs.

d. Democracy:

By reducing reliance on central subsidies, local accountability, democracy and autonomy is enhanced. Councillors have more powers, but are forced to use them in a way which is responsive to the will of the community. This point is more relevant to the English environment than to our present South African position, since our level of subsidies is very low indeed.

The five criteria discussed earlier are thus very largely met by this form of revenue-raising.

There remain, however, some important factors against user charges:

a) Profits made on these trading services are often used for general

purposes. This amounts to a subsidy from those who use the facility to those who don't. This is a very crude redistributive technique which commonly misses the 'target group' entirely.

- b. The form of pricing policy is very important. Marginal cost pricing has its problems which remain unresolved, and block tariffs, involving quantity discounts place the burden heavily on the low user, and are regressive.

5. Subsidies from Central Government

This is not an important source of revenue for South African local governments, constituting only 4,7% of income. (Table 4.1) Subsidies in other countries often match and even exceed tax revenues, contributing as much as 50% (UK) to local government revenue.

Central government subsidies to local government suffer from some severe defects as a revenue source:

- a) Grants are often made subject to the discretion of central government who may use this discretion in order to control the actions of local government, with respect to capital expenditure, or to social programs of a redistributive nature.
- b) Being discretionary, grant money is a very unreliable source of income. It is, for example, considered unwise by U.S. municipal investment analysts to count grants as part of the income stream available to service debt.¹¹ Grants may therefore enable local government to pay for certain services, but cannot constitute a revenue base against which borrowing can be secured, and capital development financed.
- c) Withdrawal of grants may force local governments to finance some planned capital expenditure out of current income, which is very costly. The alternative, to abandon planned projects, may have a seriously deleterious effect on the environment.
- d) Grants are often earmarked, and as such, may result in severe resource

misallocation. It is not uncommon to encounter subsidised communities which lack the most basic facilities, yet are the proud possessors of expensive sports grounds or community centres. Both of these facilities, which we hesitate to call luxuries yet must surely be of lower priority than sewerage, street lights and drainage, are financed by special purpose grants which have no opportunity cost, not being allocatable to any other purpose.

- e) Pressures from central government, through the granting or withholding of funds make themselves felt in an uneven way, resulting in uneven local development.

For these and other reasons, acceptance of subsidies from central government represents a very significant loss of local autonomy, and therefore a loss in both the ability to serve local property owners as well as the incentive to do so on the part of local officials.

6. Conclusion

In this discussion of the funding options available to local government, we have examined local taxes, user charges and subsidies. The conclusion has been reached that while user charges are the preferable form of funding, the nature of local government goods and services makes the charge inevitably an arbitrary one, with the result that user charges often act in a redistributive way, with donor and target groups very badly specified.

The continuing importance of the property tax was stressed, despite some difficulties in defining the final incidence of the tax.

In the following chapter the incidence of the property tax will be more fully discussed, and the effects of site value taxation examined.

NOTES TO CHAPTER FOUR

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3. Musgrave, R. & Musgrave, P., Public Finance in Theory and in Practice (2nd ed., McGraw Hill, 1973, pp.210-211).
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CHAPTER 5 LOCAL TAXES

1. The Incidence of the Property Tax

The suitability of the property tax, as a source of local funds, depends very much on who pays the tax, and whether the final taxpayer is also the recipient of benefits resulting from local expenditure programme. There has been considerable controversy surrounding this question. H. Simon, in his review article of 1943¹ categorises 4 schools:

a) The Classical School

i) Pierson

Simon chooses the work of Pierson² to represent the classical school, which has been the conventional wisdom of economists, if not of policy makers for the best part of a century. This approach divides the tax into part land tax and part improvement tax. The land tax part is seen as unshiftable from the legal base, i.e. the owner of the land. Because land is seen, in the Ricardian way, as fixed in supply, landowners cannot respond to the tax by reducing supply. They must accept, therefore, a lower rate of return than they previously received, before the tax was imposed. A purchaser of the land will of course pay a lower price for it, earning normal after tax returns. The tax is borne in this view by the owner at the time of imposition of the tax and cannot be shifted from him. (See figure 5.1)

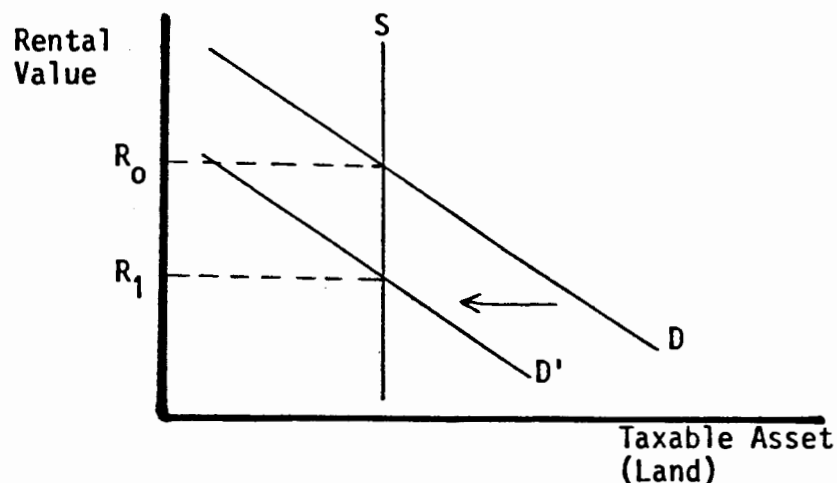


Fig 5.1

Consumer demand is unaffected by the tax and remains at D . The effective demand facing the seller falls to D' due to the tax (or expected tax). Before-tax rental therefore remains at R_0 , but after-tax rental falls to R_1 . The inelastic supply curve S reflects a fixed supply of land.

This reduction in the rental becomes a fall in the real wealth of the owner of the land as a result of a fall in the value of the land, i.e. a capitalisation of the tax. This takes place on a once-and-for-all basis when the tax is levied, or becomes anticipated. The return, after tax, on property is unaffected, but the income of the owner, being derived from a smaller asset base, is reduced.

Thus, as long as land is in fixed supply, the owner must pay the full amount of the tax. Improvements, however, are not in fixed supply, so the property developers' rational response is to reduce the quantity supplied, thus raising the before-tax price to consumers of housing, forcing them to bear some of the tax, insofar as it applies to improvements. (Figure 5.2)

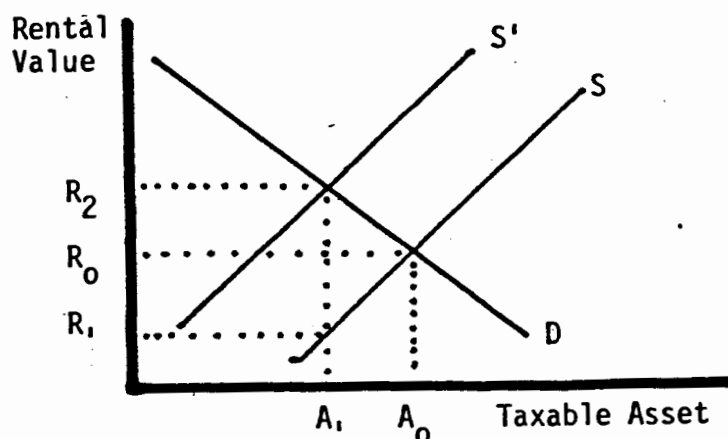


Figure 5.2

The imposition of the tax results in after-tax rental falling to R_1 . Supply is discouraged, reducing the housing stock to A_1 . The consumer price rises to R_2 . The extent of these changes, and the incidence of the tax depends on the relative elasticities of supply and demand.

The land component of the tax was thus seen as unshiftable and non-distorting, in that it does not affect the supply of land to the community. This aspect was applauded by many who felt that there

was a certain justice in taxing 'undeserved' profits from land. The tax on the buildings component was seen as an excise tax on housing services, which is borne by consumers of housing to a greater or lesser extent, depending on how much the price affects their demand, i.e. on the price elasticity of demand. If the tax-induced price rise deters people from consuming housing, then the tax will be borne by the owners who must accept a lower price or allow their housing to go unused. If people are largely unaffected by the increased price, that is, if demand is very inelastic with respect to prices, they will not reduce their demand for housing, and will have to bear some of the tax.

Since, in this classical view, a large part of the improvement component of local property tax falls on consumers, in proportion to the extent of their consumption of housing, the effect of the tax on income distribution must be affected by the distribution of housing consumption among various income groups. It is generally agreed that low income groups spend a greater proportion of their income on housing than do high income groups.³ Therefore, the property tax falls more heavily on the poor than on the rich, that is, it is regressive.

ii) Edgeworth

The second school presented by Simon is based on the work by F.Y. Edgeworth.⁴ He rejects the distinction between land and improvements, saying that housing services are only quantifiable in terms of the price they command on the market. Where two identical houses are built on dissimilar sites, the house on the better site will be, in effect, 'more' house than the one on the inferior site. The value of house and site are thus intimately related in a way that precludes separation either theoretically or operationally. The tax falls, therefore, fully on the occupier, and is avoided only by the extent of his reluctance to buy at higher prices, i.e. on the price elasticity of demand for housing.

In Edgeworth's view, the property tax is thus fundamentally an excise tax, borne by consumers in relation to their consumption of housing. Like the classical school, he considers it to be highly regressive.

b) The Harberger-Mieszkowski Model

Concentrating on reproducible capital, Mieszkowski makes a number of simplifying assumptions. Total supplies of capital are assumed fixed; product and factor markets are assumed perfectly competitive, so that factors receive the value of their marginal product. Capital is perfectly mobile between industries and regions, so that equal risk investments earn the same return over the whole economy. The value of capital in any use will be equal to its reproduction costs, taxes will not be capitalised. For simplicity, the expenditure side of the budget is ignored, only the tax being examined.

i). General Property Tax

Given these assumptions, Mieszkowski shows that a uniform tax on all capital will be borne by owners of capital in general. This hypothetical tax is put forward as the general case of which the property tax is a specific part. Since there exists no asset which capital owners can turn to to avoid the tax, all capital owners must bear it. They cannot shift the tax forward to consumers, or back to workers, since a rise in commodity prices compared to wages will constitute a reduction of the real wage which will encourage employers to use more labour. This increase in demand for labour will restore the relative real wage to its original level, and leave the tax firmly with capital. The relative prices of capital assets will remain unchanged, but the rate of return to capital will fall.

Thus in this general case, there is no effect on the price of housing nor on rents. Owner-occupiers pay the tax in their capacity as owners, not as occupiers, and, as house owners they pay the same tax as owners of any other asset. The property tax is not, in this context, a benefit tax, since the overall marginal productivity of capital is not affected by an equal increase in tax and expenditure over all communities. It is an income tax, falling exclusively on capital incomes, i.e. profits and therefore progressive in nature.

While no such tax exists in reality, these conclusions are relevant in that all local authorities levy some property tax, approximating a general tax. Capital employed in property is mobile to other uses, so

that the effect on the rate of return applies to all uses of capital, not only property.

ii) Local Tax Differentials

It is the differentials in the tax rates of different communities that result, says Mieszkowski, in excise tax effects. Because capital is mobile between communities, the after-tax return on capital will be equalised. A town that imposes a higher than average tax will find capital moving away, to areas where after-tax returns are higher. In so doing, it will increase supply of capital to other areas, resulting in a fall in the price, and decrease the supply in the home area, resulting in a rise in the price. This will take place until after-tax returns are equalised. The price paid by local users of capital, local industry, commerce etc., will rise, increasing costs, which will be passed on to some extent to consumers of final commodities.

The extent to which this can happen is of course limited by the elasticity of demand for local capital. Where this is not perfectly elastic, there will be a simultaneous fall in the prices of local land and labour until after-tax returns on capital are equalised and prices reach geographic uniformity.

The tax will thus be capitalised in the prices of property and labour and there will be an excise tax effect, an effect on relative prices which will lead to a different allocation of resources than would have occurred in the absence of the tax. A community that taxes at less than the average rate will attract capital, by raising the returns on real estate. Capital will flow in until prices fall enough to equalise the rate of return.

The inflow of capital will, in this case, attract labour, which will earn a wage which is uniform over the country as long as labour is mobile.

iii) Immobility of Labour and Land

Relaxing his assumption of factor mobility, Mieszkowski analyses the case where labour and land are not able to move freely in and out of the area, and are not able to freely allocate themselves to different uses.

If labour were excluded from this hypothetical area which levies a lower than average tax rate, local wages would rise. Local labour would be able to earn a higher marginal product when combined with additional capital. Looking at the opposite example where a district applies an above average tax on property, capital will look for alternative employment until after-tax returns are equalised, i.e. less building activity will take place, and less labour will be demanded at the current wage. If labour is unable to leave the district, wages will fall locally, but remain the same in the rest of the country. The tax on reproducible capital is thus borne by labour, if it is not mobile.

In the same way, immobile land will fall in price when a tax is increased capitalising the tax in local land values. This capitalisation may be very much less than the actual tax change, since the land-capital ratio can be varied to keep returns at a maximum. Similarly, the effect on wages may be cushioned by the possibility of using less capital or land and more labour. Thus the actual incidence of the tax will depend on the substitutability of labour for capital and land. In practice land and capital are not close substitutes for labour in the production of urban services. The fall in land prices is likely to be more severe, in Mieszkowski's estimation, than any likely fall in wages. Because land is a very small component of costs, these falls may not offset the tax leaving local firms uncompetitive. Commodity prices will rise to make up the difference, shifting the burden of the tax onto consumers of final commodities.

While his conclusions are arguable, based as they are on empirical estimates of elasticities of demand and of substitution, Mieszkowski's general model, based on rate of return analysis, possesses greater power than previous models, resolving and encompassing many of the previous theories.

c) Netzer and the 'Neo-Georgists'

Dick Netzer,⁹ principal contemporary exponent of the 'classical', 'excise tax' 'regressive' Old View, is able to accept the Harberger-Mieszkowski approach while concluding that because residential property is taxed at above average rates, there are positive excise tax effects which result in the tax falling partly on the owner of capital, and partly on the occupier as consumer. He concludes that although conventional wisdom overstates the forward shifting of the tax, this does not mean that the tax is less regressive than thought. He estimates that 20% of the tax is likely to fall on land and be distributed progressively, 35% on business property, with mild regressivity, and the remainder on residential property will be very regressive: Netzer's position therefore is that taxes on reproducible capital, including housing, are on balance regressive in their impact and distort the allocation of resources. He favours the nineteenth century views of Henry George, advocating complete reliance on taxes on non-reproducible capital, including land. This 'unreconstructed Georgist' position is based on his empirical estimates of relative elasticities rather than any theoretical disagreement. Even Netzer appears to accept the Mieszkowski capital-theoretic, revenue side, competitive approach.

Aarons,¹⁰ in his critique of the 'traditional' view, points out that prior to Mieszkowski's synthesis, the conclusion that the final users bear the tax rests on a model with some very special assumptions. The model must ignore land-capital substitution, must ignore labour and capital mobility and must indeed ignore the fundamental demand-price relationship in housing. The 'new idea' has shown that this model is in fact a special case of the more general one. Significantly, the general model gives the 'Georgist' views a new validity. It is now possible for Netzer to argue, using the same model, for the opposite result. The model is by no means deterministic, but must be estimated in specific contexts to determine the incidence of the property tax in a particular town.

d) Some Objections to the 'New View'

i) Variable Supplies of Capital

Two serious theoretical objections to the Mieszkowski approach come from R.A. Musgrave,¹¹ the first of which attacks the assumption that supplies of factors are fixed. Hankering after a general equilibrium approach, he points out that house building is both consumption and saving, and as such, can increase supplies of capital. If this is the case, labour may have to bear some of the burden of a tax on property.

ii) Non-Competitive Markets

Musgrave also calls attention to the Mieszkowski assumption that housing markets are competitive. He suggests an administered pricing model in which landlords behave like restrained monopolists, not raising rents for fear of public outrage and possible imposition of rent control laws. Tax increases may be passed on to tenants, since the public finds this morally acceptable. Rolph, in discussion of this paper, calls this monopoly power to question since, as he puts it, 'landlords number in the thousands',¹² making it very difficult to hypothesise any significant collective action.

iii) Balanced Budgets

Other discussants in this debate (Friedlander¹³ and Peterson¹⁴) point out that the expenditure side, explicitly ignored by Mieszkowski is of vital importance. Friedlander uncovers a further hidden assumption: that any change in the property tax is compensated for in the local budget by an offsetting change in a hypothetical neutral tax. This does not occur in practice. The choice to be made is always between two distorting taxes, and the task of empirical analysis to explore the actual adjustment process which will occur.

iv) Immobility of Capital in Low Income Housing

Peterson draws attention to the fact that due to zoning and other restrictive practices, themselves a result of high local taxes, capital allocated to low income housing is not able to move freely to the region where the best return is available. As the average rate of taxes increases, the incentive for fiscal zoning increases, which results in stratification of communities, poorer communities with small tax bases paying high tax rates. The Harberger-Mieszkowski model would suggest that this tax differential would be capitalised into a price differential, resulting in lower prices in low income areas. The mobility of capital for low income housing is restricted, however, by zoning and other land use restrictions. Low income housing (when produced privately) is produced under a high tax rate, low tax base regime. Under these circumstances, capital must accept a lower rate of return, or move to other sectors. A low income capital owner who builds a house, receiving real income from it in the form of shelter, must accept a capital loss due to the above average tax, or a reduced capital income.

Capital leaving the area takes labour with it, leading to reduced wages if labour is immobile, or increased consumer prices if it can migrate.

When seen on a local level, the tax is therefore regressive, falling disproportionately on low income house-owners and low income consumers.

e) Summary

Classical controversies on the incidence of the property tax have been brought under the umbrella of a single general theory of local and general property taxes.

Taxes are seen to fall on owners of capital where

- i) All capital assets are taxed at a uniform rate in all communities
- ii) All factors of production are mobile, but

- iii) are not substitutable for each other and
- iv) the demand for housing is not less elastic than the demand for other goods.

To the extent that these conditions do not apply, the tax will be borne by other factors of production, labour or land, by consumers of housing, or by consumers of all final commodities. A definitive allocation of the tax must depend on the use of a model which relates and quantifies the effective rate of taxation on various classes of property and over different competing regions; the relative elasticities of substitution between land, labour and capital; the relative elasticities of supply of factors to the community; and the relative elasticity of demand for housing and other commodities.

General statements about the incidence of the property tax can't be made at present until empirical studies of this kind have been completed.

2. The Site Value Tax (SVT):

Local governments in South Africa have increasingly turned towards the taxation of property on the basis of the value of the site, rather than the total value of the property, site and improvements. Some, like the City of Johannesburg, calculate the tax on the basis of site value alone, while others levy a tax on both, but charge a lower rate on buildings than on the land.

The stated reason for this policy is to encourage the development of vacant land and to raise the intensity of land use generally.¹⁵ In this objective, there is both a theoretical and an empirical basis for expecting success. In an empirical study in Hawaii, for example, Pollock and Shoup concluded that a change to SVT would increase property development by as much as 25%.¹⁶

In order to understand the reason for this, it is necessary to distinguish two separate aspects of the site value tax. In the first

place, the SVT is in effect a non-proportional tax on owners of real estate. Despite the fact that the tax is levied in proportion to the value of land held, it is not proportional to the value of the property as a whole, of which the land is, as Edgeworth pointed out¹⁷ an integral part. The SVT is therefore a constant, or lump sum, tax on property levied on the basis of the value of the site. It is eminently feasible, of course, to levy this tax on any other basis, such as a tax per house, per hearth, per person, per head of livestock, per plot or per room. Most of these methods are indeed to be found in the history, both past and present, of local government finance. Each of these taxes, or any other constant tax on property owners, will have a similar effect. It is very important to notice that the effect of the tax is not related to the fact that the base is land, rather than some other factor. Any base will do, as long as the tax has some constant element in it, i.e. as long as the tax formula is of the form:

$$T = c(S) \quad \text{where } T = \text{tax liability}$$

$$c(S) = \text{constant tax, related to } S, \text{ site value.}$$

In Figure 5.3 and 5.4, the difference between a lump sum tax and a proportional tax can be seen.

R_w is a revenue function of the type: $R_w = aK^\alpha$.

T_s is a SVT and is constant with respect to capital employed: $T_s = cS$ c is the tax rate
 S is the site value

T_i is a tax on improvements: $T_i = gK$ g is the tax rate
 K is the value of improvements

Subtracting the SVT from revenue: $R_x = R_w - T_s$
 $R_x = aK^\alpha - cS.$

This is represented by means of a line vertically parallel to the line R . The marginal function of R_w is unchanged,

$$\text{i.e.} \quad \frac{dR_w}{dK} \equiv \frac{dR_x}{dK} \equiv \alpha aK^{\alpha-1}$$

Subtracting the proportional tax from R_w does, however, change the

Fig 5.3

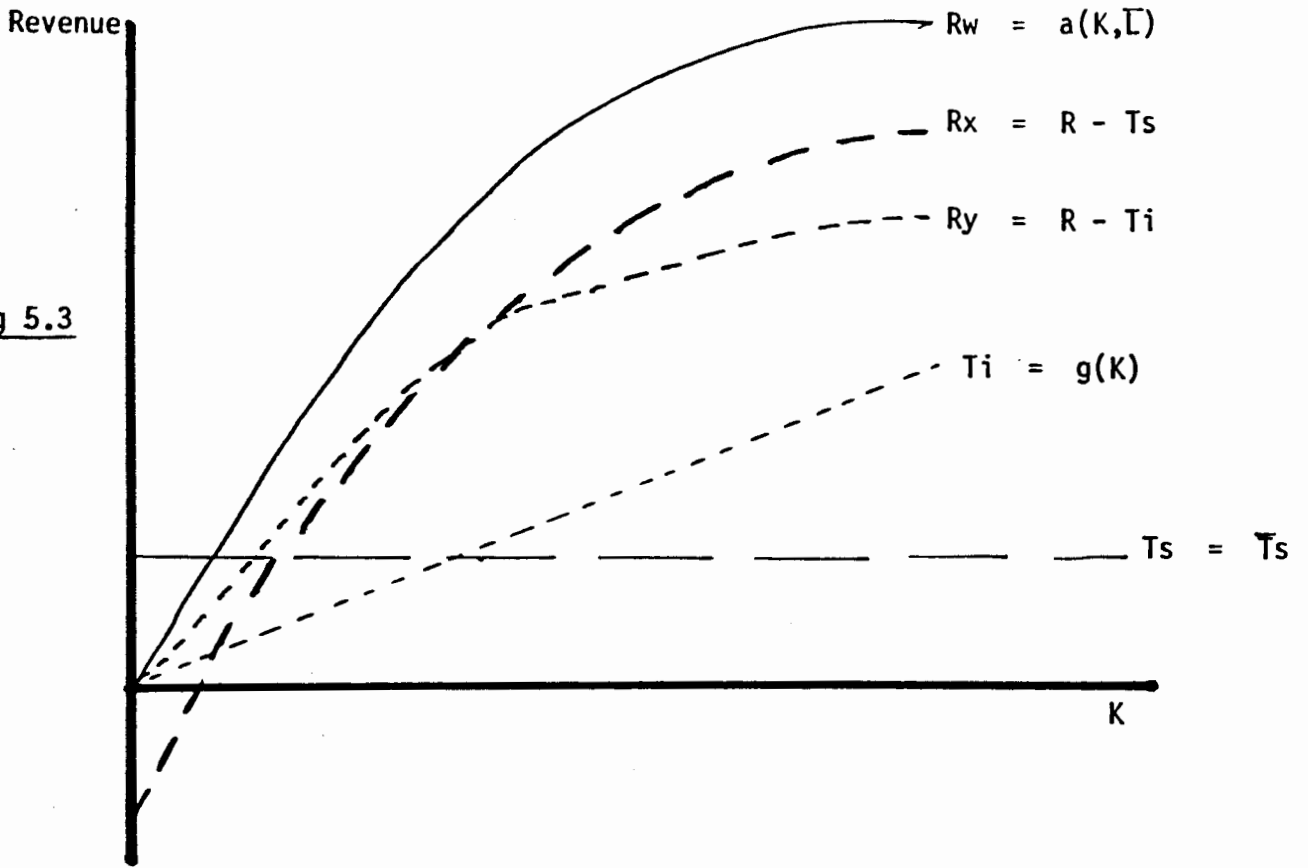
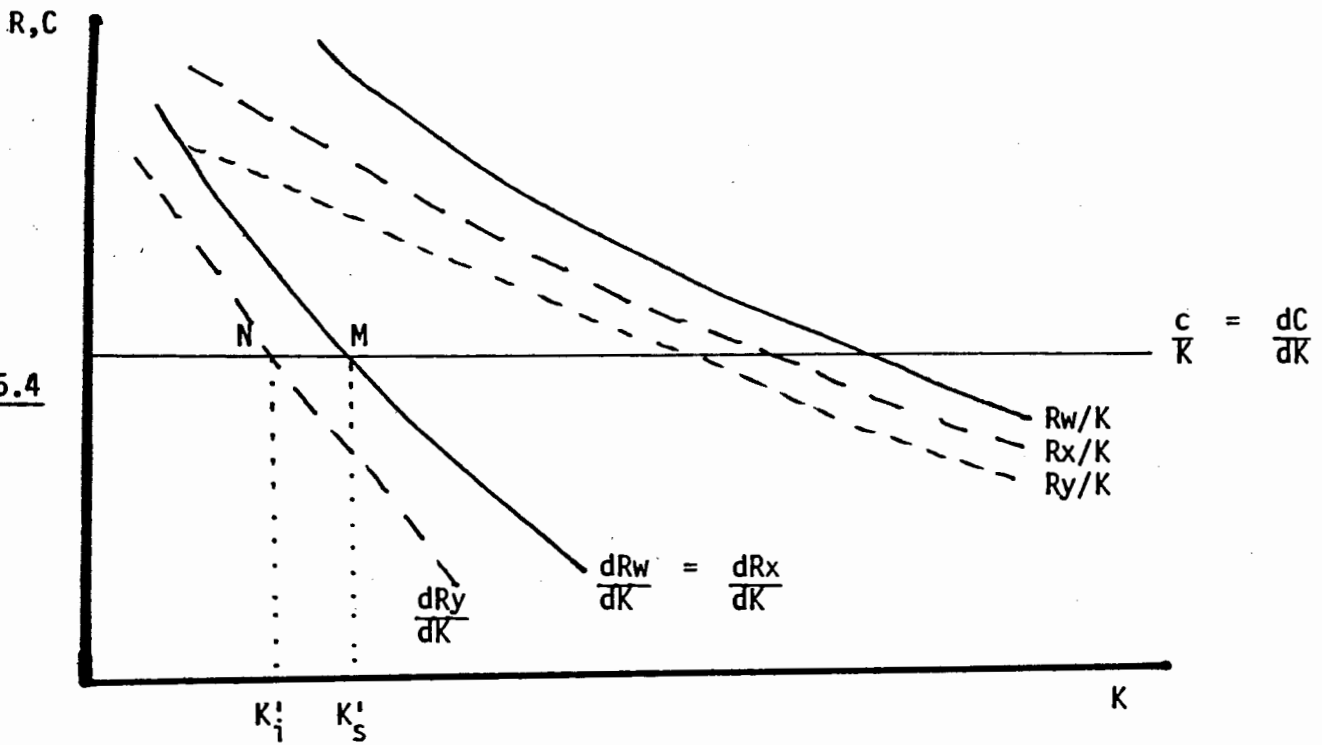


Fig 5.4



slope of the revenue function, and therefore the marginal function of R_w :

$$\begin{aligned} R_y &= R - T_i \\ &= aK - gK \end{aligned}$$

so that $\frac{dR_w}{dK} = \alpha a K^{\alpha-1}$ is not equal to $\frac{dR_y}{dK} = \alpha a K^{\alpha-1} - g$.

The optimum amount of capital in the absence of taxation is to be found at a point where the marginal revenue $\frac{dR}{dK}$ is equal to the marginal cost $\frac{dC}{dK}$, shown at K'_s on Figure 5.4. The introduction of the tax T_s has no effect on this point at all, since the marginal revenue function is unaffected. Introducing the proportional tax T_i , however, reduces the optimum amount of capital to K'_i .

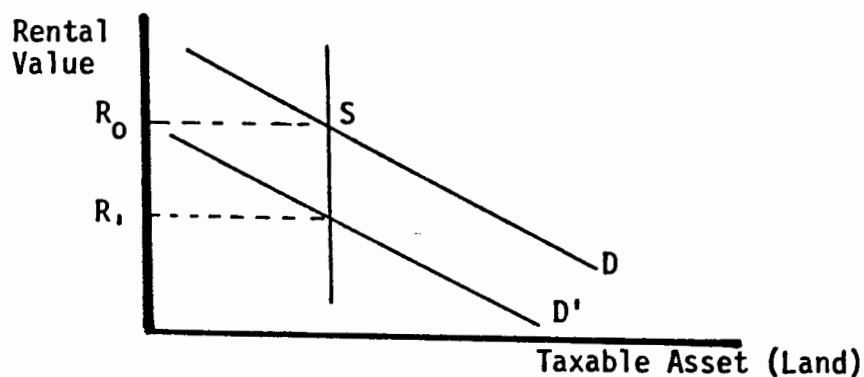
Abandonment of a proportional tax in favour of a lump sum tax therefore has the opposite effect of increasing the optimum amount of capital in relation to land. The contention that a change in the method of taxation to a site value tax will increase the intensity of development is therefore well-founded. The reason for this does not rest, however, on any special characteristic of the site as a tax base, but on the non-proportionality of the tax with respect to the value of the total investment.

The second aspect of the SVT which we need to distinguish is its effect in that it is an increase in the tax on land in relation to the tax on other forms of wealth. As such it serves to discourage, at the margin, the holding of land for speculative purposes.

Land is held in the form of vacant plots as a part of investors' wealth portfolios, in the expectation of future capital gains in excess of holding costs over the period. The future selling price of vacant land is expected to exceed the purchase price by an amount at least equal to the capitalised value of taxes payable plus the opportunity cost of vacant holding, i.e. rents foregone over the holding period, capitalised at the market rate of interest on an asset of the same risk class.

As was shown in Figure 5.1, reproduced here as Figure 5.5, an increase in the tax on land, where land is immobile, will have no effect on the absolute value of the rental charged to the tenant (R_0). The rent available to the landowner as a return will, however, fall to R_1 .

Fig 5.5



As long as capital markets are efficient and capital is mobile, this reduced rent will result in a lower land value when capitalised at a market rate of return. There will be no reduction, therefore, in the rate of return to land, but equal relative changes in the value of the land and of the after-tax rent.

The perspective confronting the individual holder of land is depicted in Figure 5.6.

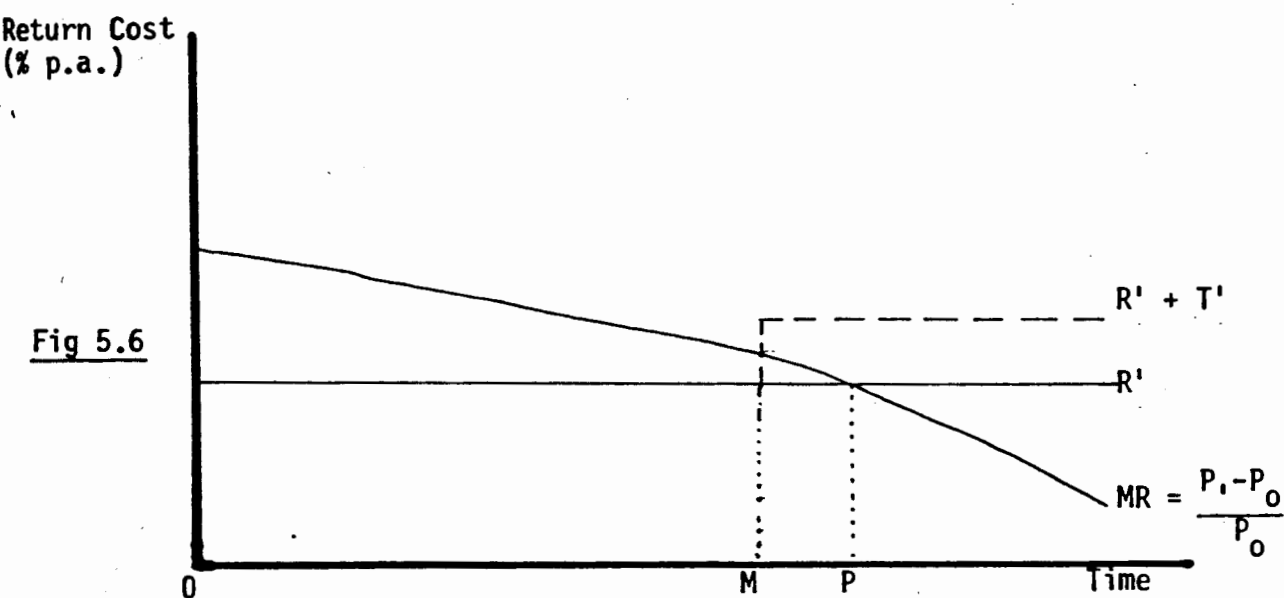
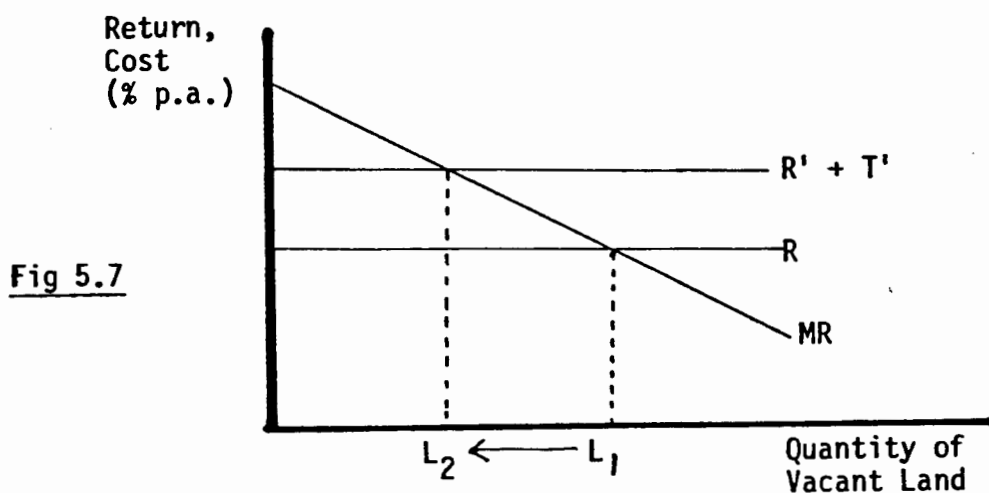


Fig 5.6

The diagram shows the flows of costs and revenues associated with a holding of vacant land. Revenue accrues as a result of a capital gain, additional revenue (MR) being the gross proportional gains resulting from holding the asset for an additional time period. This is shown in the example as falling over time, a situation which may happen, for instance, if the neighbourhood in which it is situated began to approach full development. It is likely that the 'pioneer' gains to be reaped by landowners (basically returns to uncertainty) would begin to tail off. Land prices may continue to rise but at a slower rate.

The costs of holding are shown as rent foregone per year (R') which in the absence of taxes or other costs represents the marginal cost with respect to time. A holder, situated at time m will observe potential land rents available from construction and development, R' to be lower as a proportion of the land value than the gains from holding the land vacant, i.e. $\frac{P_1 - P_0}{P_1} > R'$. The decision is made to continue holding until period p , when the falling MR equals the opportunity cost.

The imposition of a tax, T' , however, raises the effective marginal cost to $R' + T'$. The absolute value of $R' + T'$ remains the same as R' , as was pointed out above, but the additional annual opportunity cost per rand rises to $R' + T'$. The land holder, situated at m will see his marginal cost ($R' + T'$) as greater than possible gains (MR) and will convert his capital to other uses, either improved land, earning R' or any other use of wealth. Figure 5.7 shows how the quantity of vacant land held will fall from L_1 to L_2 with the imposition of the tax.



These results are, as pointed out in the above discussion of tax incidence, dependent on the mobility of capital and labour. If such mobility does not exist, then the tax on land will be borne by all owners of capital and labour, through a fall in the rate of interest and wages and not borne by present owners of land through a once and for all loss of wealth. The marginal cost of holding vacant land may thus be reduced, mitigating to some extent the tax's disincentive on land holding.

Theory does suggest that the SVT has the potential both to increase intensity of development and to discourage the speculative holding of vacant land. The first effect is due to the nature of the SVT on a 'lump sum' tax, while the second is due to the discrimination against land as a form of wealth holding.

3. General Sales Tax (GST)

The imposition of this type of tax represents a further option for local governments. The effects of a GST differ widely depending on the method of imposition. They may be imposed at retail, wholesale or manufacturing levels, or at all three stages. This form of tax is known as a turnover tax. Turnover taxes can have very severe economic effects, providing artificial incentives for vertical integration of firms, and resultant market concentration. To avoid this pitfall, Value Added Taxes are sometimes used, taxing only the additional value created by the concern.

The advantage for the local authority of this form of tax are:

- i) High yields for low tax rates. In 1971, a 1% sales tax yielded 15% of the revenue of Chicago, 20% of the revenue of Los Angeles and 12% of the revenue of San Francisco.¹⁸
- ii) Low cost of collection when centrally administered.
- iii) The yield is fairly elastic with respect to local incomes.
- iv) It is more stable than a similar income tax.
- v) It obtains revenues from non-residents.
- vi) Extends the tax burden to all income levels.

vii) Creates community tax consciousness.

This last factor is disputed by Buchanan and Flowers,¹⁹ who list among the principal disadvantages the fact that sales taxes foster the illusion that it is paid by consumers. This, they say, is not so. Where markets are competitive, owners of factors of production, land, labour and capital, pay the tax. In the presence of sticky markets, unemployed labour, land or capital carry a disproportionate burden. Thus community tax consciousness, they say, is destroyed, by fostering illusory incidence assumptions, and by concealing the true cost of taxation.

The conventional view of the regressivity of the sales tax is also rejected by these two authors, as a consequence of the conclusion that the tax is not borne by consumers but by producers. It is, they say, equivalent to a proportional income tax.

There is, thus, dispute as to how inequitable the sales tax really is. A more damaging critique rests on the inefficiency which results from intercommunity tax differentials. Location of economic activity can be seriously affected by taxes which vary from place to place.

Efficient administration also requires record keeping, auditing etc. which can be very costly for the small authority. Collection at the central level presents a viable alternative, which can be implemented at small cost.

4. Selective Sales Taxes (Excise Tax)

Being, by definition, discriminatory in their nature, these taxes are usually used for goals other than pure revenue raising. Sumptuary goals may be pursued, such as discouragement of smoking, drinking or gambling by means of taxes on these activities. The reasons for pursuit of these goals are usually moral ones, and as such are beyond objective comment.

Excise taxes are often used for regulatory purposes, to protect one or other section of consumers, or producers. Taxes on the sale of margarine are used to protect dairy interests, or on the import of textiles to protect textile manufacturers. In each case, some other section of the economy suffers as a result. Consumers must pay more for breads and clothing. Buchanan and Flowers ask the question: 'Why should the producers, processors or consumers of this or that good or services be discriminated against (or in favour of) by the fiscal system?'²⁰ The answers to this often-asked question are fundamentally political in their nature and can only be provided in the political arena.

Whether used for sumptuary or for regulatory purposes, the use of a selective tax is always predicated on a presumed knowledge of its effects. In practice, this knowledge is often very hazy. The true effects of a tax are often not fully researched.²¹

- a) Public Utility Taxes: While currently of more relevance to the USA than to South Africa, these taxes become important when the idea is mooted of putting local services out to public tender. The price paid by the supplier for a monopoly of, say, bus services can take the form of a tax. This tax will generally be passed on to the consumer, who will pay it in the form of higher prices.
- b) Tobacco Tax: This tax has been in use in the USA since 1921. In 1972, 22 states taxed a pack of 20 cigarettes as much as 15 cents. This is a sumptuary tax aimed at discouraging smoking. It is not very suitable for local use due to the ease of evasion, by purchasing outside the area, smuggling etc.²²
- c) Amusement: Although this tax is easy to administer, is a benefit tax and obtains revenue from non-residents, it is an unimportant tax because the revenue potential is very low.
- d) Motor Fuel: Also a benefit tax, with its revenue often earmarked for road development. This tax is a popular one for local use, but suffers the defect of being very easy to avoid, by buying in neighbouring areas.

- e) Business Licences: This is a highly discriminatory source of revenue, commonly serving local sectional interests through price policies, sale of publicly policed monopolies and other restrictive practices. The theoretical possibility exists to use this device for allocation of property rights in such locally owned collective resources as crayfish stocks, common grazing etc. The likelihood of corruption and favouritism is, however, great.
- f) Motor Vehicle Licences: This tax is favoured by Maynard & King²³ for local use since it is very strongly a benefits tax, and raises revenue from outside the area.
- g) Gross Receipts Tax: This is very similar to the general sales tax falling on all levels, but has wider impact. This is a highly discriminatory kind of tax, having no relation to ability to pay. It can have very harmful effects, encouraging unsuitable industrial structures, discouraging expansion, penalising efficiency.

5. Local Income Tax

Taxes on income are the best 'ability to pay' related tax in our armoury. Nevertheless, it remains imperfect if no account is taken of differential needs. Income taxes are appropriate for local use if the income is earned within the taxing boundary. Buchanan & Flowers comment:

'The appropriateness of Income Taxation for a unit of government is directly dependent on the extent to which its boundaries are co-incident with the extent of the market.'²⁴

The advantages of this form of taxation are:

- i) Being broadly based, the tax touches all aspects of the local economy.
- ii) It is a high yielding tax, despite relatively low rates.
- iii) Collection at source is easy for a local authority.

- iv) The tax is not regressive, but proportional, and may even be made progressive, for redistribution reasons.
- v) Revenue is collected from non-residents, as well as residents, extending the base.
- vi) While not 'efficient' it is one of the less inefficient taxes.

Indiscriminate use of this kind of tax for all local authorities is inadvisable, since proper administration is costly, and problems of overlapping jurisdictions can be quite acute. It could be used if centrally administered along with the Central Government Income Tax.

While all forms of taxation have their faults, the most suitable ones for local use are:

- The property tax: this is essential for the link between tax policies and local interests.
- The local income tax: is appropriate when administered in conjunction with central government.
- A local sales tax: can be very effective for revenue raising but must be handled carefully, again in conjunction with central government.
- Selective sales taxes: specific taxes on certain commodities and businesses can be carefully used. Motor vehicle licences, and certain specific business licences are suitable.

These taxes should be used in conjunction with the other sources of revenue, such as user charges, discussed above, and borrowing, which will be discussed in the following chapter.

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CHAPTER 6: A MODEL OF LOCAL AUTHORITIES'
DEBT CARRYING CAPACITY

1. The Role of Debt in Financing Local Expenditure

We have, in preceding chapters, shown that the policies of local authorities can have a very strong effect on the local economic environment, or on the 'Supply side' of the local economy. Commenting on the poverty of Demand Theory, J. F. Kain states:

'The ... (Demand Analysis) ... approach of the local economy inevitably focusses attention on matters over which local governments have little or no control - the exogenously determined components of demand - while distracting attention from the very thing local authorities can influence - the nature and attractiveness of the local economic environment.'¹

It is clear that the cost and availability of credit will very strongly influence the local government's ability to affect the environment. Well chosen capital projects can, as Brooks and Gripaios confirm, generate local growth and employment.²

The absence of such capital investment, or even worse, the presence of ill-conceived projects can have a powerfully depressing effect on the local economy compared to neighbouring competitive areas. Residents of a local authority which allows itself to lag behind its neighbours with respect to the development of infrastructure and amenities, will not only suffer from the immediate lack of facilities, in the form of unmade roads, inadequate lighting or sewerage, but will find the relative value of the local property falling. As a result, the authorities' tax base will be diminished and the capacity to provide amenities in the future eroded.

The ability to undertake capital development depends very largely on the cost and availability of finance. Access to low cost sources of finance in the form of various kinds of loans or accumulated taxpayers' money, has the effect of enhancing local capital development prospects, allowing projects to be completed which could not otherwise be done.

There are a number of methods of financing development available to local authorities in South Africa, ranging from all borrowing policies to 'pay-as-you-go' policies financing capital from current sources.

The different methods are discussed below:

a) All borrowing:

This method is looked upon as an emergency measure suitable for use only in the direst of emergencies, for example, local floods or disasters. In such an event, local taxes may not be available, and recourse must be had to borrowing from outside agencies to meet both capital and current expenditure. In such a case, future reserves will be heavily committed to servicing this debt, leaving only a small proportion available for future services and amenities. Any unexpected shortfall in revenues would severely jeopardise the financial health of the local authority. If, on the other hand, revenues rise as expected, the local authority will find itself in no danger at all and will have greater and greater resources available to repay debt and to meet any further obligations it may experience.

Aside from its role as an emergency measure, 'all borrowing' policies are often encountered in the very early stages of township development. Developers often find themselves in a position prior to the marketing of stands, and hence prior to the receipt of appreciable revenues, of having to finance all local facilities from sources external to the fledgling local authority. This they do in the expectation that sufficient revenues will flow from the sale of the property and from subsequent taxes to retire part of the debt, to service the remainder and to provide local amenities.

b) 'Pay-as-you-go':

At the other end of the spectrum of financial options would be a policy of meeting all requirements, whether capital or otherwise, out of current revenues. This is an approach which is popular with the financially conservative, since it is regarded as imposing a discipline on local officials, forcing them to 'make do with what they've got', and preventing them from committing future generations to heavy interest payments and hence heavy tax burdens. Indeed, by avoiding interest payments altogether, this policy seems to 'save money' in the sense that future payments of interest do not place a burden on future revenue. 'Pay-as-you-go' financing must, however, involve present taxpayers, either in very high taxes or a reduced capital development programme. This merely shifts the burden of capital expenditure into the future, imposing costs on future residents which may be higher than the costs of borrowing in the present. This option is, therefore, not necessarily a 'future regarding' one, and may unnecessarily restrict present development potential.

c) A Capital Reserve:

The intention of this policy is to accumulate current revenue in a 'sinking fund', earning interest, until enough has been accumulated to initiate a capital programme. Historically, this policy has been very unpopular with taxpayers, since it taxes the present to pay for the future. A policy of accumulating capital revenue became prominent in the U.S.A. during the war when materials and labour were channelled away from social infrastructure towards the war effort. Special legislation was passed at State and Federal level to enable local authorities to 'shelve' projects, and accumulate tax surpluses for use after hostilities had ceased, apparently in expectation of the post-war deflation that had marked all American wars up till then. When 'price levels' continued to rise after the war, the value of accumulated development funds was rapidly eroded. Many cities, faced with unexpectedly rising costs were forced to use these funds to meet current requirements.

Thus the American venture into capital reserves ended in failure due to an unexpected turn in the American economy.³

This is an historical lesson which must be properly learned in the local context: The success or failure of a Capital Reserve Policy depends on the ability to manage the Fund so as to earn returns in excess of the opportunity cost of the money to Local Authority or to the taxpayer himself. This managerial ability is limited in the case of South African Local Authorities, not by the skill of local officials, but by Provincial requirements regarding the investment of these funds. The ability of a local authority Capital Development Fund to bring a rate of return comparable to that of commercial investment funds is accordingly limited.

Despite these considerations, the application of these financial practices has become standard with many local governments in the Cape and is highly commended by officials in other provinces and at central government level.⁴ It is likely that reserve funds are seen as a means to limit the risks associated with borrowing, and as an aid to central government 'demand management' policies.

The reserve fund policy is, however, not likely to serve the interests of local residents and property owners who would do better to reduce taxation and meet capital requirements by judicious borrowing.

d) 'Pay-as-you-use':

A popular approach to public financing policy is to match the term of the loans raised to the life of the equipment in question and to retire the loan by means of a sinking fund which terminates simultaneously with the asset. This policy is considered to amount to paying for the facility in instalments equal to the amount 'used up' or depreciated over time.

This results from a number of confusions:

Firstly, each project forms only a part of the total capital programme. Spreading payment over the life of the asset does not, by itself, accomplish the goals of financial management, including an optimal scheduling of cash payments. Uncomfortable peaks and troughs in the pattern of payment obligations may still occur, placing unnecessary strain on the financial resources of the community. The 'pay-as-you-use' authority is forced to carefully arrange the scheduling of the projects themselves in order to avoid this discomfort. The physical development plans are thus linked unnecessarily to purely financial considerations with a resulting loss of flexibility.

Secondly, the 'life' of an asset is not clearly definable and depends on technical and physical characteristics, on the costs of repairs and maintenance and the relative value of the service provided. Items such as roads may never be replaced, only maintained at a specific level in perpetuity. Financing over the 'life' of the asset has no meaning in this context.

Lastly, recent approaches to financial theory separate the financing decision from the 'investment' decision of the firm. The financial policy is shown to have no effect on the value of the firm, while the investment decision does. Financial decisions must be made, therefore, purely on the basis of the overall cash flow and on the values of relevant market interest rates and yields. The life of a specific asset is relevant only insofar as it affects the overall cash flow, and for this reason alone is a factor in estimating future financing requirements.

These then are some of the options available to local governments. In the following pages an attempt will be made to develop a coherent theory of local authority financial policy. The analysis will draw on important recent developments in financial economics, particularly the Capital Asset Pricing Model (CAPM) and the Modigliani-Miller approach to capital structure (M-M).

The section that follows will trace the development of approaches to capital structure, culminating in the M-M position which will then be applied to Local Authorities Financial Policy.

2. Theoretical Approaches to Corporate Capital Structure

While it is true that local governments differ from private firms in many important ways, particularly in that they do not seek to maximize profits, they are similar in that they try to minimize costs, and to maximize the local benefits resulting from their expenditure. This means that they too are faced with the problem of acquiring capital at minimum cost, by some judicious combination of internal and external finance. For these reasons the literature on Corporate Finance is drawn upon to gain insight into the Local Authorities financing decisions.

The key elements of the optimal Capital Structure decision are to be found in the Net Income Approach.⁵

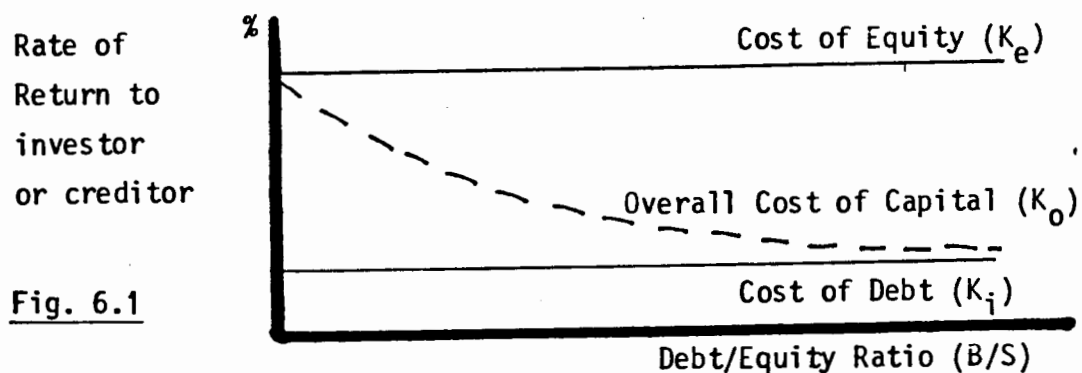


Fig. 6.1

This approach sees the problem as essentially one of minimizing the cost to the firm of financial resources. As may be seen in Fig. 6.1, costs of debt and shareholders' equity are shown on the vertical axes as rates of return (%). The horizontal line K_e shows that the return on equity is not affected by the Debt Equity ratio (B/S) depicted on the horizontal axis. Equally unaffected by B/S is the cost of debt K_i , but this is shown as cheaper (earning a lower return) than equity. This means that both lenders and investors are unresponsive to the debt/equity ratio and would lend and invest at the same rate (%) whatever the B/S ratio.

It is evident that the overall cost of capital (K_o) in this simple model without growth, corporate taxes, personal taxes or bankruptcy costs, is a weighted average of the costs in percentages of debt (K_i) and of equity (K_e) which are both constants:

$$K_o = K_e \frac{B}{B + S} + K_i \frac{S}{B + S} \quad (2.1)$$

where

B = market value of debt and

S = market value of shareholders' claims.

The cost of capital, therefore, falls continuously as cheap debt is substituted for more expensive equity, i.e. B/S rises. As a result, the value of the firm (V) rises, since overall returns are capitalized at a lower interest rate:

$$V = B + S \quad (2.2)$$

$$B = \frac{I_c}{K_i} \quad (2.3)$$

$$S = \frac{NOI - I_c}{K_e} \quad (2.4)$$

where V = market capitalization of the firm
 I_c = interest charges
 NOI = net operating income

Substituting (2.3) and (2.4) in (2.2):

$$V = \frac{I_c}{K_i} + \frac{NOI - I_c}{K_e} \quad (2.5)$$

i.e. The value of the firm is equal to interest flows and income flows discounted by relevant rates of return.

Equation (2.5) with K_i and K_e regarded as autonomous variables, represents the NI (Net Income) model.

The shortcoming of this approach is that it ignores the fact that investors and lenders are both discouraged from lending to firms with high B/S ratios, because of the increasingly risky nature of such loans or investments. This aspect is portrayed in the 'Traditional Approach' as represented in Fig. 6.2.⁵

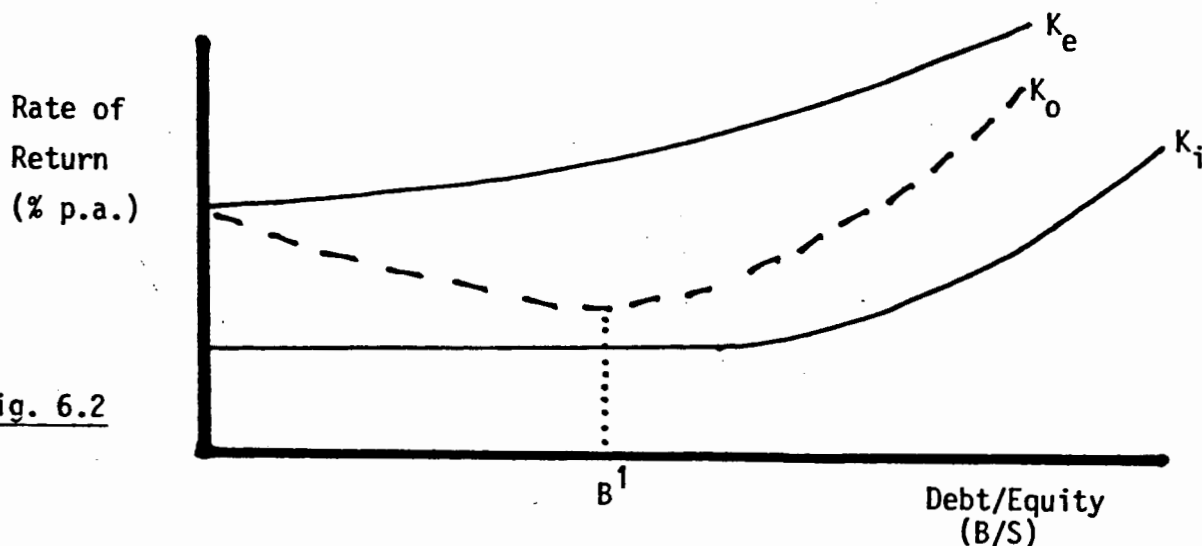


Fig. 6.2

This represents lenders and investors, reflecting their aversion for placing money with a highly levered company by requiring higher interest rates at higher B/S ratios. Investors and lenders are, moreover, differently affected by the B/S ratio, so that there exists some point B^1 , representing the degree of leverage which minimizes the cost of capital, K_0 .

To show this, we must modify the simple Net Income model presented above to reflect the relationship between K_e and the debt/equity ratio, B/S, and K_i , the interest rate on debt and B/S.

To do this, we leave the value of the firm unchanged:

$$V = \frac{I_c}{K_i} + \frac{NOI - IC}{K_e} \quad (2.5)$$

But the values of K_i and K_e are not independent of B/S , but are:

$$K_i = f(B/S) + r$$

$$K_e = g(B/S) + r$$

where

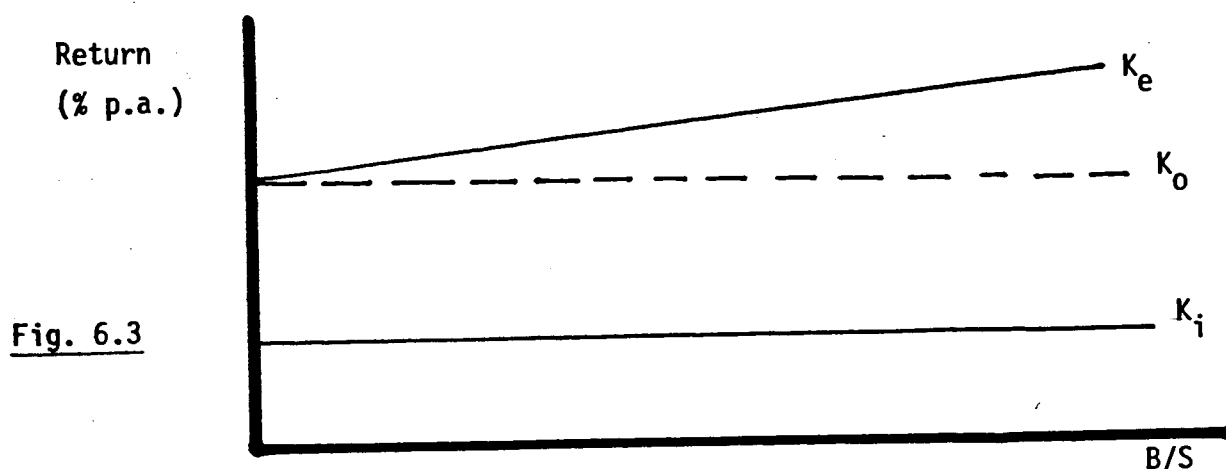
r = the rate of return on a riskless asset.

So that the weighted average cost of capital is:

$$K_0 = K_i \frac{B}{B + S} + K_e \frac{S}{B + S}$$

where $V = B + S$.

This financial orthodoxy came under severe attack in 1958 from F. Modigliani and M. Miller.⁶



Modigliani and Miller argued that arbitrage between personal and corporate debt in efficient capital markets would operate to offset the use of cheaper debt by increasing the return to equity (K_e). As the firm acquires more debt, it becomes more risky for investors who see personal debt as exchangeable for ownership of a levered company. Higher risk to investors would be

compensated by higher returns, which will just offset the lower cost of debt in efficient markets. This would imply that the value of a firm is independent of its capital structure, in a world with efficient markets, no corporation taxes and no bankruptcy costs (see fig. 6.3).

To illustrate this, the traditional model must be modified to incorporate arbitrage between personal and corporate debt.

Modigliani and Miller initially state as a first proposition:

$$\frac{E(\tilde{X}_j)}{S_j + D_j} \equiv \frac{E(\tilde{X}_j)}{V_j} = \rho_k \quad \text{for any firm } j \text{ in risk class } k. \quad (2.6)$$

where

$E(\tilde{X}_j)$ is the expected income from assets in firm j .

D_j is the market value of the debts of the company

S_j is the market value of its ordinary shares

V_j is the market value of the firm

ρ_k is the market's capitalisation rate for a pure equity in the same risk class.

This proposition contradicts the traditional approach outlined above which asserted that the cost of capital would be reduced by the choice of a specific optimal level of debt in relation to the equity of the firm.

The contradiction results from Modigliani and Miller's proposition that in efficient asset markets, personal and corporate debt are substitutable for each other as long as both are subject to equal treatment with respect to taxes and other institutional factors. They illustrate this substitutability as follows:

Two companies are considered; Company 1, which consists purely of shareholders equity, and Company 2 which is a levered company, having some debt in its capital structure. As a starting point, they consider a position where the value of the unlevered firm V_1 is less than that of the levered one V_2 . An investor holds a portfolio consisting of the fraction α of the shareholders equity of firm 2, i.e. αS_2 . This portfolio will bring a return (Y_2) equal to the fraction α of the expected income $E(\tilde{X}_2)$ available to shareholders, after payment of creditors claims, i.e.

interest charges (rD_2), i.e.

$$Y_2 = \alpha[E(\tilde{X}_2) - rD_2] = \alpha E(\tilde{X}_2) - \alpha rD_2 \quad (2.7)$$

If this investor wanted to change his portfolio from Company 2 to Company 1, he could do so by selling his Company 2 shares, worth αS_2 and purchasing $\alpha(S_2+D_2)$ of the shares of Company 1. This he could do by using the amount realized on the sale of shares in Company 2, αS_2 and borrowing, on his own account an amount equal to αD_2 possibly by offering his new holding in Company 1 as collateral. He would now own a proportion $\alpha(S_2+D_2)/S_1$ of Company 1, but be personally liable for interest payments αrD_2 . The net return Y_1 on his new portfolio, consisting of, equity and debt, will be

$$Y_1 = \frac{\alpha(S_2+D_2)}{S_1} E(\tilde{X}_1) - \alpha rD_2 \quad (2.8)$$

Since Modigliani and Miller assume homogeneity of investments, i.e. implying that different equities in the same risk class are substitutes for each other, they are able to combine $E(\tilde{X}_1)$ (expected income from firm 1) and $E(\tilde{X}_2)$ in one term $E(\tilde{X})$. Thus equation (2.8) above is changed to

$$Y_1 = \frac{\alpha(S_2+D_2)}{S_1} E(\tilde{X}) - \alpha rD_2 \quad (2.9)$$

Substituting V_2 for $(S_2 + D_2)$ and V_1 for S_1 in equation (2.9)

$$Y_1 = \frac{\alpha V_2}{V_1} E(\tilde{X}) - \alpha rD_2 \quad (2.10)$$

Comparing the returns from the two portfolios, Y_1 and Y_2 (equations (2.10) and (2.7) respectively), we find that as long as V_1 is less than V_2 , Y_1 will be greater than Y_2 .

Investors will therefore find advantage in divesting themselves of holdings in Company 2 and acquiring holdings in the unlevered Company 1, financing the additional value through personal debt. As a result of this process, the value of S_2 and hence V_2 will be depressed and the value of $S_1 = V_1$ will be raised.

The final position after all possible gains have been made from portfolio adjustments, will be $V_1 = V_2$. This is a result of an arbitrage process between levered companies and their alternative, unlevered companies and personal debt.

Thus the value of the portfolios is independent of the level of gearing of the companies in which equity is held:- 'We conclude, therefore, that levered companies cannot demand a premium over unlevered companies because investors have the opportunity of putting the equivalent leverage into their portfolio directly by borrowing on personal account.'⁸

A premium is earned, however, by owners of the stock of a levered company to compensate for the additional financial risk incurred as a result of the leverage.

Thus the return on equity (K_e) is:

$$K_e = \rho_k + (\rho_k - r) D_j/S_j \quad (2.11)$$

i.e. 'The expected yield of a share of stock is equal to the appropriate capitalisation rate, ρ_k for a pure equity stream in its class, plus a premium related to financial risk equal to the debt-to-equity ratio, D_j/S_j times the spread between ρ_k and r .'⁹

Thus a change in the debt/equity ratio has no effect at all on the value of the company for shareholders. It does, however, involve shareholders in a choice among categories of diversifiable financial risk, for which commensurate returns are earned. A risk averse company would finance primarily from equity, a risk seeking company chooses to lever more strongly earning higher returns to equity.

Modigliani and Miller add realism to their model by incorporating company taxes and some institutional factors, such as bankruptcy costs.

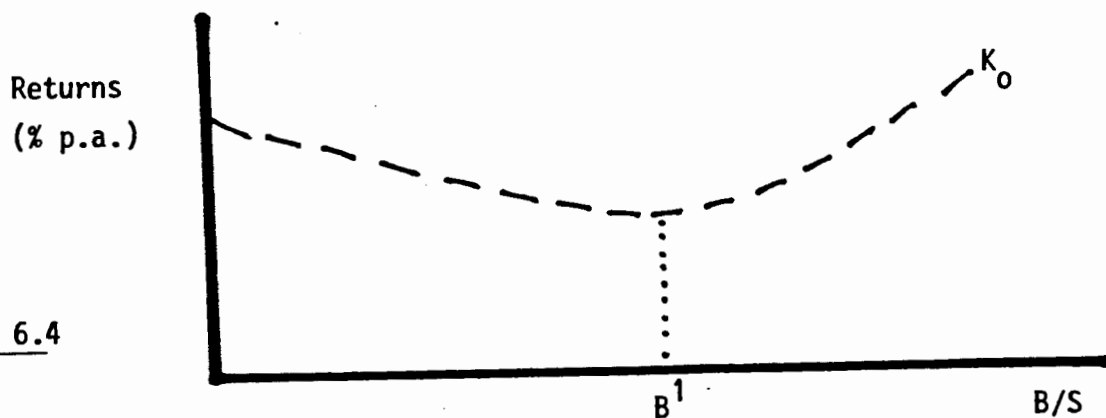


Fig. 6.4

The company tax acts as a tax on equity, or a subsidy on debt, making debt relatively more attractive than equity. This is offset at high leverage by the existence, and increasing probability of bankruptcy costs. Thus M-M return to the idea of an optimum debt level (B^1) which minimizes the cost of capital in a world which taxes equity but not debt, and which penalizes financial failure. (See fig. 6.4).

3. Application of Corporate Theory to Local Authorities

The Modigliani-Miller analysis can be very helpful when applied to the issue of Local Authority policies. A difficulty arises, however, with the definition of 'equity' since local governments are not 'owned' in the same way as shareholders' capital is. One way around this problem could be to define equity as the balance sheet residue after subtracting external debt. There are a number of difficulties with this procedure. Firstly, the balance sheet is not market related. This is of particular importance in inflationary times. Secondly, the value of the assets does not express the net capitalized value of the local governments' services, since there is no trading of shares in these assets.

A more suitable way of modelling a local authority is to look upon it as an institutional arrangement for the provision of local services to property owners. The value of these services is captured by the act of purchasing real estate in the area. As was shown in the previous chapter, the value of the expected stream of services and the value of expected taxes is capitalized and forms an integral part of the price paid for real estate. The act of buying a house or land implies purchase of an asset that yields housing services arising from the building and site, and simultaneously net local public goods services, arising from the activities of the local government. The capitalised value of these services less the capitalized value of expected taxes represents the value of the residents' shareholding in the local authority. A Local Authority which is successful in the view of the local residents would follow policies which maximize the net present value of its services and so result in higher property values. (See fig. 6.5). A Local Authority which imposes more of a burden than it benefits local people will find local real estate values falling as the market capitalizes the net cost represented by the shaded portion in fig. 6.6.

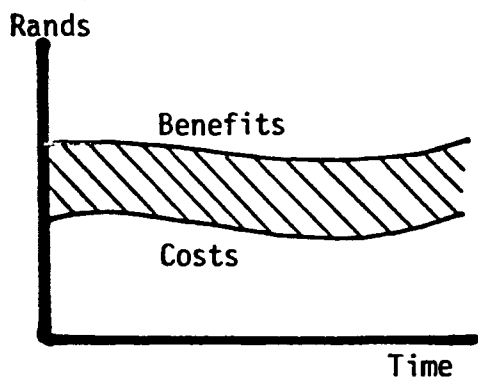


Fig. 6.5

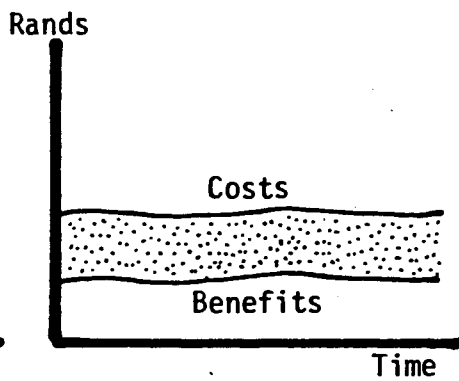


Fig. 6.6

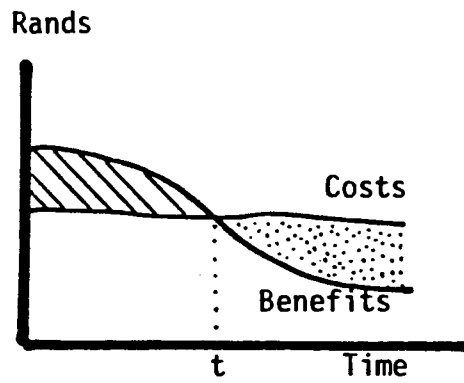


Fig. 6.7

Fig. 6.5 illustrates the value of a shareholding, the value of which is the PV of the shaded area, the excess of benefits over costs.

Fig. 6.6 shows a local authority with a negative value to its shareholders.

Fig. 6.7 shows a local authority which is expected to become of negative value in the future at time t .

To illustrate this we construct a property valuation model which endogenizes local fiscal variables:

$$V_0 = S_0 + H_0 + T_n \quad (2.12)$$

where

V_0 = The Value, or market price of the property at time 0.

S_0 = Net present value at time 0 of the shareholding in the local authority, i.e. the net benefit stream flowing from amenities.

H_0 = The present value at time 0 of the expected stream of housing benefits flowing from the actual building and site.

T_n = Terminal Value at time n .

Expressing this stock relationship in terms of flows, i.e. discounted by relevant rates:

$$V = \sum_{t=1}^n \left[\frac{E_t}{(1+\rho_e)^t} - \frac{V_t A_t}{(1+\rho_e)^t} + \frac{H_t}{(1+\rho_h)^t} \right] + \frac{T_n}{(1+\rho_c)} \quad (2.13)$$

where

$$S_0 = E - VA, \text{ i.e. Expected benefits less the Value times the tax rate. (A)}$$

Each flow of amenities, taxes and housing benefits is discounted to the present at rates of interest ρ_e , ρ_c and ρ_h which, because of arbitrage in efficient markets are each equal to the return on any other equity stream in the same risk class. Each discount rate incorporates a premium over and above the risk free rate:

$\rho_h = r + a$, i.e. the risk free rate, plus a premium [?] as related to the uncertainty of the asset, its durability, the effective location of the site and any other factors affecting the replacement cost of the site and building.

$\rho_c = r + b$, i.e. $r +$ premium b , the premium related to the uncertainty of future property prices.

$\rho_e = r + c$, i.e. $r + c$ the premium earned on an equity of the same risk class as the local authorities services and taxes.

The risk attached to a local authority shareholding is not, as in the case of the corporation, the risk of financial failure, but is the risk, illustrated in fig. 5.7, of the local authority imposing greater costs on its residents than benefits. This might happen, for example, if the authority contracts large amounts of debt. In this event, local property owners run the risk that present levels of tax payments may not be enough to meet future debt servicing and services costs. In such an event, debt servicing, being contractual, would have to take priority, leaving the quality of services to bear the brunt. The net benefit of being part of a local community would then become negative or at best reduced, a situation which would be reflected in the price of local real estate.

The present value of the property thus reflects the risk of this event occurring by discounting the expected services stream at a rate ρ_e relevant to this risk. Therefore, real estate in a highly geared local authority will be bought and sold at prices which reflect financial risk in the form of a high rate of discount on local services.

Purchasers of this property will be able to buy a higher level of real services at a cheaper price thus earning the required return ρ_e on their shareholding in the geared local authority, which compensates for the greater riskiness of the stream of real services in the future.

Applying the portfolio value equation developed earlier (equation (2.13)), we can see that an increase in ρ_e would result in a lowering of V , the value or price of the property.

When properties of equal V are considered, an increase in expected E_t (amenities) a decrease in A_t (expected tax rate), an increase in H_t (replacement cost) or of T_n (Terminal Value) can be predicted.

In this way the value of local authority debt is treated analogously to corporate debt in that increased debt-equity ratio is offset by increasing returns to equity on the levered authority.

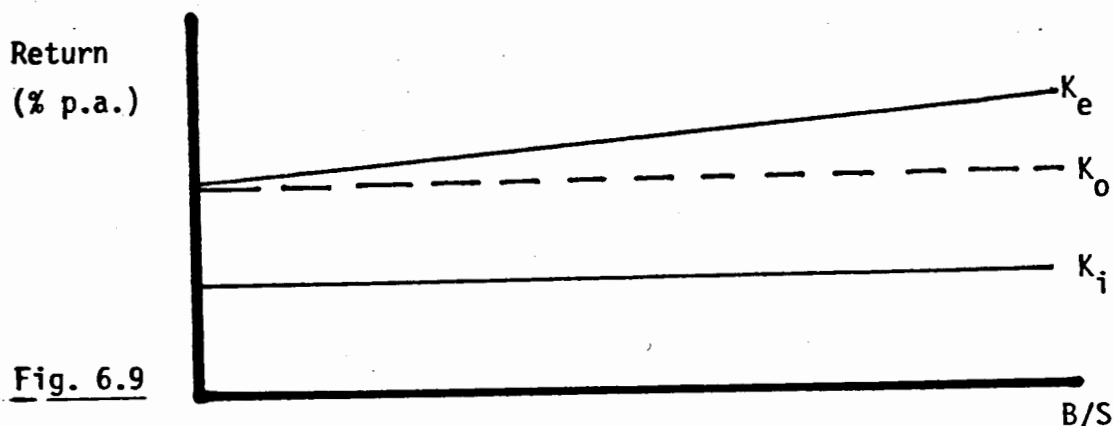


Fig. 6.9

In fig. 6.9, an adaptation of the M-M position which was applied to debt policy with respect to corporations, we see the effect of gearing (B/S) on the cost of capital to local authorities. K_i remains the rate of return paid to lenders. K_e is the real return on property ownership,

the return to a shareholding in the local authority. This rises as gearing is increased to offset the additional risk at a rate which exactly compensates for the lower cost of debt. In efficient asset markets, with arbitrage between personal and local authority debt, the weighted average cost of capital K_0 will be constant, unaffected by gearing.

4. Substitutability of Local Government and Personal Debt

Following the Modigliani and Miller approach for this trade-off to occur, personal debt must be fully substitutable for local government debt. While this is an hypothesis that required careful empirical testing, it does seem intuitively plausible. A local authority which history has endowed with a high level of amenities can provide a high standard of services at a low average cost to taxpayers and with a low level of local government debt.

Property values in such a community will be high, and the value of private mortgage bonds issued by residents will accordingly be higher, offsetting the low debt of the local government. Any property owner would realize the full price after repaying personal debt outstanding. The value of the owners equity in the property would be equal in equilibrium to the purchase price of an equivalent property in a levered community. Similarly, a resident of a geared community will, on selling his property, be able to acquire an equivalent property in an ungeared community only by increasing personal gearing. This he can do either by buying a more expensive house in a well served community and increasing his mortgage bond, or by buying a similarly priced house in a poorly served community, and borrowing money with which to replicate the local services sacrificed. In both cases, arbitrage between markets and between personal and public debt will ensure equivalence of geared and ungeared communities.

The value V_1 of the individual's holding in a levered community consists of the value of local services S_1 , plus the value of the building H_1 , less the value of the mortgage bond P_1 held by the individual, thus:

$$V_1 = S_1 + H_1 - P_1$$

This must, in equilibrium be equal to a new holding in an unlevered community V_2 :

$$V_2 = S_2 + H_2 - P_2 = V_1$$

if

$H_2 = H_1$ i.e. the quality of buildings are identical

$S_2 > S_1$ i.e. the value of the same level of services in the unlevered community is higher due to a lower risk premium ρ_e

Then for $V_1 = V_2$ to hold, $P_2 > P_1$ must be true.

i.e. For an equivalent holding, in an unlevered community, more personal debt must be substituted for local government debt.

There are, however, a number of factors which reduce the substitutability of local government and personal debt.

- i) There are bankruptcy costs associated with local authorities. While the province and central government stands ready to salvage financially troubled towns, this help may not be immediate. Waiting to be paid out, even if the payment is certain, involves costs. The form of the help may coincide with obligatory increases in the tax rates, or other levies to be paid by present taxpayers.

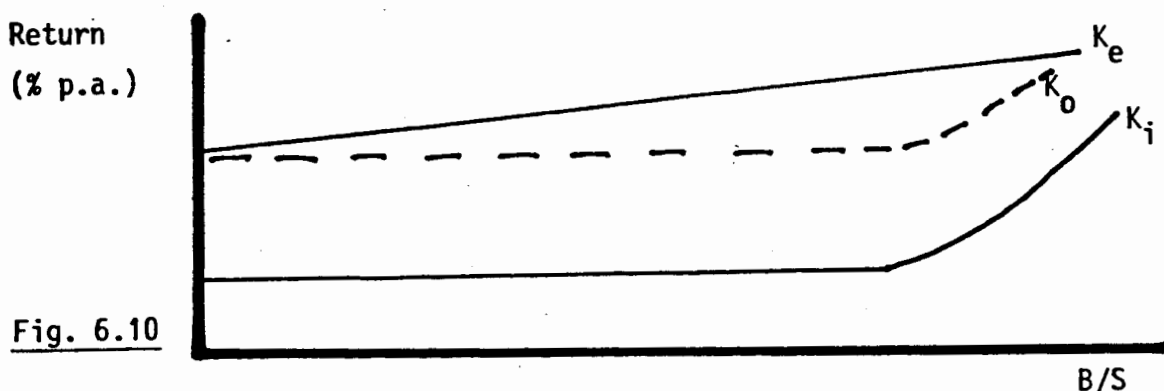


Fig. 6.10

The existence of bankruptcy costs will have the effect, shown in fig. 6.10, of increasing the cost of debt and therefore the overall cost of capital K_o at high levels.

- ii) The property market suffers from greater transactions and information costs than does the securities market. Adjusting one's portfolio between local authorities has a far greater cost than a similar adjustment among traded securities. Not only must brokerage charges of a fairly substantial nature be paid, but, for the seller, advertising costs may be high and for the buyer, search costs may be high. For both, the costs of moving family and possessions may be large. For these reasons, the capitalisation of local authority debt in the yield on property may be less than complete. This has the effect of raising the price of the levered authority to the house buyer.

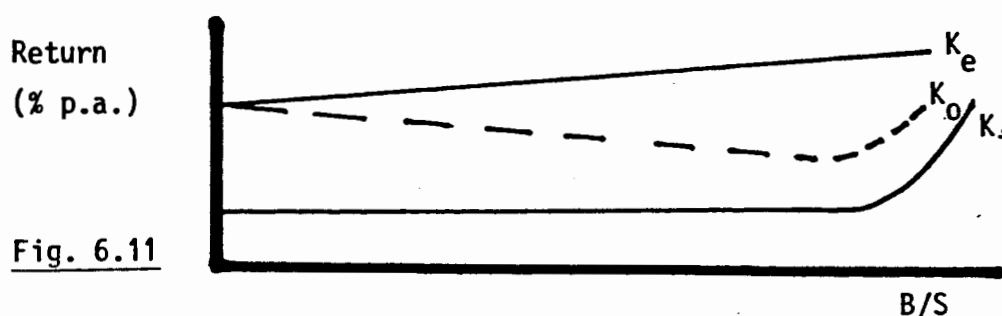


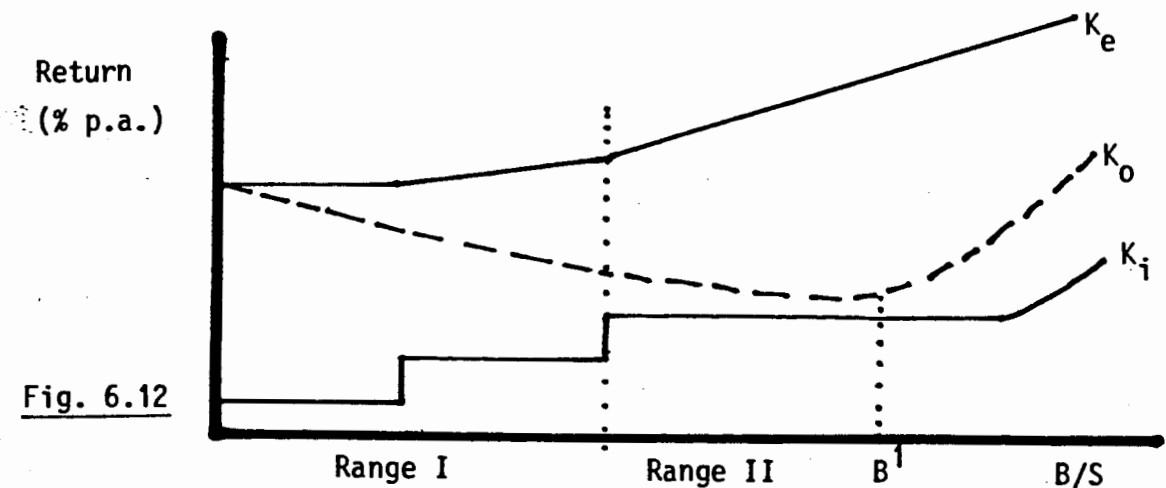
Fig. 6.11

Fig. 6.11 shows how these considerations would make the K_e line less steeply sloped, reflecting the incomplete adjustment to increasing risk. As a consequence, the overall cost of capital declines as the authority becomes more highly levered.

- iii) In South Africa, the debt of local governments is much cheaper than personal debt as a result of their semi-gilt prescribed investment status. This further encourages local government debt in preference to personal debt.
- iv) Adding further to this bias is the "limited liability" nature of ones local authority shareholding. The homeowners' personal liability in the local government extends only as far as the potential the local government has to harm or to enhance the value of property. While this potential may be considerable, it can never extend beyond the value of the property itself. In this sense then, the individual benefits from

'limited liability' with respect to the local government, and his wealth may be maximized by extending his 'shareholding' in local government debt, rather than incurring personal debt with which to buy the same services.

- v) Local government debt is often directly subsidized at low levels. Certain projects such as libraries, roads, sports fields, schools may be able to attract low interest loans, from provincial and central government. Intuition may suggest that this should have the effect of extending the level of debt financing. Fig. 6.12 shows why this is not so. Subsidies have the effect of making debt cheap at low levels, but do not affect the cost of debt at higher levels except insofar as they push the 'danger' level of B/S further towards debt.



Adjustment for this subsidy takes place in the asset market, increasing the returns to property by lowering its price relative to the stream of real services flowing from it.

In the diagram the K_e line is shown as kinked reflecting discontinuities in the debt subsidy. It can readily be seen that the optimum debt level B^1 will only be affected by the subsidy if it occurs in range I. If B^1 occurs in range II there will be no affect since only in range I is K_0 affected by subsidies.

It is clear that the local authority is similar in many ways to the corporation in the choice of its capital structure. Like the corporation, the local authorities may find an optimum level of debt which maximizes the benefits it can provide to the residents. This optimum exists because of an environment in which debt is subsidized. Corporate debt is subsidized in that interest is deductible from profits for tax purposes. For the local authorities debt is subsidized by the semi-gilt status of local government stock. In the remainder of this chapter, we will explore the criteria used for evaluating debt levels, and examine some implications of the theory for local authorities in South Africa.

5. The Amount of Debt

Following the logic of the Modigliani-Miller thesis, the amount of debt would be of no importance at all to the local authority, or to the lender, as long as there are efficient asset markets, and institutional influences are even handed with respect to debt and taxpayers' contributions. Where these factors are not even handed, the intuition suggests that there are factors which favour debt, then there will be some level of debt which maximizes the value of the residents' shareholding. The amount of debt in this case will affect residents both by affecting the value of their property and by changing the riskiness of asset portfolios and therefore the rate of return.

The amount of debt will reflect a number of factors:

- i) The attitude of the community at large toward fluctuations in property values. Any existing community is likely to consist of people who look upon property prices as properly reflecting all important aspects about the attractiveness of the site, building and the area generally, including indebtedness of the local government. People who are averse to additional risk in their wealth portfolios in the form of uncertain property values would tend to gravitate towards low-g geared local authorities. Governments which unexpectedly incur large amounts of additional debt will find some previous residents leaving, and being replaced by those who are less averse to property related risk. This will not necessarily reduce property values unless the new gearing is less preferred in the society generally.

- ii) The extent to which the local bureaucracy is responsive to local preferences will affect financial policy. Local officials are, like economic actors generally, averse to risk and will only be willing to accept additional risk if accompanied by greater expected rewards. Additional local debt adds to the riskiness of their positions but it will bring no direct reward other than through the political process. Officials who are politically unresponsive will therefore tend to encourage the authorities they serve to minimize the amount of debt.
- iii) The amount of debt will also depend on the intrinsic ability of the community to make valuable public investments. A community which is much sought after residentially but is badly served with amenities will have great scope for making public investments which are highly productive. Debt incurred by such a community would be efficiently converted into amenities, thus into property values and hence augmenting the tax-base. By contrast, a declining village, being unexpectedly abandoned by its inhabitants who are attracted by superior income opportunities in the large cities will have a surfeit of local amenities. Roads, schools, parks and other infrastructure may have been constructed and paid for by past taxpayers in the expectation of population growth, and may now stand largely unused by present residents. The creation of further amenities in such an environment would clearly be unproductive and unlikely to generate tax or fee revenues to pay for itself. Such a community is likely to be very slightly levered, if at all.
- iv) Steiss sums up as follows: 'The capacity of the community to incur debt must be gauged by the amount and quality of its resources, and by its practical ability to draw on these resources.'¹⁰ As we have discussed, the 'amount and quality of its resources' must be interpreted broadly as the capacity of the community to establish a revenue base at competitive cost. The 'legal and practical ability to draw on these resources' refers to the existence of legal and constitutional limits to debt. Moak and Hillhouse mention five types of limit:¹¹

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and debt servicing, their stability and their relationship to each other. These expected flows are converted into values by the tax rate and the interest rate. Where these rates are stable, as has been the case in the past, the stocks and flows are, for all practical purposes, interchangeable. Where the rates vary, this practical rule of thumb becomes faulty and it becomes necessary to concentrate directly on the flows of Revenue and of Debt Servicing.

For example, a decrease in the rate of interest relative to the tax rate will reduce the debt servicing obligation without affecting the book value of the debt in relation to property values. In such an environment, higher gearing will increase the premium on local authorities services risk, c , to offset the reduced interest rate r , without affecting the value of property. A control on debt, in such an environment, expressed in terms of the stock values of property and debt would be overly restrictive, preventing local government from benefitting from a favourable borrowing environment.

6. Rating of Local Authority Debt

American investment analysts look at four sets of information when assessing the standing of a debt issue:¹⁴

a) Debt Factors:

The nature of the issue itself is of primary significance, whether it is secured by specific assets or whether it is a general obligation bond. Also of relevance here is the existence of specific requirements and limits to the local authorities' authority to issue bonds. An authority which has borrowed up to its constitutional constraints and compared with trends and averages for similar authorities. Debt per capita, Debt per capita in relation to income per capita, Debt per R of Valuation are commonly used ratios, all of which are, as pointed out above, conceptually problematic.

The key questions in this regard are: 'How does the amount that must be borrowed compare with the amount of debt already outstanding?', and 'How does the amount outstanding compare with the revenue flow, against which the debt is a claim?'

Where there is friction preventing full capitalisation, particularly resulting from uneven treatment of personal and local government liability, increasing leverage will be accompanied by a fall in the overall cost of capital and a rise in the present value of local property. These benefits from debt will, however, be exhausted at high levels as the risk of incurring bankruptcy costs become greater. In consequence, there is a level of debt which minimizes the overall cost of capital to the local authority and maximizes the value of the local authority to its residents.

The occurrence of local areas with debt levels which are lower than the optimum may be evidence of differences in the impact of debt risk on the local residents and on local government officials. As we discussed above, city treasurers and town clerks are, like anyone else, risk averse to a greater or lesser extent. This does not mean that no risk will be taken, but that risks will be taken only in expectation of commensurate reward. It is thus understandable that officials will be inclined to add to the riskiness of their positions only if they are under pressure from the electorate either directly or indirectly.

Where there is no such pressure, as a result of political or constitutional arrangements, risk will be avoided, and leverage kept low to the detriment of the area. The political sensitivity of the constitution can thus have a profound effect on the financing of local amenities and thus on their level.

A local government which is politically sensitive to its community can be expected to approach the optimum level of debt in relation to its tax potential. A government which is unresponsive will tend to borrow very little, and to provide very little capital development.

8. Evidence

This prediction of the Local Authority Financial model is tentatively confirmed by examination of the data presented by the Browne Committee:

Table 6.1: Some Financial Ratios of Local Authorities
in South Africa: 1977*

	I	II	III	IV	V	VI	VII	I-VII	VIII	IX	X	XI	VIII - XI	I-XI
1)	25	26	23	23	20	17	21	23	4	3	14	na	4	20
2)	9,9	7,2	6,1	14,5	11,7	11,5	9,8	10,2			4,2			10,9
3)	395	292	202	400	270	202	116	328	59	20	21	-		-

- 1) Debt Servicing as % of Expenditure.
- 2) External Debt as % of Rateable Value.
- 3) Debt per Capita.

Table 6.1 compares the eleven categories of local authority analysed by the Browne Committee by three different measures. Line 3 compares debt per capita, and illustrates quite dramatically the difference between Administration Boards (classes VIII and IX) and municipal-type authorities, (classes I-VII). The 6 metropolitan cities (class I) and the large towns (class IV) carry about R400 per capita debt, a level which U.S. Municipal Bond rating services consider 'normal'. The non-municipal, non-representative bodies carry only R20-R60 per capita. This extreme difference can be explained partially in terms of the predicted reluctance of unelected bureaucrats to incur even reasonable debt on behalf of 'captive' ratepayers.

This measure is unfortunately not an entirely useful one since it takes no account of the relative wealth of the citizens. Richer people whose local authority runs on a larger budget, will clearly carry more debt than a poor community. The measure of debt per Rand of Valuation (line 2) performs the function of screening out mere relative wealth effects. The disparity between municipal and non-municipal communities remains, however, dramatic. Municipal, representative local authorities have debt of about 10c/R of Valuation, Administration Boards less than half, or 4,2c/R (excluding Housing debts).

* Source: Browne Committee Report RP8 of 1980, own calculations.

1. Table 5.6.
2. Schedule 7.5 and Table 8.5.
3. Table 8.5 and Schedule 8.1.

The most acceptable measure used is the Debt Servicing as % of Income/Expenditure figure (line 1). This is an important improvement on the previous two since it compares streams of cash flow, not stocks of wealth or Debt. It can, however, be misleading when Revenue consists to a large degree of grants in aid, or when large portions relate to capital-intensive operations. These factors cannot, however, account for the contrast between 23% for municipal local authorities, and 4% for non-municipal local authorities (line 1). This can only be accounted for by a systematic non-borrowing policy, which particularly in the recent, inflationary conditions, and considering the central government subsidy on loans, represents a severe limitation to these areas' potential to develop.

Table 6.3 shows the same pattern occurring in the Cape Town context. External debt per rateable valuation (line 7), and debt per capita (line 5) are significantly lower in the Divisional Council Local Areas of Grassy Park and Ocean View than they are in the independent Municipalities of Cape Town, Parow and Stellenbosch. (Goodwood's figures are anomalous in this respect, partially due to their very conservative policies and lack of growth of the municipality.

Table 6.2 comparing Municipal Authorities and Administration boards, again points out the extreme disparities between Debt per Capita in the two groups (line 5). While Municipal Authorities have external debt of R65 per capita, Administration boards have only R5 per capita.

The evidence available seems to indicate, therefore, that representativeness of local governments is closely related to debt policy in a way consistent with risk averse bureaucratic behaviour.

TABLE 6.2

Some Key Financial Ratios of Local Authorities
in the Five Metropolitan Areas of South Africa

1977/1978

	Municipal Auth.		Admin. Boards
	Total Pop. excl.Blacks		
1. Total Expenditure on General Services per capita	R89.22	R135.32	R33.47
2. Property Tax income per capita	R45.80	R 69.56	R 6.87
3. Capital Expenditure per capita	R79.40	R120.45	R11.99
4. External Debt per capita	R64.15	R 97.32	R 4.67
5. Internal Debt per capita	R15.24	R 23.12	R 7.32
6. External Debt/Rateable Valuation	1.65%	1.65%	-
7. Rateable Valuation per capita	R3885.00	R5894.99	-

(Source: Calculated from Schedule 1.5 of the Browne Committee Report, Vol.III (RP80/1980))

TABLE 6.3

Some Key Financial Ratios of Selected Local Authorities

in the Cape

1980

	Cape Town	Parow	Good-wood	Stellenbosch	Grassy Park	Ocean View
1.Expenditure on General Services per capita	109	122	131	115	56	26
2.Property Tax per capita	59	45	66	43	47	11.50
3.Capital Expenditure per capita	143	1	455	108	38	-
4.External Debt per capita	710		228	449	234	10.10
5.Non Recoverable Debt/Capita	350		157	328	234	10.10
6.Rateable Valuation per capita	2509	3393	6816	3025	1645	151
7.External Debt/Rateable Valuation	13.9%		2.3%	10.6%	8.6%	7.0%
8.Expenditure on Roads per capita	23.08	40.20	13.57	10.14	7.18	2.14
9.Expenditure per Rand of valuation	.04	.036	.019	.038	.034	.172

(Source: Calculated from Municipal & Divisional Council Financial Statements)

9. Conclusion

This chapter has built upon the foundations of previous chapters, which situated local government within the economic framework, characterizing them as institutions, developed in a social process of institutional choice, for the most efficient provision of certain goods and services. As such, local governments are acted upon by a set of economic and political forces which influence them in what are, under suitable conditions, optimizing directions.

In order to spell out the nature of the forces acting upon the authority in respect of its financial policies, the well known Modigliani-Miller approach to corporate finance has been used, with suitable adaptation. The conclusions of this model include a relationship between debt, risk and returns, which when applied to local governments can provide an indicator of local government risk preference. The implication is drawn that local governments which are very loosely linked both economically and politically to the people they serve will be more risk averse than fiscally or electorally sensitive governments, and will display greater reluctance to incur debt. In so doing they sacrifice opportunities to improve local areas by favourable capital development, financed by a judicious combination of debt and current revenue.

This conclusion is tentatively confirmed by the data currently available.

Further chapters will use this framework to examine and criticise current financial arrangements in S.A. and those embodied in various policy proposals.

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CHAPTER 7 THE SHORTAGE OF FUNDS FOR LOCAL GOVERNMENT IN SOUTH AFRICA

1. Introduction

The rapid urbanisation of the South African population has resulted in a growing demand for urban local amenities. The ability of local authorities to meet this demand has been severely limited by numerous institutional and statutory restrictions, not only the specific local government ordinances,⁽¹⁾ but also the wide range of statutes which affect the mobility, place of residence, and security of real estate tenure of a large proportion of the South African population.

The effect of these restrictions has been to prevent local governments from emerging where they are demanded, and to hinder existing local governments in the performance of their functions. This hindrance makes itself felt in the form of a shortage of funds with which to provide amenities.

This chapter will examine the fiscal role of local governments in South Africa and will attempt to identify which of the sources of finance are most strongly affected.

2. The Fiscal Role of Local Government in South Africa

Local government in South Africa plays a relatively small role in the economy as a whole when compared with local government in other countries. A comparison of eight countries undertaken by the Browne Committee⁽²⁾ shows the share of local government expenditure to be 4,2% of GDP (see Table 7.1 line C(2)).

This is small indeed when compared to local government in Sweden (24,7% of GDP) and even to Canada and Switzerland (9,3% and 10,0% respectively). Of the eight, only Greek local authorities play a smaller role in financial terms than do those in South Africa. The role of local governments in this country has, furthermore, been losing importance over the past decade. Line B (c) of Table 7.2 shows the proportion of local authorities contribution to GDP (at factor cost) over the years 1970 to 1978. This has been falling from 3,6% and 3,7% in 1970 and 1971

to 3,1% in 1978, a relative decline over a period of 8 years at a rate of 2,2% per annum (adjusted by OLS linear regression).

This fall contrasts sharply with the central government's share of GDP, which rose dramatically from 16% in 1970 to 27% in 1978 (see Table 7.3). Local governments share of general government declined as a result from 18,4% in 1970 to 16,4% in 1978 (Table 7.2 line A3c).

It is clear then, that local government in South Africa is accorded a relatively unimportant place both in the economy as a whole and in government, and that this role, small though it is, is declining in relative terms.

This impression is confirmed when we examine the contribution local government makes to Gross Domestic Fixed Investment. In the period under consideration, local governments share of GDI declined from 8,9%, more than double its share of GDP, to 7,2% at an (adjusted) rate of 2,6% pa. (Table 7.4 line B(c)).

Thus it is clear that South African local governments are highly investment orientated institutions whose contribution to Domestic Investment has been two to three times as big as their proportionate contribution to Domestic Product. Their function is however declining relative to the economy and to general government, with the investment function being particularly strongly affected.

In the light of these statistics the suggestion that local authorities are short of funds does seem to have some substance, in the sense that they are being forced to curtail their activities in relation to central government and to the economy as a whole. The question remains:-
"which specific sources of revenue are suffering most acutely?"

TABLE 7.1

LOCAL GOVERNMENT FINANCE IN A NUMBER OF COUNTRIES 1976

	South Africa	Canada mill.Can.\$	USA mill.\$	UK mill.£	Switzer- land mill.Fr	Sweden mill.Kr.	Norway mill.Kr	Greece mill.Drach.
A. Expenditure + income								
1. Current + capital exp. ²⁾	1 311	17 776	93 956	19 304	14 019	79 870	40 445	7 810
2. All tax revenues	402	6 449	33 795	4 708	7 607	39 082	17 978	1 840
3. Other current income ³⁾	429	1 984	28 107	3 525	3 696	11 851	13 871	3 520
4. Subsidies ⁴⁾	62	8 270	31 490	9 575	2 560	22 012	6 562	1 870
5. Total current income	893	16 703	93 392	17 808	13 863	72 945	38 411	7 230
6. Total deficit ⁵⁾	418	1 073	564	1 496	156	6 925	2 034	580
B: % of current + capital expenditure								
1. Current + capital exp.	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
2. All tax revenues	30,7	36,3	36,0	24,4	54,3	48,9	44,5	23,6
3. Other current income	32,7	11,2	29,9	18,3	26,3	14,8	34,3	45,1
4. Subsidies	4,7	46,5	33,5	49,6	18,3	27,6	16,2	23,9
5. Total current income	68,1	94,0	99,4	92,3	98,9	91,3	95,0	92,6
6. Total deficit	31,9	6,0	0,6	7,7	1,1	8,7	5,0	7,4
C. Aggregates of local authorities in relation to the GDP								
1. Gross domestic product, amounts	30 970	191 882	1 526 457	121 978	140 710	323 300	170 811	813 700
2. Current + capital expenditure as a % of GDP	4,2	9,3	6,2	15,8	10,0	24,7	23,7	1,0
3. Total deficit as % of GDP	1,3	0,6	0,04	1,2	0,1	2,1	1,2	0,7

110
Table 7.1

- 1) Sources: Government Finance Statistical Yearbook, Volume II, 1978, International Monetary Fund; Statistical Abstract of the United States 1977, U.S. Government Printing Office 1977; Yearbook of National Accounts Statistics 1977, United Nations Organisation, New York, 1978; various sources for South Africa. The data cover most types of local authorities in every country.
- 2) Covers only current expenditure on General Services, but also capital expenditure on General and Trading Services. Redemption of loans is excluded from current expenditure. Housing has been treated as a trading service.
- 3) Includes gross profit of trading services, including housing.
- 4) Received almost exclusively from higher government authorities.
- 5) Item 1 minus Item 5, i.e. represents more than a current deficit.
- 6) The statistics for South Africa refer to 1976/77 and cover Classes I to XI in Schedule 1.1.
- 7) The statistics for the USA refer to 1975 and include all municipal and county authorities but not other types of authorities. The data are not fully comparable with those of other countries as details were not available in the Statistical Abstract of the United States.

(Source: Browne Committee RP 80/1980 Volume III p.94)

TABLE 7.2

CONTRIBUTION OF LOCAL AUTHORITIES TO GROSS DOMESTIC PRODUCT¹ (AT FACTOR COST)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u> ³	<u>1977</u> ³	<u>1978</u> ³
A. <u>Gross domestic product of public authorities:</u>									
1. General govt. services ²									
a. Local authorities R'000 000	204	240	269	315	378	453	527	584	632
b. All general govt. services R'000 000	1 132	1 367	1 508	1 785	2 115	2 456	2 815	3 183	3 508
c. Local authorities as % of b.	18,0	17,6	17,8	17,6	17,8	18,4	18,7	18,3	18,0
2. Government enterprises									
a. Local authorities R'000 000	223	252	284	325	356	388	429	447	510
b. All govt. enterprises R'000 000	1 184	1 345	1 422	1 780	1 976	2 325	2 647	3 177	3 457
c. Local authorities as % of b.	18,8	18,7	20,0	18,3	18,0	16,7	16,2	14,1	14,8
3. General govt. services and enterprises									
a. Local authorities R'000 000	427	492	553	640	734	841	956	1 031	1 142
b. Total genl. govt. services+enterprises	2 316	2 712	2 930	3 565	4 091	4 781	5 462	6 360	6 948
c. Local authorities as % of b.	18,4	18,1	18,9	18,0	17,9	17,6	17,5	16,2	16,4
B. <u>Gross domestic product as a whole</u>									
a. Local authorities	427	492	553	640	734	841	956	1 031	1 142
b. Total GDP	11 949	13 251	14 987	18 633	23 055	25 731	29 076	32 466	36 987
c. Local authorities as % of b.	3,6	3,7	3,7	3,4	3,2	3,3	3,3	3,2	3,1

Table 7.2

- 1) All statistics were derived from the national accounts, and in 1976 and 1977 divisional councils were responsible for approximately 4 per cent of the gross domestic product of local authorities.
- 2) Housing schemes of local authorities have been classified as a general government service.
- 3) Preliminary.

(Source: Browne Committee RP 80/1980 Volume III p.92).

TABLE 7.3: CENTRAL GOVERNMENTS SHARE OF GDP (FACTOR COST)

<u>Year</u>	<u>Central Govt. Expenditure (RM)</u>	<u>GDP at Factor Cost (RM)</u>	<u>Govt GDP (%)</u>
1970	1 920,9	12 023	16,0
1971	2 542,3	13 255	19,2
1972	2 787,1	15 036	18,5
1973	3 414,9	18 675	18,3
1974	5 500,9	23 083	23,8
1975	6 803,1	25 864	26,3
1976	8 244,6	29 014	28,4
1977	8 960,5	32 167	27,8
1978	9 955,3	36 953	26,9
1979	11 443,5	44 054	26,0
1980	13 590,0	58 089	23,4

(Source: Statistical/Economic Review. Supplement to the Budget 1982/83 (W.P.B.)).

TABLE 7.4

CONTRIBUTION OF LOCAL AUTHORITIES TO GROSS DOMESTIC FIXED INVESTMENT¹

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u> ³	<u>1977</u> ³	<u>1978</u> ³
<u>A. Gross fixed invest- ment of public authorities</u>									
1. Genl. govt. services ²									
a. Local authorities R'000 000	191	229	252	276	346	473	520	495	511
b. All genl. govt. services R'000 000	615	742	854	836	1 071	1 434	1 575	1 573	1 607
c. Local authorities as % of b.	31,0	30,9	29,5	33,0	32,3	33,0	33,0	31,5	31,8
2. Govt. enterprises									
a. Local authorities	92	98	115	133	142	173	205	198	203
b. All govt. enterprises	423	595	784	804	878	1 211	1 634	1 363	1 233
c. Local authorities as % of b.	21,7	16,5	14,7	16,5	16,2	14,3	12,5	14,5	16,5
3. Genl. govt. services and enterprises.									
a. Local authorities	283	327	367	409	488	646	725	693	714
b. Total genl. govt. services+enterprise	1 038	1 337	1 638	1 640	1 949	2 645	3 209	2 936	2 840
c. Local authorities as % of b.	27,3	24,5	22,4	24,9	25,0	24,4	22,6	23,6	25,1
<u>B. Gross domestic fixed investment</u>									
a. Local authorities	283	327	367	409	488	626	725	693	714
b. Total gross domestic fixed investment	3 194	3 741	4 332	5 027	6 158	8 110	9 221	9 333	9 894
c. Local authorities as % of b.	8,9	8,7	8,5	8,1	7,9	7,7	7,9	7,4	7,2

Table 7.4

- 1) All statistics were derived from the national accounts, and in 1976 and 1977 divisional councils were responsible for 7 to 8 per cent of the gross domestic fixed investment of local authorities.
- 2) Housing schemes of local authorities have been classified as a general government service.
- 3) Preliminary.

(Source: Browne Committee RP 80/1980 Volume III p.93).

3. Trends in Local Government Finances

Table 7.5 provides an indication of recent trends in the financing of local government. Of the three revenue sources presented, rates and 'other' income, (consisting principally of subsidies) have both suffered declines in their relative contributions to current revenue. In order to compensate for this, local governments have expanded their trading functions, increasing revenue from this source at a compound growth rate of 7,9% in real terms since 1960. As a result, the proportion of revenue from this source has increased from 51% to 56%, at a rate of 0,5% p.a. over the eighteen years. (Table 7.5 line 3)

Despite these changes in its composition, the amount of current revenue per rand of property value (line 8) has risen from 5,8c/R to 7,5c/R, a compound growth rate of 1,4% p.a. This is undoubtedly a reflection of the low growth in real estate values over these years.(11,6% p.a.) in relation to the growth of nominal GDP (15,9% p.a.) and not an indication of accelerating expenditure and revenue.

TABLE 7.5 SOME RATIOS : ALL LOCAL AUTHORITIES

		<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1978</u>	<u>Rate of change % p.a.</u>
1. Components of Current Revenue:						
2.	Rates %	19,5	17,6	18,5	16,3	-1,0
3.	Trading %	51,0	53,6	53,9	55,9	+0,5
4.	Other %	29,5	28,8	27,6	27,7	-0,35
5. Total Debt/Rateable Valuation	%	19,5	-	-	11,8	-2,7
6. Total Debt/Total Revenue	%	332,7	210,6	178,0	156,6	-4,09
7. Salaries/Total Expenditure	%	43,8	40,7	41,1	33,7	-1,4
8. Total Current Revenue/Property Valuation	%	5,8	na	na	7,5	+1,4
9. Rates Revenue/Property Valuation	%	1,1	na	na	1,2	+0,5

Source: Calculated from Statistics 1980, Table 19.21, Department of Statistics.

It is clear therefore that the property tax has proved very inflexible in the South African context, and has led to a decline in current revenues relative to the demands made on them. The use of the trading activities to fill the gap has apparently been pursued with some success, but this source of revenue clearly has its own limitations.

The most dramatic change, however, has been the decline since 1960 of the use of Debt to finance local capital development. Line 6 of Table 7.5 shows that the relationship between total local government debt outstanding and total revenue has declined from 332,7% to 156,6%, a relative decline of 4,1% per annum. Table 7.6 confirms this impression. In 1975, 39,8% of additional financing requirements were met from net additional borrowing.

TABLE 7.6 LOCAL AUTHORITIES LIABILITIES : FINANCING OF GROSS ADDITIONS

	Natal	%	Cape	%	OFS	%	Tvl	%	Average
1. <u>1974 Gross Additions</u>	na		na		8 250		178 399		
2. <u>Net borrowing</u>	na		na		-3 432	-41	69 585	39	
3. <u>1975 Gross Additions</u>	189 782		91 328		17 646		239 453		
4. <u>Net borrowing</u>	119 575	63	34 182	37	2 307	13	110 296	46	39,8
5. <u>1976 Gross Additions</u>	93 453		205 406		26 755		276 538		
6. <u>Net borrowing</u>	28 975	31	124 379	60	4 784	18	135 438	49	39,5
7. <u>1977 Gross Additions</u>	111 348		210 158		27 391		264 000		
8. <u>Net borrowing</u>	48 487	43	193 199	49	5 711	21	114 047	43	39,0
9. <u>1978 Gross Additions</u>	117 586		220 317		19 756		228 785		
10. <u>Net borrowing</u>	23 556	20	104 430	47	9 286	47	21 475	9	25,8
11. <u>1979 Gross Additions</u>	na		na		24 038		234 484		
12. <u>Net borrowing</u>	na		na		-8 995	-37	18 326	8	

Source: Department of Statistics Report 13.03.15:- Local Government Statistics.

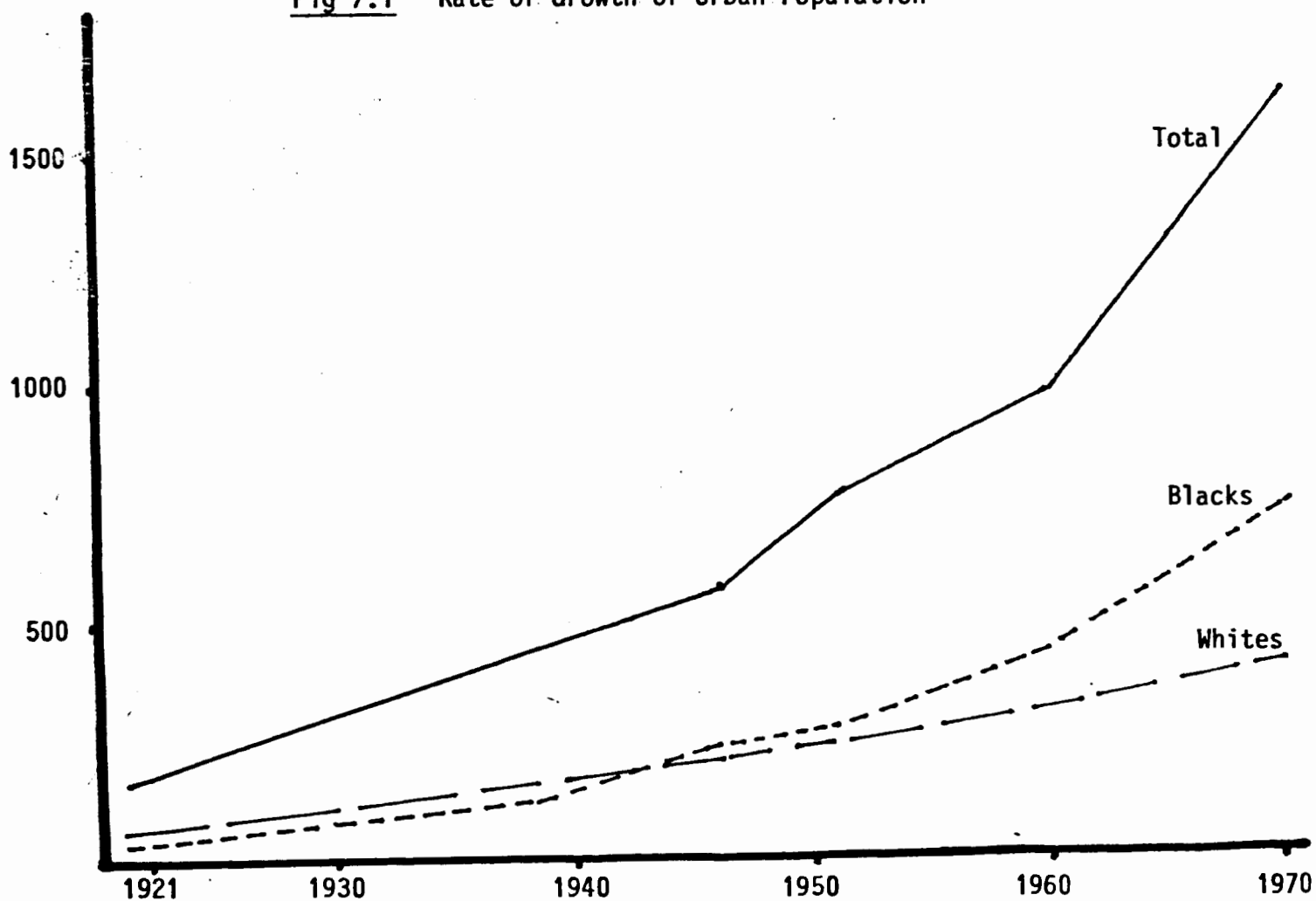
By 1978, this proportion had fallen to 26% despite a fall in that year of the cost of local government borrowing due to a fall in semi-gilt interest rates and a simultaneous increase in the rate of inflation.

The shortage of local government funds appears therefore to be closely related to the low level of borrowing by local governments.

4. Conclusion

Despite the rapid growth of urban population in South Africa, local governments have experienced a decline relative to central government. Sources of local funds have proved to be inelastic with respect to the demand for local services, and most significantly, the propensity for local governments to borrow has suffered a severe decline. The reasons for this are to be found in the political structure of the newly forming urban areas. Figure 7.1 shows that the largest proportion of

Fig 7.1 Rate of Growth of Urban Population



Source: Department of Statistics: South African Statistics, 1980, Table 1.7.

CHAPTER 8 INTERNAL FINANCING OF LOCAL INVESTMENT.
A CRITICAL APPRAISAL

1. The Browne Committee:-

Following its deliberations on the question of the provision of capital funds to local governments, the Browne Committee recommended that:

'....It should be regarded as a matter of national importance that uniform legislation promoting the compulsory establishment and building up of capital development funds be passed as soon as possible in every Province'.¹

In making this recommendation, the committee drew upon the experience of such cities as Durban, which makes extensive use of internal financing techniques.

TABLE 8.1 THE FINANCING OF THE FIXED CAPITAL ASSETS OF DURBAN
ACCORDING TO THE BALANCE SHEET, 1960-1978

	<u>1960</u>	<u>1963</u>	<u>1966</u>	<u>1969</u>	<u>1972</u>	<u>1975</u>	<u>1978</u>
A. Amounts, R millions							
1. Net external loans	63,5	81,8	106,6	141,0	135,8	111,5	62,7
2. Capital development fund	1,3	2,8	9,2	24,7	67,2	122,5	204,2
3. Loan redemptions etc.	32,5	37,8	50,7	65,1	96,3	146,9	216,0
4. Total	97,3	122,4	166,5	230,8	299,3	380,9	482,9
B. Percentage contributions							
1. Net external loans	65,3	66,8	64,0	61,1	45,4	29,3	13,0
2. Capital development fund	1,3	2,3	5,5	10,7	22,4	32,1	42,3
3. Loan redemptions etc.	33,4	30,9	30,5	28,2	32,2	38,6	44,7
4. Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: Browne Committee Report RP 80/1980 Vol. I p.134.

Table 8.1 indicates the 'success story' of the Durban municipality which has increased its proportion of internal financing from 39% in 1969 to 87% in 1978. This is enthusiastically endorsed by the Browne Committee:

'...the case of Durban provides a particularly fine example of the way in which a capital development fund can be successfully operated...'²

The committee is, however, cogniscent of some of the shortcomings of this policy:

'...it is sometimes argued that a high degree of self-financing by local authorities places a relatively heavy burden on residents because they have to pay higher rates or tariffs...'³

It therefore tempers its enthusiasm with the warning:

'....it would not necessarily be in the best interests of other local authorities to copy the Durban model punctiliously.'⁴

It is the purpose of this chapter to spell out the disadvantages of following internal financing policies, particularly those of the type practised by Durban.

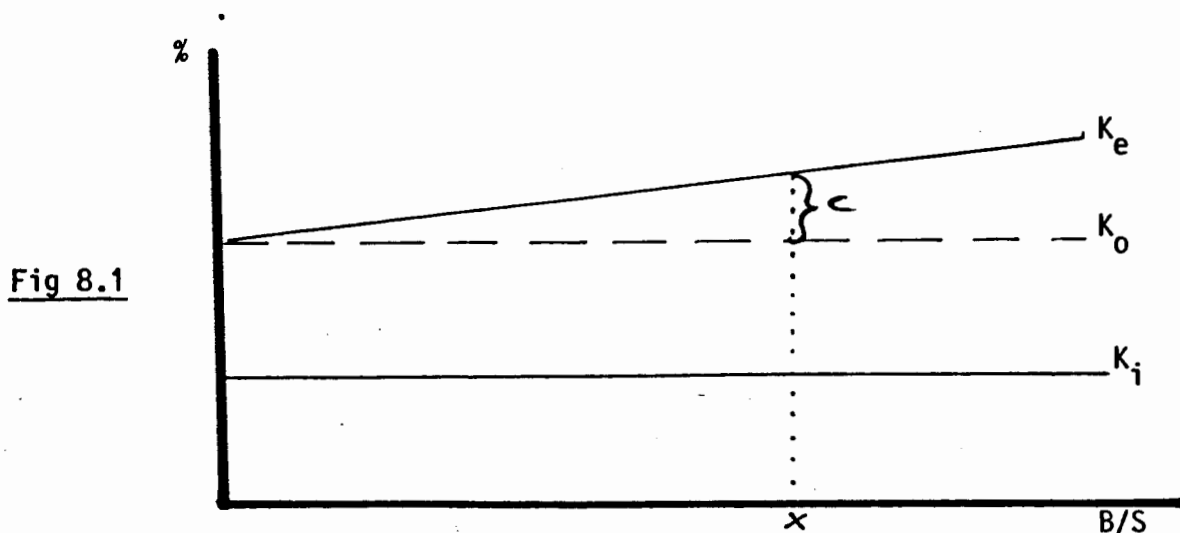
2. The Shortcomings of Internal Finance

The fundamental objective of financial policy whether that of a local government or a private company, is to meet the cash requirements of the capital program in the cheapest way. Chapter 5 outlined some of the financial alternatives available to local governments and presented a model in which an optimal mix of internal and external sources was determined. This model will now be applied to the Browne Committee's 'Internal Finance' recommendations to highlight some of its shortcomings.

a) Portfolio Theory

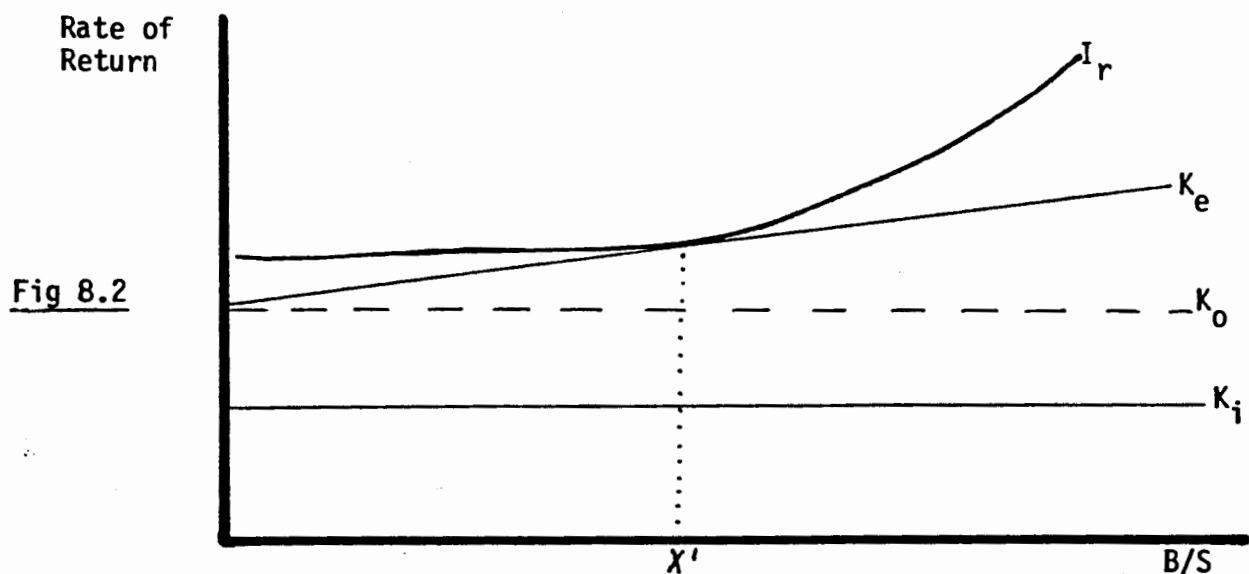
The approach to local debt outlined in chapter 6 showed that, in the absence of institutional constraints or subsidies on debt, there is no specific proportion of debt that will minimize the cost of capital to

the local government. It follows therefore that in this type of world, local governments will be indifferent between methods of financing (figure 8.1).



An internal funding option, such as that shown in Figure 8.1 at point X will be seen as neither better nor worse than option Y which includes some borrowing. While option Y will involve more risk than X, the additional risk will, in efficient markets, be fully compensated for by the risk premium c . From this perspective then there is nothing to choose between financing local government investment from current revenue, necessitating high levels of current taxes, or debt financing necessitating a more risky future stream of services but offering higher real returns on property.

In choosing a specific debt level, whether low for an internal finance option, or high for an external option, the local government's actions affect the riskiness, and earnings potential of the taxpayers property holding, and hence of his wealth portfolio generally. The relative merit of a specific choice lies in the extent to which the local government risk-choice accords with the property owners' preferences in respect of the riskiness of his wealth portfolio. A local government which 'plays safe' may be sacrificing the opportunity to serve residents better by incurring more debt (i.e. more risk) for the sake of an increase in the rate of return which will accrue in the form of a better level of service.



The choice of an optimum level of risk under these circumstances is depicted in Figure 8.2. At debt level X^1 the subjective marginal rate of compensation for risk, i.e. the slope of risk/return indifference curve I_r , is equal to the slope of K_e which approximates the efficient capital markets line. At a higher B/S level the communities increasing aversion towards risk is not adequately compensated by the rate of return offered by the market for an asset of the same risk class. At a lower B/S level, the risk averse community is more than compensated, leaving unexploited opportunities for risk-return 'trades'. Debt/risk level X^1 is therefore the level at which the market as a whole values additional risk at the same rate as does the community.

b) Advantages of Exchange

We have applied some of the conventional principles of portfolio selection to the choice between internal and external financing of local governments, and have shown that there is a level of debt which is optimal to a local government for financing a given level of investment. We turn now to the level of investment itself and apply conventional investment theory⁵ to throw light on this issue. We will show that a refusal to look beyond the confines of the community for funds with which to finance investments will have the effect of limiting the extent of that investment to the level of the individual savings that

local residents are prepared to make through local government. This link between investment and financial decisions is unnecessarily restrictive and is, as Modigliani and Miller made clear,⁶ entirely absent in a world where markets are efficient.

'Self-sufficiency' in finance, as in anything else, has the effect of narrowing possibilities by neglecting opportunities for gainful trade:

Figure 8.3 is a conventional model of the marginal efficiency of investment. From the perspective of the local government it can be seen as a ranking of projects in descending order of public usefulness or 'priority'. Figure 8.4 expresses this diminishing MEI relationship in terms of a simple two-period intertemporal model. The axes, C_0 and C_1 , are consumption in periods 0 and 1 respectively. Consumption sacrificed in period 0 brings returns in period 1, that is, investment is positively productive.

The transformation function $T_1 T_0$ models the rate at which consumption in C_0 is transformed into consumption in C_1 . Its shape reflects the diminishing returns characteristic represented in Figure 8.3.

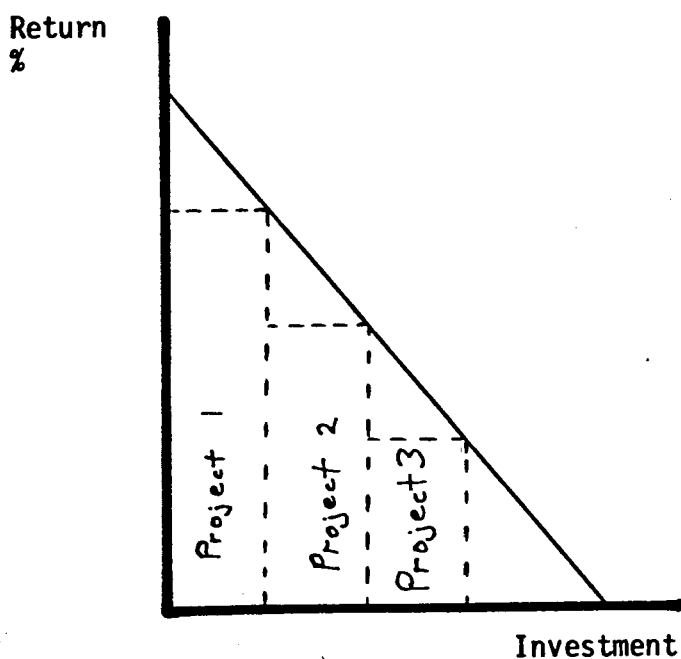


Fig 8.3

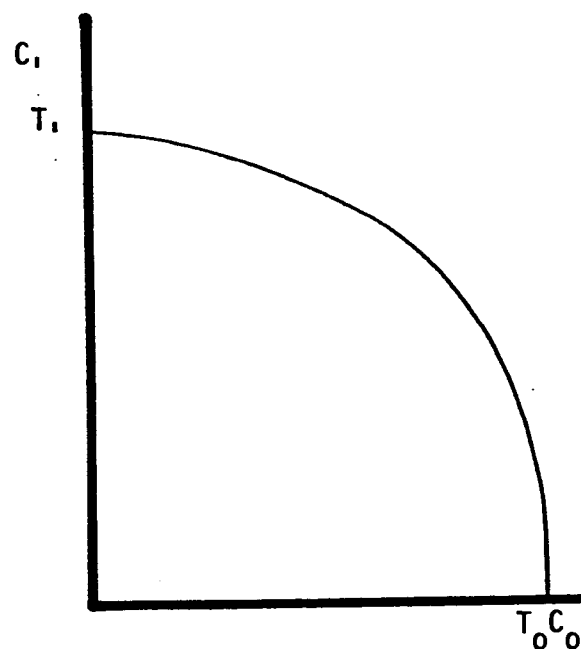


Fig 8.4

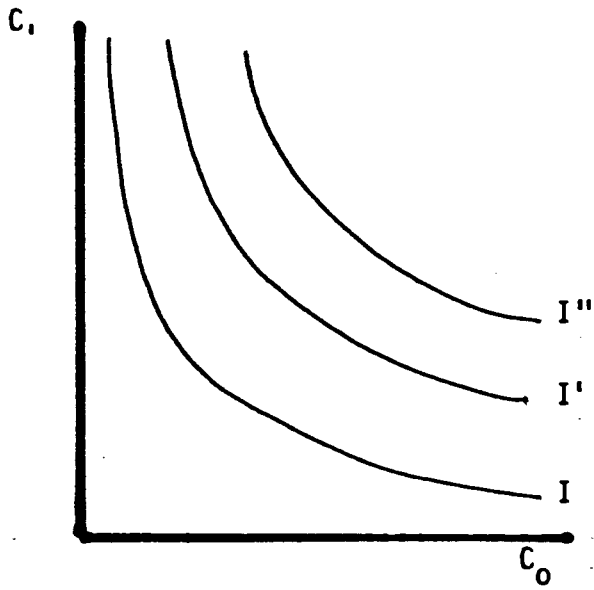


Fig 8.5

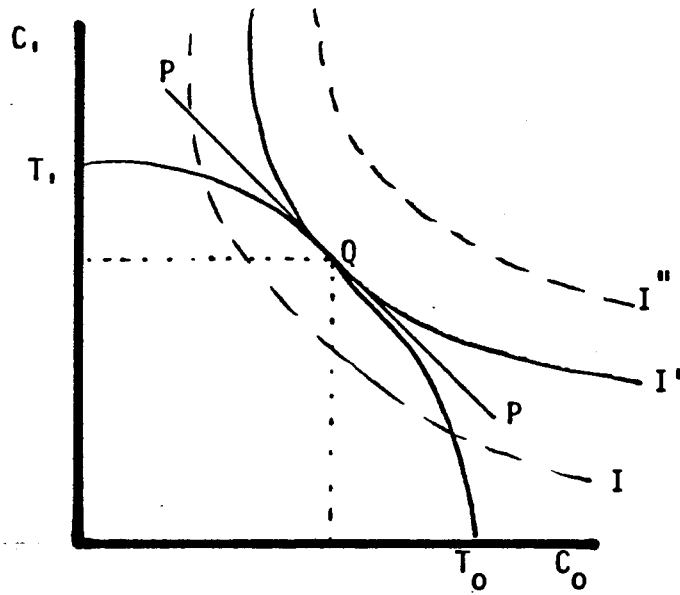


Fig 8.6

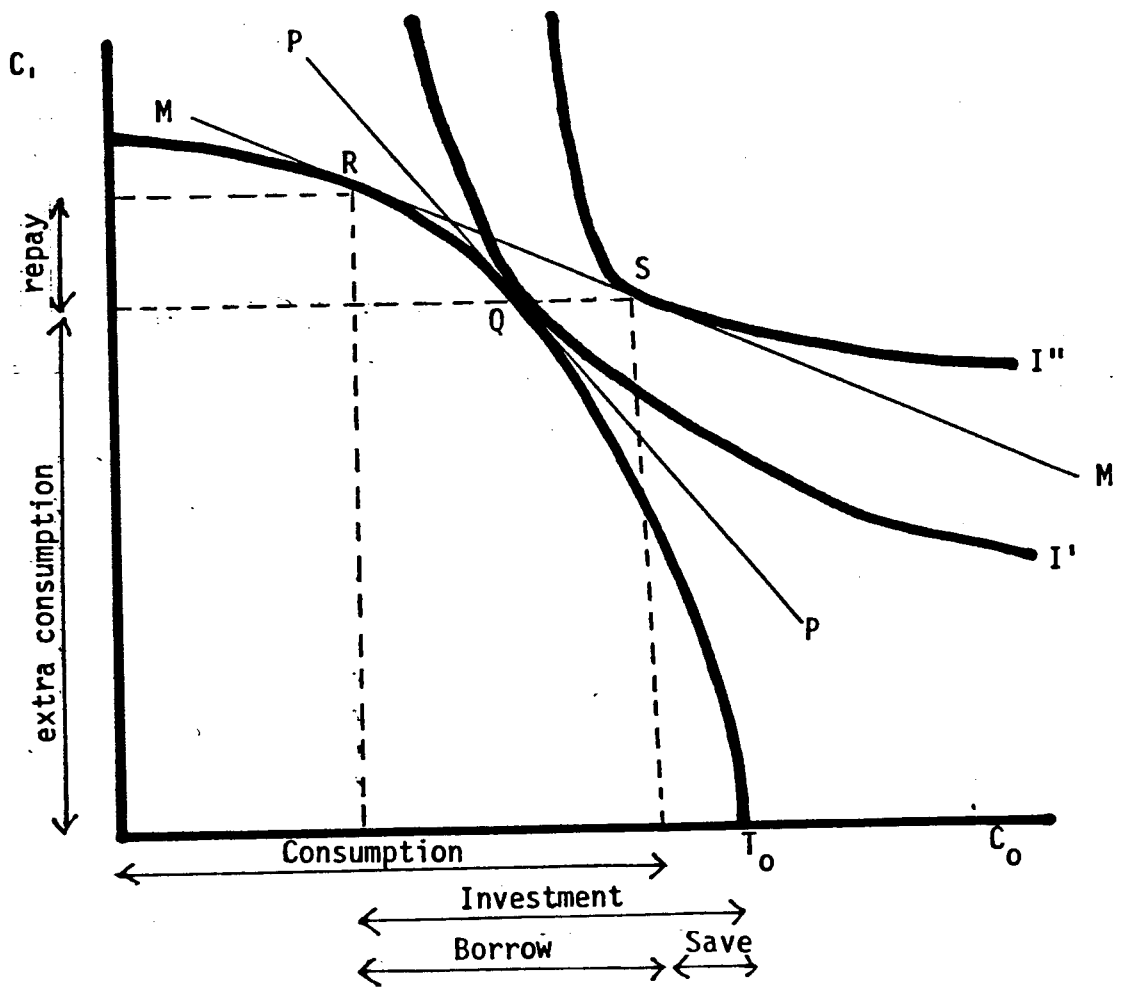


Fig 8.7

Figure 8.5 represents the intertemporal preferences of the local community. The shape of the Indifference curve, I , illustrates that increasing sacrifices of present consumption require in compensation greater and greater amounts of future consumption.

Figure 8.6 combines the local communities transformation function $T_0 T_1$ with its substitution map $I I' I''$ in an intertemporal model which generates an optimal saving/investment/consumption level, Q . This is where the marginal rate of transformation and substitution coincide and are expressed in the internal rate of interest, PP .

Figure 8.7 introduces the community into a world where the market rate of interest MM is lower than the 'internal rate' PP . Intertemporal trading, i.e. borrowing and repayment will enable a new, higher optimum to be reached at S which raises the communities' satisfaction from I' to I'' . Investment, being freed from the belt-tightening consequences of local saving is expanded while present consumption is increased. Future production is expanded by R leaving enough for interest payments and additional consumption in period C .

This trading optimum, S , will be approached by any firm or local government which simply tries to finance investment from the cheapest source available. The local government which ignores the signals of the market place and opts for financial 'self-sufficiency' will condemn its residents to a lower level of services for a higher level of current taxes. The property market will respond to this relatively unfavourable tax/amenities package by a reduction in prices relative to those communities which follow a more advantageous policy.

c) The Cost of Taxes

The choice of financial source for a local government is as we have shown identical in principle to the choice made by an individual or firm. It appears to be ambiguous in practice because, while debt has a market price or opportunity cost, taxes seem to carry no such indicator. The model presented in chapter 6 showed that, since personal and local government debt are interchangeable in the model, tax money paid to local government has the same opportunity cost as money invested in any other market institution. That is, it could, in

its next best application, be earning as much as any investment in an equally risky asset. The precise riskiness and return of local investments is however not as clearly on view to officials as the rate of interest on local debt, revealing itself only through the operation of the real estate market. It is often erroneously assumed therefore that local taxes are a costless source of finance because the increasing disutility of sacrifices of current income may not be apparent to local administrators. Taxes are seen therefore as cheaper than debt. This approach is contradicted by the model which sees residents as having the opportunity to invest privately with numerous institutions other than local governments, earning a market related interest rate.

Summary

Internal funding can be seen therefore as a disregard on the part of local officials for the relative costs of debt and taxes. Debt is seen as costly because interest is paid, taxes are seen as costless because they are compulsory contributions. It is not, however, compulsory to incur tax liability through residence in a high tax area, so high taxes to finance investment are substitutable, through migration for lower taxes combined with personal debt. Taxes therefore have an imputable cost equal to the return on an investment yielding an income stream of a riskiness equal to that of local amenities and infrastructure.

Refusal to recognize this cost, and to engage in financial transactions such as borrowing to minimize it will lead local officials to invest less and tax more than is necessary. Welfare of residents will fall short of maximum and property values will fall in relation to other areas and other types of asset.

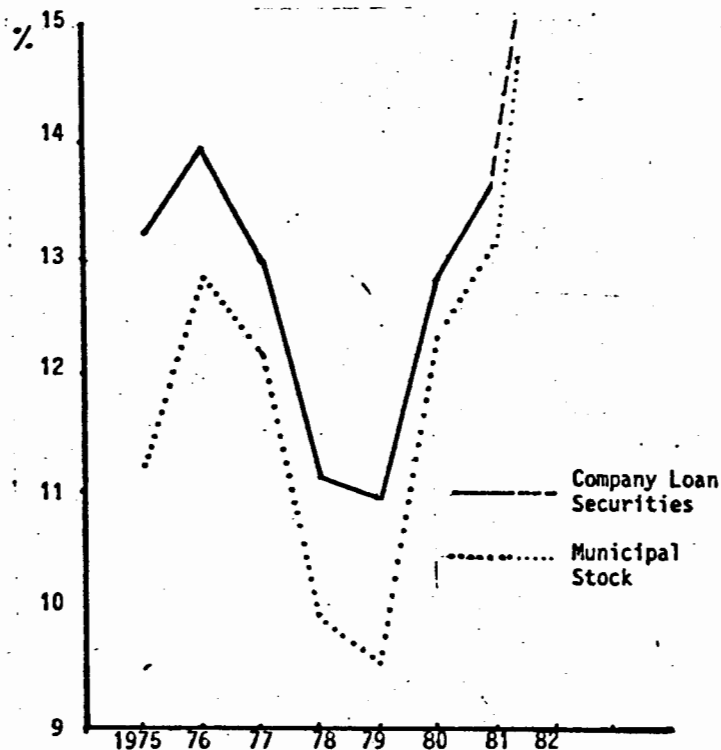
3. Some Claims made for Internal Financing

Several claims are made by the Browne Committee and by other sources in support of internal funding. These deserve some comment, in the light of the above models.

a) Savings on interest

The Browne Committee claims this as one of the benefits of self-financing. (p.133 para. 12.6.4 (iv)). In the sense that self-financing is a cheaper source of finance, this is entirely illusory. As was pointed out, taxpayers money has a cost equivalent to the interest rate obtainable privately on the market. This is in most cases far higher than the semi-gilt interest rates local governments pay on debt (see Figure 8.8).

Fig 8.8 Yields on New Issues of Long Term Fixed Interest Bearing Securities.



(Source: S.A.R.B. Quarterly Bulletin
December 1982, pp.5-36)

Financing through debt is by far the cheaper method for most municipalities.

In the sense that less money is paid out for interest and redemption in any specific year, internal financing does 'save money'. What it sacrifices, however, in terms of investments not made or, if investment level is maintained, in terms of consumption forgone in previous periods could easily be far greater than this 'saving'. Far from saving money, internal funding in fact imposes unnecessary costs on taxpayers.

b) Increased disposal over Funds

The Browne Committee further claims that: 'self-financing will enable the local authority to increase its disposal over funds ...' (p.133). By this is meant that a greater level of internal funding will enable more debt to be issued at the same leverage level, and therefore a greater level of investment to be undertaken. There are several objections to this. Firstly, what is advocated is not a specific method of finance, but a higher level of investment. No suggestion is made that internal finance be used instead of debt, but that it be seen as a base on which financial leverage can operate by incurring more debt at the same B/S ratio. Municipalities are exhorted not to finance internally, but to simply expand investment while keeping financial policy unchanged.

Secondly, in terms of the theories outlined above, it is by no means obvious that additional investment, financed through taxes and debt, will be a good thing. Figure 8.7 showed that this decision depends on the communities capacity to make useful investments, on the interest rate, and on the communities willingness to make present sacrifices for the sake of future gains. This in turn depends very much on the level of the communities income.

Fig 8.9

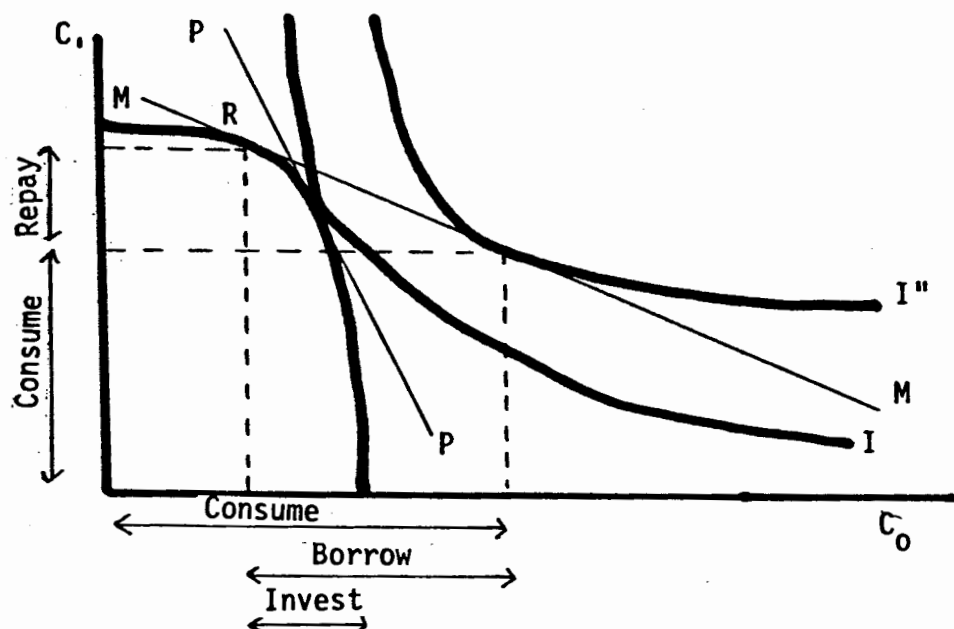


Figure 8.9 shows a poor community with a low income and therefore a great reluctance to sacrifice present consumption, which is already at low levels, for the sake of future consumption. Such a community may

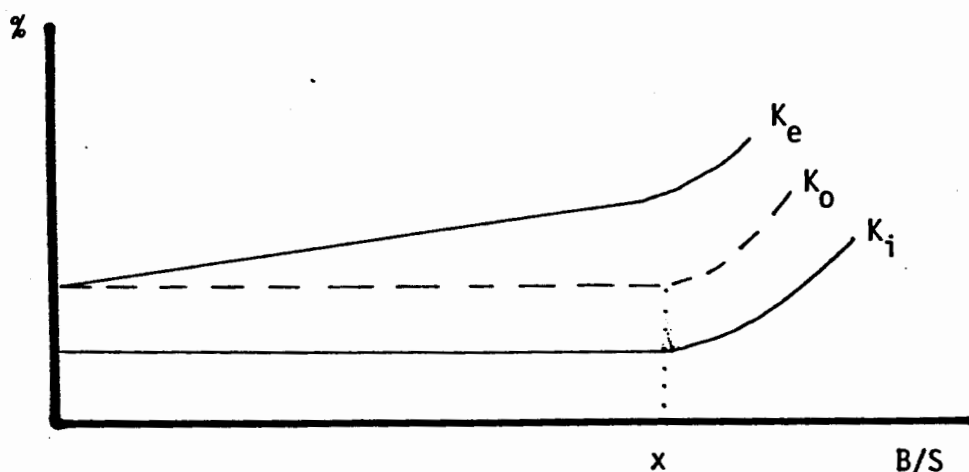
reasonably wish to save little or none of its present income, financing investment, and even some of its consumption from borrowing.

The Browne Committee's recommendation may, therefore, have a very unfortunate effect on some communities, particularly the poorer ones, leading them to make sacrifices that are not warranted.

c) Better rating

It is further suggested that by reducing debt, the local government may improve its 'rating' and so attract cheaper debt finance. This argument is completely valid, and was addressed in chapter 6 of this thesis. Figure 6.10, reproduced below as figure 8.10, illustrates the effect that bankruptcy costs have in raising K_i , the return to debt at high leverage levels. The advice to local governments that flows from this analysis, however, is not that they should avoid debt, so defeating the purpose of the internal funding, but that the debt/equity level should be optimized at the level which assures the lowest overall cost of capital (K_o).

Fig 8.10



d) Intergenerational equity

Government debt, being a commitment on behalf of future generations, is seen erroneously as inherently inequitable. Reliance on internal sources thus appears to have the merit of maintaining intergenerational equity.

This advantage is as illusory as the other examples given:- It is in the nature of things that generations should inherit a specific state-of-the-world from their precursors. This state-of-the-world consists of an endowment of assets and obligations. A generation which refused to pass on obligations to future generations would be unable to pass on as sets, or investments as well. This latter consequence may easily be far more onerous than the debt incurred to finance the investment. Generations cannot be sealed off from each other by the simple expedient of internal financing. They are inextricably linked in a way that is characterised by uncertainty and by the impossibility of future generations taking part in present decision making processes. Present generations must take actions which affect the future, and they must do so without perfect knowledge. This is the unavoidable consequence of mans existence in time, and cannot be avoided by clever financial policies. Decisions in the present are made on the basis of expectations of the future, as embodied in relative present prices and interest rates. Investment and financial decisions made on the basis of this information are inherently the best informed decisions that could have been made. As Kantor states: 'In an efficient market prices fully reflect available information'.⁷ Local governments, by borrowing and repaying money at market rates of interest are acting on the basis of this available information in a way that is responsible, and that cannot be improved on by appeal to higher authority.

4. Methods of Internal Financing

It is clear, then, that internal funding has severe defects as a means of local government financing, and that the claims made on its behalf are fundamentally specious. In the following section we will outline some of the methods by which internal financing is pursued, and will comment on the special claims made for them.

a) Short term financing

A local government which finances its capital program with short term debt will be faced in due course with a heavy interest and redemption burden. In this way the internal component of the financial policy is increased despite the continued rise of debt. This procedure has proved useful for circumventing state controls on debt which may be very

restrictive. Rapid retirement enables the local government to issue debt more frequently and to finance a larger capital budget than would have been possible under existing debt limits. Short term debt financing must be seen, therefore, not as a response to real economic forces, but as a response to regulation. Like so many such responses, it is extremely costly, for reasons we have outlined above. In addition, the local government may, in so doing, fall foul of an adverse term structure of interest rates or 'yield curve'. Despite many claims to the contrary,⁸ financing in the short term does not have the potential to reliably reduce interest costs. Short term rates are not always lower than long term rates, but may be higher or lower, depending on inflationary and other expectations. Even if it is cheaper to borrow short term, this may not be a good strategy, since the 'long term' does inevitably arrive, bringing with it higher rates, compared to which yesterday's 'high' long rates may seem very low. Financing exclusively in the short term constitutes, in effect, an attempt to outguess the financial market. While chance may bring some success at this, it is not possible to do this consistently in efficient markets.

The prudent capital budget will contain a mixture of both long and short term liabilities designed to accommodate projected variations in the local governments cash flows.

b) Purchasing own stock

Several local authorities in South Africa use this method as a means of increasing the proportion of internal finance in their structure. As such, there is no reason at all to criticize this practice, as long as the debt level finally selected conforms to the principles outlined in chapter 6. On the contrary, making a market in its own stock can be highly beneficial, particularly when the secondary market in municipal semi-gilts is as thin as it is in South Africa. By increasing the tradability of its paper the local government can achieve a better rating, and attract funds at a lower interest rate.

In the presence of debt limits, however, this practice would seem to be an unwarranted luxury. Maintaining a proportion of 'slack' debt for trading purposes reduces the amount of permissible 'active' debt below

the restrictive levels sanctioned by central government. This must have the effect of restricting capital development.

c) The Capital Development Fund

So far in this chapter we have dealt with the shortcomings of internal funding as such. While this critique applies of course to the Capital Development Fund (CDF) as a specific method of internal funding, this policy has its own particular shortcomings. Contrary to the recommendations of the Browne Committee, the CDF is an inappropriate vehicle for internal financing, a policy which is in itself defective as a local government financial policy.

The Capital Development Fund is a consolidated 'sinking fund' which serves as an accumulator for retained taxes, investment income and proceeds from property sales. Loans are made from this fund to the various departments of the local government for capital projects. Interest is charged at an 'average' rate, which is commonly lower than the market rate on municipal debt. Undistributed funds are invested in a portfolio of assets which earn market rates of interest with various institutions.

The portion of the CDF which is internally 'invested' simply constitutes internal financing and as such warrants no further comment except to point out that the low rate of interest charged in no way reflects the true opportunity cost of funds, being merely a 'shadow' figure. Claims that CDF finance is 'cheap' is accordingly misinformed. It is however the externally invested portion that requires further comment at this stage.

External investments are made in order to augment, by means of earnings, the funds available for capital development. This they certainly do, but the question remains: do the earnings exceed the cost of the finance? As was pointed out in section 3, the cost of accumulated taxpayers money is the interest rate obtainable by private citizens on the market. To justify the existence of the CDF, local governments would have to show that they can earn a greater return than the taxpayer can in his personal capacity. If they are unable to do so, then it would clearly

be advantageous to tax less, leaving the money in the taxpayers purse to be used according to personal preferences and priorities. As we will show the latter course is the appropriate one.

In the present statutory environment confronting most local governments, external investment is singled out for special consideration. The appropriate Provincial Ordinances⁹ specify a limited range of securities in which local governments may invest without provincial sanction. These consist in practice of fixed interest securities with banks, building societies and other local authorities. The prescribed nature of this portfolio places severe limitations on the local governments ability to acquire and administer a well diversified portfolio of assets. It is accordingly unable to earn a return on this portfolio which is competitive with the returns on private investments. Despite the fact that the same interest rate is earned on any given investment irrespective of whether it is made by a local government or by a private investor, the local government is forced to add more risk to its portfolio by the acquisition of say, a semi-gilt bond, than is the private investor. The private investor, in acquiring the semi-gilt will be adding this security to a diversified portfolio, changing its riskiness in a way that, in efficient markets, just offsets the change in return of the portfolio as a whole. The local authority, because its acquisitions are added to a restricted portfolio, is not able to make efficient trades of this kind and is thus forced to accept a portfolio which earns a lower return than many other portfolios in the same risk class.

Because of these restrictions, local authorities are not well constituted for the purposes of external investment. The apparent revenue-earning function of the CDF is largely illusory, being based, as were the advantages of internal financing generally, on a misconception regarding the cost of taxpayers money.

Another supposed benefit ascribed to the CDF is the role they seem to play in avoiding financial risk at no apparent cost.

'Capital Development Funds perform an extremely valuable function in insulating the local authority... from the vagaries of the capital market...' 10

This idea again embodies the view that the municipality can 'beat the market'. In reality they are involved in as much guesswork as anyone else, and as likely to be wrong in their guesses. If the CDF finds itself facing unexpectedly rising interest rates, then it will lose money. If real interest rates fall, it will gain money. In the long run in efficient markets it will make no more than normal returns, commensurate with the level of risk of the securities held. Far from providing a cushion against the fluctuations of the market, the CDF itself is likely to fluctuate even more strongly than the market, for the reasons already given.

The only genuine 'cushion' the CDF can provide is to allow the local authority flexibility in the timing of its debt issue. This is a genuinely useful function, one which is addressed by finance texts under the title 'liquidity management'. It is not a form of financing, and does not substitute for debt financing or any other form. It is merely a fund, held in a mixture of more and less liquid form which enables the municipality to choose the precise moment at which to offer its paper on the market, or to meet other contingencies. In order to 'beat the market' in this way the municipality must make guesses in competition with others. If it misses the correct moment, it will have to pay a higher rate. In the South African semi-gilt market, fine timing of this kind is not possible since the annual 'calendar' of bond issues is determined by the Department of Finance, and not by the municipalities themselves.

The Capital Development Fund is therefore not a means to 'cushion' the municipality from the capital market. If cushioning is wanted, there are many financial institutions which will be eager to provide this kind of 'insurance' by, for example, the purchase of long term debt. The municipality will have to pay for this service, in the long term, but is certainly not in a position to provide 'self-insurance' at a cheaper rate unless, of course, it is privy to inside information, not known to other operators in the market.

5. Conclusion

We have shown that capital development funds, as recommended by the Browne Committee do not live up to their promise of lower interest rates, asset replacement and market stabilisation. They in fact cost local taxpayers thousands of rands each year in terms of amenities sacrificed, negative returns earned on a money-losing financial portfolio, and money paid in taxes rather than spent, saved or invested by the individual taxpayers themselves.

Their continued use by local governments can be ascribed either to a great reluctance to seek external finance on the part of officials, or to an inability to seek such finance due to statutory or other limitations. As such the CDF may be a successful regulation-avoidance technique, but it does not serve to maximize local welfare.

Insistence by provincial and central government on the use of the CDF and other internal funding procedures can only serve to inhibit the development potential of local communities in South Africa.

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Insistence by provincial and central government on the use of the CDF and other internal funding procedures can only serve to inhibit the development potential of local communities in South Africa.

NOTES TO CHAPTER EIGHT

1. Browne Committee Report, op cit, Vol.1, p.138.
2. ibid, p.134.
3. ibid, p.133.
4. ibid, p.134.
5. Hirschleifer, H., Investment, Interest and Capital (Prentice Hall, 1970).
6. Modigliani, F. & Miller, M., op cit.
7. Kantor, B., Rational Expectations and Economic Thought (J.E.L., Vol.17, December 1979, pp.1422-1441).
8. Moak & Hillhouse, op cit, p.307.
9. Cowden, J.W., Provisions Relating to Finance in the Provincial Law of South Africa, South West Africa and Rhodesia (IMTA, 1977, section 18).
10. Gorven, O.D., Capital Development Funds (Browne Committee Report, op cit, Vol.II, p.35).

CHAPTER 9 LOCAL GOVERNMENT REFORM IN SOUTH AFRICA -
A CRITIQUE OF THE PRESIDENTS COUNCIL PROPOSALS

In earlier chapters, public goods in general and local public goods in particular have been situated theoretically within the mainstream of micro-economic theory. Through the Buchanan approach to institutional choice, public goods were analysed in terms of the kinds of institutions which provide them, in contrast to the Samuelsonian approach which saw them as a specific category of goods with a recognizable set of characteristics which defined them as 'intrinsically' public. This analysis led us to conceive of all public institutions including local governments not as purely political entities, but also as competitively selected institutions providing certain goods in the most efficient way.

The institution of the local government was accordingly identified as the organisational form which exists and survives because it is able to supply a set of valued commodities at competitive costs, and to capture, through the property tax, some of the rents generated by its development of amenities and infrastructure.

The Tiebout 'voting-with-the-feet' model was presented to show how demand and supply for local amenities have expression in the property market, and that they do in fact react upon each other through the medium of local government. The property market upon which the local government has such an important influence, represents a signalling mechanism with the potential to generate an optimal pattern and level of local public goods; that is providing the local authority operates within a suitable legal and constitutional framework.

This chapter will identify the nature of the legal framework for local authorities in South Africa and will discuss the proposals made by the Presidents Council¹ using the analysis presented in previous chapters.

The great strength of the present constitutional proposals has been to recognize the importance of the commonality of interests between different sections of the South African population. It has been

formally acknowledged that Whites, Coloureds and Indians share, in some respects at least, the same problems and interests. It has also been acknowledged that, for the various groups to be able to develop and co-exist, suitable institutions of a social, political and economic nature must be created or allowed to emerge. Local government is seen by the policy architects of the Presidents Council as the key institution for this purpose. To this extent, therefore, the Presidents Council proposals are accommodated within the analytical framework of this thesis: local autonomy is seen as a potential force for development and maximum social welfare of the non-white groups. Beyond agreement on these general issues, however, differences arise.

1. Metropolitan Government

In its eighteenth recommendation, the Presidents Council suggested that, where appropriate, a metropolitan level of government should be established in place of the provincial level:

'the 'hard' functions of government should be dealt with by a nominated board (rural or urban), utility company or metropolitan authority to which each of the local authorities concerned would nominate at least one representative'.²

By 'hard' functions, the committee has in mind activities such as water supply, electricity supply, sewerage or drainage, whereas by 'soft' functions is meant that category of goods which appear 'location specific', such as parks or libraries.

The institutional choice approach used in this thesis throws some critical light on this proposal.

a) Hard and soft functions

The process of competition among local amenity producing institutions will, as discussed above, lead to a continuing effort by local government to provide the most desired package of local goods, at the cheapest possible tax price. Failure to do so could lead to a vote-with-

the-feet in favour of competing communities, resulting in a relative fall of local property values and of the property tax base. We would predict from this theory that, in addition to assiduously seeking value enhancing public projects, communities would equally carefully seek cost saving collective arrangements with neighbouring authorities or firms. This is indeed what can be observed on a daily basis in almost any municipality.

Those functions where economies of scale are obtainable³ such as water provision, wastewater treatment, refuse disposal and, to some extent, refuse collection, are commonly the subject of collective agreements. For example, water and electricity are provided to a population far larger than that of the city of Cape Town through a set of contractual arrangements. Refuse removal and disposal is performed on behalf of some local governments on a contractual basis by a local firm which is not confined to the scale of a single municipality. Fire protection services are often shared, despite the apparent absence of opportunities for scale economies. Local governments apparently find room for mutual co-operation where professional consultants to the Presidents Council do not!⁴ Daily experience confirms our contention that the choice between local or metropolitan government is in fact a choice between alternative institutional forms each of which may have the potential to supply some, but not all services at minimum cost. This choice does not have to be made at a constitutional planning level, but at a local level. An ongoing, competitive social process in which different institutions compete for the opportunity to supply a service, just as firms compete for survival in the market place, would resolve the question of which authority or organisation should produce the required service.

It is not appropriate or even possible for the constitutional committee to make specific recommendations about which functions are best performed at local level (soft) and which are best performed at metropolitan level (hard). All that can be done is to provide an appropriate legislative framework within which agreements between governments at all levels can be made and enforced, and new local governments can be established for presently accepted purposes or even for new specialised purposes. Local transport, irrigation or education authorities, for example, may be the most efficient way to provide these specific

services, yet the borders of each respective authority may be entirely different. The boundaries appropriate to a Cape metropolitan water authority, for example, may be entirely inappropriate to a Cape metropolitan refuse removal authority. Similarly, the taxing power of a school board may be quite unsuitable for a traffic police force. The process of choosing the most efficient social institution may result in separate provision of these services by differently constituted 'governments' with different boundaries. On the other hand it may as easily transpire that a single authority will efficiently perform the most unlikely combination of services as a result of the cost minimizing, satisfaction maximising process of institutional choice. Condominium developments, for example, perform such disparate services as swimming pool provision, laundromat services, security guards and cable television, apparently to the advantage of shareholders.

The best a constitution can do is provide a framework in which these rational choices can be made and to legally guarantee the rights of individuals and groups within these collective agreements. It is quite inappropriate for a constitutional committee to attempt to codify decisions which are properly the result of an ongoing social process.

b) Representation

The Presidents Council makes the recommendation that local governments should be represented on metropolitan councils. Indeed the recommendation is stronger: that metropolitan level acquires its authority from the local level.⁵ If by this the Presidents Council means that metropolitan government is a result of mutual agreement between participating local governments, then the concept is to be applauded. The question arises though, as to why any official notice needs to be taken of such an agreement other than for the purpose of drawing up enabling legislation. The theoretical approach adopted in preceding chapters suggests that no regulation is needed to force local governments to pursue the interests of residents other than those ensuring an environment of personal mobility and secure tenure of real estate.

It seems clear though, that what the Presidents Council has in mind is not enabling legislation at all, but coercive legislation aimed at forcing local governments to take part in a metropolitan tier of government with some clearly laid out functions. As long as there is no possibility for a local government to 'opt out' of metropolitan government, an option which the concept of 'hard functions' seems to preclude, there can be no truth in the statement that 'the authority of the metropolitan body will be derived from the constituent members'.⁶ It seems far more likely that the intention is to represent local governments in a higher authority subject to the will of the majority of representatives. Dissenting communities will presumably have to accept the ruling of the majority and consent to policies which do not serve them for the sake of other policies which do.

While the Presidents Council provides us with no framework within which to evaluate this proposal, the economic theories of voting, developed by Buchanan and Tullock and presented in chapter 2 of this thesis are of considerable usefulness.

Of special importance in the median voter model, which predicts that expenditure patterns will, in a majority rule situation reflect the priorities of the median voter. Incorporation into a metropolitan democratic institution will have the effect of altering the nature of the median voter, and hence of the expenditure policies. A relatively poor community joining a wealthy metropolis will find the thrust of public policy being aimed at an income group far higher than the group it would have targeted independently. Similarly, a rich community will find itself committed to decisions serving income groups lower than that of its own median voter.

Incorporation seems, therefore, a far cry from the 'customer' relationship presently enjoyed between co-operating local authorities. An authority which 'buys' services from a neighbour or enters into any other form of collective agreement does so because both parties expect to benefit from this action. The agreement is thus unanimous in the Wicksellian sense.⁷ This does not mean that all parties are fully satisfied. The buyer would like better service at a lower price, while the seller would like the opposite, together with the

monopoly powers to guarantee it! The agreed price may not be regarded as ideal yet the presence of a contract signifies that all parties have unanimously agreed to accept a compromise position. Anything short of unanimity in this regard would abort the agreement. All parties would go their own ways disappointed but unharmed by the unsuccessful attempt at socio-economic co-operation.

An 'unsuccessful' political decision, on the other hand, has tremendous potential to harm the participants in the process. Adverse decisions can impose actual costs on some, while even a neutral decision, or no decision at all, imposes costs in the form of participation in the process.

A community which exchanged its autonomy for representation on a metropolitan authority would be exposing itself to this potential harm as a result of adverse decisions taken by the majority of fellow representatives. A 'unanimity' voting rule would eliminate this risk completely, but as every committee member knows, unanimity is extremely difficult and costly to achieve, especially when people of different, non-homogenous interests are involved. Some issues, such as the construction of roads and drainage may take weeks to resolve at metropolitan level, but be easily and cheaply decided at local level. To justify this minimum cost of reaching unanimous decisions there must be commensurate expected benefits to be gained from the collective action that made the decision costs necessary. A 'hard' function required by regulation to be dealt with at metropolitan, committee level has, therefore, the potential to impose costs on the provision of the service that may be avoided by other institutional forms.

Thus far in the discussion of some aspects of the definition of 'hard' and 'soft' functions, we have accepted the structure of the service as given. This is not the case. It is by no means given that the process of supplying water is a single, cohesive social function, while the supply of commodities such as food or clothing consist of many aspects, each of which may be performed beneficially by separate agencies. In reality, the supply of water, for example, is performed by many agencies, even within the monopoly currently exercised by government. It is not uncommon to find the supplies of drinking water, urban

irrigation water, rural irrigation water and industrial water being handled in the same geographical area, by separate bodies. Neither is it uncommon to find different aspects of police work, such as security of buildings, CID investigation, forensic laboratory work, training of personnel, control of mobile patrols, civil defence and many others being performed by many different agencies, some governmental in their nature, others not. This division of labour is indeed a feature of the market economy, and takes place continuously in a dynamic competitive process. The outcomes of this process may be understood and predicted by means of the economic theories of industrial organisation, but cannot be duplicated by presidential decree, however well informed it may be.

c) Local Preferences

The choice of neighbourhood is, as has been discussed, an economic act which reveals preferences for collections of public goods. As such it is an important mechanism in the articulation of demand for local amenities. The merging of local tastes and priorities into a collective set of metropolitan priorities will reduce the variety of local communities which are available to the house-seeker and will inhibit the mechanisms of demand for local public goods, with resulting inefficiency.

This will mean that residents will be more dependent on the political process to express their preferences, and to look after their interests in the field of local amenities and services. It is common cause that the political process in South Africa has, in the past, been anything but even handed. It is altogether likely that metropolitan councils will become an arena in which small communities are dominated by eager ones, not the forum for expression of differing preferences and priorities.

2. Revenue Sharing

One of the ways, traditionally, for central government to impose its policies and judgements on local authorities is to control a large proportion of their funds, through grants and subsidies. It is with very little surprise therefore that we read recommendation thirty four,

which levels some offhand accusations at the property tax and then recommendation thirty five which, without further ado accepts in principle the idea of 'neutral funds' and goes on in paragraph ii and iii to outline the enforced standardisation of facilities and the 'determination of priorities'. The Presidents Council clearly envisages a situation in which metropolitan and regional governments have strong control over local government actions through the discretionary disposal of 'neutral funds'. Far from being a liberal, democratic recommendation, it holds in itself the seeds of authoritarianism.

Paradoxically, the recommendation stems from a desire 'to counter the present maldistribution of existing sources of rates income' (p.97), a laudable enough aim. The suggestion is made that 'neutral' funds, (i.e. those not originating from taxes on residential property), should be redistributed on a regional basis so that all municipalities, residential or non-residential, should have access to rates from commercial and industrial property.

In the South African context, this recommendation does at first flush seem attractive. It is common to find communities of 'sub-economic' and 'economic' but low-income residents living, as residents of Blackheath in the Cape Province do, literally across the road from an industrial complex (Leylands Blackheath plant) but without access to it as a tax base since it is sited in the neighbouring (white) local authority. Sharing the revenue of the Leyland plant would seem to be eminently fair.

There are, however, a number of reasons why such a revenue sharing plan would be less than ideal:

a) The reason for the problem does not lie in the absence of revenue sharing but in the nature of the state housing policies, the limitations on mobility which flow from the Group Areas and related Acts, and the unsuitable constitutional position of coloured local authorities. It is to these real causes that we must look for a cure, not to a temporary palliative which will exacerbate the problem in the long run.

b) Local authorities are well aware of the beneficial nature of local, properly housed and situated industrial developments. Many towns and cities make strenuous efforts to attract business in competition with

their neighbours by developing local factory sites, service roads, rail links and to make business aware of these services by advertising and other media presentations. They have a strong incentive to do this because the nature of commercial and industrial developments is such that they are able to expand the tax base without making excessive demands on local resources, thus helping to finance services for residents. Any suggestion, such as that made by the Presidents Council, that industry be looked upon as 'common' rateable property for a wide range of communities will certainly be met with cries of horror from those who have deliberately attempted to attract economic development by the provision of an attractive business environment. Aside from 'the fairness' considerations, and perhaps even more important, is the possibility that local governments will no longer consider it worthwhile to continue to do this.

If a share of all business taxes in metropolitan Cape Town will accrue to each municipality, regardless of where the business is situated, it will become rational for municipalities to actively discourage unsightly, pollution producing factories. The opportunities for 'free-riding' on the backs of other local communities will expand and the potential benefits of having local industries will dissipate. Costs of roads and transport will rise as factories are situated far away from residential areas. Activities presently performed by local government will have to be performed by central or regional government with attendant costs and inefficiencies. Investment in local areas will decline to be replaced by investment in more central areas. If the costs associated with this mode of local amenity production are very great, it is likely that businesses themselves will see the opportunity to provide housing and local amenities themselves by means of 'company towns'. In so doing, they will prevent the actual dissipation and wastage of the benefits that local business can bring to residential areas. From the perspective of home owners as a group, this development, or inevitable variations on it, will have the same effects. The benefits and consumer surpluses generated by the activities of local governments will be lost to local residents, and captured by other, more efficient institutional structures.

c) Tax Neutrality

Attention was drawn in a previous chapter to the fundamental non-neutrality of all taxes, and to the shortcomings of the various 'neutral' taxes proposed by the Presidents Council:

Business Licences: Suffer from the defect of being highly discriminatory, commonly being used to protect local sectional interests. The potential for corruption and favouritism is very great.⁸

Turnover Taxes: Being a tax which is imposed at all points in the production process, manufacture, wholesale distribution or retail distribution, this tax can encourage the conglomeration of these activities under one roof. There remain, however, some advantages to the local use of certain forms of this tax, as was pointed out in chapter 4.

Employment Levy: This is a highly regressive form of local income tax which, if it does not fall directly on employees, will be passed on to unemployed labour. The use of this tax to 'encourage deconcentration' as envisaged by the Presidents Council may be in line with historical decentralisation policy, but is certainly not in line with the spirit of the Prime Minister's 'Good Hope' proposals, which spoke emphatically of 'carrots', not 'sticks'.

d) Redistribution of Income

Underlying the President Council's discussion of revenue sharing was the apparent wish to see income redistributed from Whites to Coloureds. While this is a laudable intention, it cries out for some comment:

i) If we are serious about redistribution, it is as well to start as we mean to go on and to talk of low and high income groups as the recipients and sources of redistributed funds. It is misleading to refer, as does the Presidents Council, to these groups as 'black' and 'white'. These terms are not (hopefully) suitable proxies for 'poor' and 'rich'.

ii) The foregoing model, involving inter-institutional competition, shows that the local level of government is an inappropriate site for redistributive activities. As agents of redistribution they suffer from the defect of not being able to hold donors captive, nor being able to exclude potential recipients of public largesse. As a result, 'Robin Hood' local governments find themselves losing well-off citizens to neighbouring, more parsimonious cities, and attracting to themselves the needy of all areas. Thus the 'goose that lays the golden egg' is effectively killed, the base for redistribution destroyed.

Similarly, as a proposed recipient of central government redistribution the local government suffers from certain defects: Being producers of a narrow range of goods they are confined to passing these subsidies on to residents through lower taxes or charges for these goods, or increasing the quantity of local amenities produced. In so doing, it must make use of its own judgement as to which of these services will best serve the poor. This is a process which is fraught with error and distortion. No such judgement is needed by a central government which simply provides a personal subsidy on a means test basis to individual people. Recipients of such a subsidy are not distinguishable from any other citizen, and so do not need any further organisations or structures, such as low-income housing projects, charity clinics etc to serve their needs. They present themselves to the market as any other customer with an income which, though augmented by redistributive subsidies, remains limited in relation to needs. The revelation of preferences for goods, both personal and public would then take place in the normal way, through the acts of purchase and sale.

Redistribution on the local government level, however, raises many problems, in addition to the ones already mentioned. Possibly foremost among these is the understandable reluctance of local governments to accept responsibility for potential recipients despite an undertaking by central government to foot the bill. Local officials have limited time and resources and are (commendably) reluctant to use them on activities which do not benefit local residents and ratepayers. The construction and administration of subsidised housing clearly falls into this category, in the judgement of many local governments.

It is thus the unfortunate result of the present method of subsidisation through the local government that people who would normally present themselves as customers, shareholders and residents, and whom the local government would try to serve and attract, become a source of cost and expense, which it is in their interests to repel. This they do by attempting to persuade some other authority to accept the responsibility of redistributive functions, resulting in a 'passing the buck' process, which is harmful to the interests of the recipients of redistribution.

The economic theory of the local government presented in this thesis does not, therefore, endorse the proposal of the Presidents Council to use the local level of government as a site for redistributive activities, whether the redistributive funds originate locally or centrally.

3. Black Local Authorities

Perhaps the most severe shortcoming of the Presidents Council report is the scant attention it pays to the position of Blacks in the constitutional structure. Beyond noting that 'It is government policy to establish Black local authorities with municipal status' (4) and the endorsement of the Browne Committee's view that Black local governments can appropriately co-operate with white and coloured neighbours in the provision of services which yield scale economies (5), the Presidents Council has little to say about Blacks and the way in which local services are to be provided to them. In reality it is black and coloured local authorities that merit special attention because of the peculiar institutional structure under which they now operate:

a) Property Ownership

The economic theory of public goods as presented in this thesis stresses the importance of the institutions of private property and of a market in real estate for the existence and proper functioning of a 'market' for local public goods and services. The absence of a genuine black property market is thus of great importance to prospective black local authorities. It means that the essential link between local government

decisions and the residents who are affected by those decisions is absent. The conditions for the 'natural' emergence of responsible local government are therefore not present.

The alternative, at present, to private property ownership is the state financed, local government administered housing scheme, or township. These schemes have a very poor record with regard to the provision of services and amenities for reasons that are very easy to understand:

The local authorities' relationship to the resident of a township is that of landlord and tenant. In the normal course of events, this should present no obstacle, since owners and renters of property share many common interests, as successful private rental schemes all over the world show. The difficulty arises, however, as a result of the redistribution nature of this housing. Most townships consist almost exclusively of houses erected expressly for the purpose of letting to people with very low incomes. Rents are subsidised through the mechanism of very low interest loans made through the National Housing Fund to cover the cost of construction. These schemes are administered by local authorities, often Administration Boards or Divisional Councils, who are required to balance the annual budget of these schemes on an individual basis. This they often find impossible, or are able to do so only by maintaining a very low standard of services.

b) Location

Part of the process of provision of low income housing in South Africa is the choice of the location of this housing. This choice commonly goes towards the most unfavourable areas for human habitation. While it is true that the market process itself typically results in the structuring of cities into homogeneous zones,⁹ the process of bureaucratic allocation has not proved a good substitute for the market process, and many townships find themselves isolated in areas that are particularly expensive to serve with amenities. This further adds to their costliness and to the burden they place on their local government.

Low-income housing schemes are therefore not a source of revenue to local governments, but a source of potential loss. As such, their presence may not be welcomed by local governments, but actively discouraged. The provision of low-income housing, financed by central government, is not seen as an opportunity by local authorities, but as a burdensome duty, which they rationally seek to avoid as far as it is legally and morally possible to do so.

Under these circumstances any local government serving black communities have no incentive to improve their service to their residents, and will be particularly disinclined to borrow on their behalf to finance capital projects. Borrowing, as has been discussed, will only be undertaken in the expectation of rewards or return. There can be no such expectation in the kind of environment surrounding the provision of black housing in South Africa.

c) The Political Process

In this environment the political process must carry a particularly heavy burden.¹⁰ The ballot box remains as the only channel through which local residents can communicate their own assessment of preferences and priorities. Their attitude towards alternative public projects cannot be expressed in the normal way through the choice and purchase of accommodation, but must be articulated through nomination and election of competing representatives. It is clear, therefore, that the political process assumes if anything a greater significance for the black communities than it does for the white. The neglect by the Presidents Council of the constitutional position of black local government and of any mention of the many restrictions that make black local authorities unique in South Africa is therefore a very serious omission.

4. Conclusion

The theoretical framework provided by the Tiebout model and by the institutional choice approach has led to a fundamental critique of the Presidents Council proposals. At a general level these proposals err in attempting to codify what are essentially the results of a dynamic

social process. They try to embody in a constitution issues such as the existence of metropolitan levels of government and the sharing of services. Instead they should concentrate on drawing up a framework within which people and communities can freely associate politically and economically, in order to generate mutually acceptable solutions to these issues, and within which the rights of each party are protected.

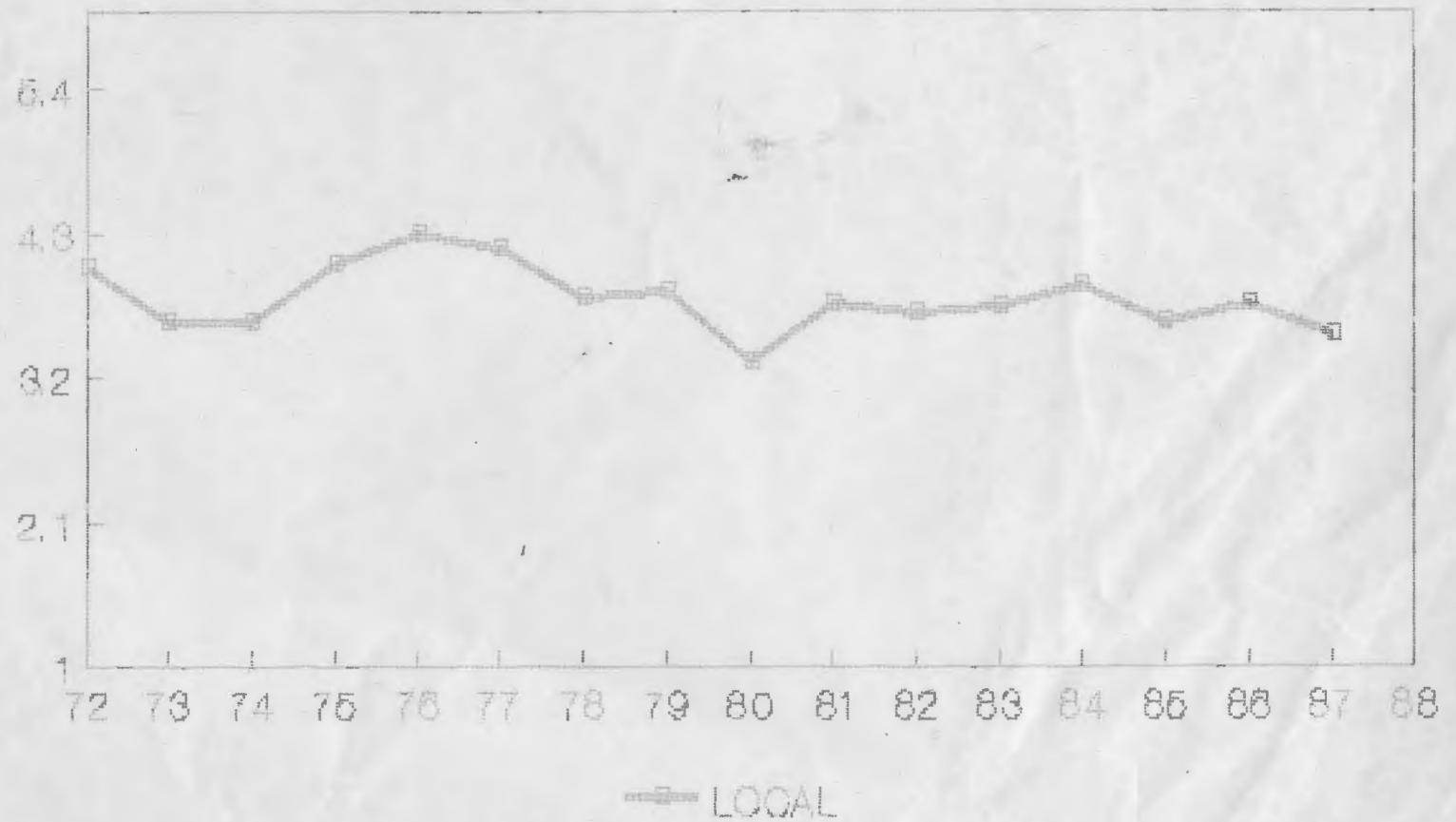
The neglect of the situation of Blacks in South Africa is a major defect of the report, since the issues in question are issues which specifically concern them. Any constitution must address the question of black local authorities and the intimately connected issue of property ownership, mobility and local representation, even if it does neglect the question of national representation.

NOTES TO CHAPTER NINE

1. Joint Report of the Committee for Economic Affairs and the Consultational Committee of the Presidents Council on Local and Regional Management Systems in the Republic of South Africa PC 1/1982.
2. PC 1/1982, op cit, p.109.
3. *ibid*, p.172.
4. *ibid*, p.177.
5. *ibid*, p.109.
6. *ibid*, p.109.
7. WickseL, Knut, A New Principle of Just Taxation, op cit, 1896.
8. *ibid*, chapter 4. The relative merits of various revenue sources were discussed in chapter 4.
9. The issue of location is extensively dealt with in the literature. For example: Lösch, A., The Economics of Location (New Haven, Connecticut, 1954); Solow, R., Equilibrium Models of Urban Location (M. Parkin (ed), Essays in Modern Economics, 1972).
10. Buchanan, J.M., op cit, 1968, p.163.

GOVERNMENT STATISTICS

LOCAL-PROV EXPENDITURE AS % GDP



CHAPTER 10 CONCLUSION

1. Summary

In this thesis we have examined the difficulties experienced by local communities in providing themselves with amenities and infrastructure. In order to place the problem in a generalised context, the theory of public goods was examined with particular emphasis falling on Buchanan's institutional choice approach. Public goods were seen as good produced by a government, an institution which is able to internalize the externalities inherent in the consumption and production of some goods and services. Allocation of resources to this category of goods takes place in the context of the institution which produces it, in this case through the political process.

Local public goods were seen as goods and services which as a result of a competitive process between different kinds of institutions and between different institutions of the same kind, are produced by public authorities at community or regional level. The market process affecting local public goods-producing institutions was explored by C.M. Tiebout in his 'voting-with-the-feet' model of interjurisdictional competition. Chapter three of this thesis presented the Tiebout model, and examined the empirical evidence available on it.

In chapter four, a closer look was taken at the variety of ways that local authorities can finance the provision of amenities and infrastructure, including taxes, grants and user charges. Following this, in chapter five a model of local government capital financing was developed which made use of the institutional choice framework developed earlier. Looking upon the local government as an institution analogous in many ways to a firm, financial policy was modelled by a method drawn from corporate finance theory, the Modigliani-Miller approach.

Using this model we were able to show that in the absence of market asymmetry, communities are indifferent between levels of debt, choosing a specific level only in order to satisfy local governments' risk preference. An administration whose natural risk aversion is not countered by democratic pressure will tend to avoid debt, while a genuinely representative government will choose a level which

approaches optimum.

Existing asymmetries in the process of capitalising local government debt policies through the property market have effects on the debt policy, but do not change the process through which the financial decisions are made. Because debt is effectively subsidised in terms of tax, legislation and other factors, the tradeoff between return and risk on local governments services is not as great as for other assets. This, and other factors provides a general bias towards debt.

In the light of this theory, existing shortages of local government finances were analysed, and found to originate in a growing aversion to debt, and an increasing tendency towards internal financing. Chapter Eight was devoted to a criticism of internal financing and of the Capital Development Fund as a specific method of internal funding. By drawing on well established portfolio theory, and the theory of intertemporal allocation we were able to show that internal financing is not the policy that would be chosen by a community which endeavours to maximize the welfare of its residents. Thus despite official enthusiasm, internal funding is not necessarily in the interests of local communities.

Other official proposals regarding local government, particularly those emanating from the Presidents Council, were addressed in chapter Nine. The concept of metropolitan government was examined in the context of the institutional choice approach and was found to have some shortcomings. Co-operation between local governments, it is suggested, will take place on a voluntary basis, outside of the guiding hand of central government. Revenue sharing through the use of 'neutral funds' was also discussed and found to conflict with the model presented. By breaking the link between property value and local government income, revenue sharing destroys the incentive to attract business and industry by providing them with services and facilities. Finally, the predicament of black local authorities was briefly touched upon in order to illustrate that their omission from the Presidents Council frame of reference constitutes a serious shortcoming.

This thesis has, therefore approached the issue of local governments and their financing in a highly analytical way, drawing its inspiration from the theoretical fields of public choice, the theory of public goods, corporate financial theory, intertemporal analysis, and the theory of tax incidence and market valuation. In the remainder of this conclusion we will place the issue of local autonomy within the current political context of South Africa and will spell out the conditions which are essential to the efficient operation of local government.

2. The Political Context

In the current 'reformist' climate of South African politics, the concept of local autonomy plays a very special role. Government constitutional planners see the idea of local autonomy as a means of operationalizing the ethnic and racial separation of communities. The many opponents of government minimize the importance of autonomy of local communities, and of the ethnic heterogeneity of the South African population. They stress the unity of the people and press their claim to general enfranchisement by rejecting as a red herring, the offer of representation at a local level.

The struggle for and against apartheid has thus come to rest (briefly perhaps?) on the issue of local autonomy, and the role of local authorities. Apartheid planners would like to see all local areas racially homogenous, self-financing, self-'governing' in the sense of determining their expenditure policy. This, in their eyes, would have the merits of insulating central government from grass roots issues such as education, housing, local facilities, transport and at the same time creating a situation in which opponents of apartheid are set against each other in interregional competition.

Opponents of apartheid have their eyes set firmly on the prize of universal franchise, and rightly see local autonomy as a diversion, a device to take their attention away from this goal. Their rejection of local autonomy is often a refusal to be diverted, a determination to stick to their guns. Accordingly, they point out some of the apparent

pitfalls of local autonomy. They point out the origins of the communities (on the drawing boards of apartheid planners), their consequent isolation from services, markets, and from commercial and industrial revenue bases. They point out the dependence of local areas on the metropolitan cores, a dependence which is said to create and perpetuate the poverty of the local area. Control over local affairs is therefore not seen to be the solution to the problems of local areas, since these problems have their origin in the nature of the local area's relationship with the wider community.

Simultaneously, however, local issues form the focus of a great deal of the ongoing struggle. Communities are increasingly organizing themselves around issues such as electricity, bus fares, drainage, streets, housing maintenance and others, many of which are seemingly trivial. Yet it is in the articulation and resolution of these issues that communities are finding identity and expressing common solidarity.

There exists, apparently, a contradiction: Either local issues are vital, and a valid area for social action, or they are irrelevant, a decoy, a distraction from the real issues at national, even international level. They clearly cannot be both.

It is against the background of this contradictory position that the role of the local authority must be viewed in South Africa today. It must be remembered that the ideas of local autonomy are currently vehicles for conflicting economic and class interests, not merely theoretical constructs which stand on their own.

3. Requirements for effective Local Autonomy

Having characterised local government as an institution of the market economy, it remains necessary to spell out the conditions needed for its efficient operation.

a) Mobility

Perhaps the most vital assumption on which the Tiebout 'voting-with-the-feet' hypothesis rests is, that people can choose their place of

residence:

'Consumer-voters are fully mobile and will move to that community where their preference patterns ... are best satisfied'¹

This choice performs the function in the Tiebout model of revealing preferences for local goods combinations, a function more familiarly performed by the act of purchase of private goods.

'Spatial mobility provides the local public-goods counterpart to the private market's shopping trip'²

The ability, therefore, to move freely (although not costlessly) between communities is therefore a vital element in a system of local autonomy. The existence in South Africa of severe statutory limits to mobility must inevitably jeopardize the effectiveness of local governments in providing public goods in desired combinations.

b) Large Number of Local Areas

Tiebout's third assumption that:

'there are a large number of communities in which the consumer-voters may choose to live'³

reflects his concern at the wide variety of public goods combinations that are feasible and the wide disparity of tastes and preferences that display themselves. Movement between communities will ensure, in equilibrium, equality of the marginal cost of moving and the marginal benefit to be gained. This equity will be clearly more accessible if the differences between communities are lessened by other communities which in this sense, bridge the gap.

It is unlikely that proposals for the creation of black or coloured local governments will allow the variety or multiplicity of local government that is envisaged in the Tiebout competition model. Present administration of coloured local areas within the Cape

Divisional Councils is certainly not conducive to encouraging multiplicity, nor is the administration of black areas within Administration Boards.

c) Powers of Local Governments

If local areas are to be truly autonomous, they must have suitable powers of action, viz.: the powers to tax, to spend, to contract with other local governments or private firms, and to proclaim, subject to circumscribed limits, regulations and bylaws.

i) Power to tax:

In chapter four we dealt with the importance of an internal revenue base. Receiving revenue from sources inside the local community, rather than from outside it (eg. central revenue sharing schemes) cements the bonds between community and government, fosters accountability and limits wastage or misallocation of resources.

ii) Power to spend:

It is vital that local government be able to respond to perceived resident preferences through their expenditure pattern. Any limits on expenditure will prevent them from doing so, and therefore from optimally allocating resources to public goods.

iii) Power to Contract:

Because local services are so diverse and are produced under diverse circumstances, it is essential that communities be able to combine together for the provision of some aspects of these services where economies of scale are available. This they do at present, and must be enabled to continue to do, through mutual contracts, or through contracting with a third party, or a firm or other government institution.

Where this facility is available, discussion of the optimal 'size' of a local community loses its significance. A community which is too small to produce electricity economically will find mutual benefit in purchasing it from a larger neighbour, or from joining its like-sized neighbours in a 'metropolitan' venture. If this same community should find that its fire department could serve a larger area, it will find advantage in offering its services to its neighbours. Freedom of contract combined with the other conditions for local autonomy will ensure that communities are able to benefit from whatever economies of scale are available, without being committed to sharing all things with a given collection of neighbours, whether there are benefits to be had or not.

iv) : Power to Regulate:

As an institution which exists fundamentally to internalize the externalities that community living generates, the local government needs to be able to pass and enforce regulations, particularly those affecting land use. By means of such regulations, individuals are prevented from imposing externality costs on the community by, for example, the construction of high rise buildings which reduce the scenic value of the community to its residents. In this way, uncertainty regarding the services which flow from residential buildings is reduced and the value of the whole community is enhanced. In this sense, then, zoning regulations are an important public good, and must receive attention in the design of a constitution for local autonomy.

d) : The Property Market:

The model presented in this thesis clearly outlines the importance of a market for real estate in the allocation of resources to local public goods. It is through the purchase of property that one acquires a stake in the services provided by a local government. The value of those services become, we have argued, embodied in the capital value of the real estate. This capitalisation process is clearly inhibited by the severe limits placed on property ownership in South Africa. The prohibition on land ownership by Blacks in South Africa has the effect of simultaneously preventing Blacks from acquiring an interest

in their local governments. The natural pressure to create local authorities is accordingly diminished, as is the accountability of existing local administrations.

A similarly inhibiting role is performed by the system of housing subsidy, which effectively prevents the price of housing from reflecting any characteristics of the building site or local amenities. The essential link between government and community is therefore broken, and the economic processes of resource allocation rendered inoperative.

e) Representation:

Where the foregoing conditions are present competition between jurisdiction will as we have discussed, ensure responsive provision of local services. Where they do not exist, or exist only in limited form, the allocation of resources to local public goods will diverge from the socially preferred mix and level.

Even where the economic mechanisms are in existence and are operating in an efficient way, it remains essential that the political process at the local level be a truly representative one. In chapter two we discussed the significance of the political process in the process of articulating supply and demand forces within public goods institutions. Epple and Zelenitz⁴ confirm that competition among jurisdictions does not, by itself, guarantee public sector efficiency. Despite the ability of residents to vote with their feet, land itself, due to its immobility, generates rents, some of which can be captured by local government by for example expanding activities beyond efficient levels.

This conclusion is of vital significance to communities in South Africa which are being offered, in many cases a 'dispensation' which is not only defective in terms of the economic characteristics outlined above, but in addition fails to provide appropriate democratic processes for articulating local preferences and priorities.

Autonomous local communities are an important institution in the market economy through which an essential category of goods and services are provided. Recent political moves towards their establishment can have very favourable consequences for the provision of local services.

The danger exists, however, that local governments will be created, which because they are lacking in the essential characteristics we have outlined above, will be unable to perform effectively. Instead of providing greatly appreciated local services, they will provide less important ones. Instead of striving to follow a rational, effective financial policy, local officials will play safe, by following central government suggestions instead of pursuing the interests of local communities.

Autonomous local government is an essential institution for providing much needed local services to the rapidly growing cities of South Africa. It is to be hoped that current policy directives will encourage them, not stifle them.

NOTES TO CHAPTER TEN

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3. Tiebout, C., op cit, p.209.
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ABBREVIATIONS

A.E.R.	American Economic Review
I.E.A.	Institute for Economic Affairs
J.E.L.	Journal of Economic Literature
J.P.E.	Journal of Political Economy
Q.J.E.	Quarterly Journal of Economics

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the addition to urban populations is Black. Black local areas are represented by non-democratic institutions, principally Administration Boards. Such institutions, being non-democratic, tend to be unduly risk averse, and avoid incurring debt. This is to the detriment of local areas, and results in an absence of local facilities and essential services.

In the following chapters we will examine some of the proposals put forward for the solution of the problems presented by the lack of local government funds. Chapter Eight will examine a proposal put forward by the Browne Committee, to establish methods of internal financing. Chapter Nine will look at some of the proposals put forward by the Presidents Council for local authorities.

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