ASPECTS OF SOUTH AFRICAN STATE WELFARE POLICY: A STUDY IN PUBLIC FINANCE AND INCOME REDISTRIBUTION

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I, Delia Hendrie, submit this thesis for the degree of Master of Arts in Economics. I claim that this is my original work and that it has not been submitted in this or in a similar form for a degree at any University.

ABSTRACT

International redistribution studies vary in scope from those which investigate the full range of all benefits and costs of the fiscal system to others restricting their coverage to the distributive impact of a single expenditure or tax. In South Africa relatively little research has been directed to the distributive consequences of state spending and taxing policies. The few existing studies have mainly concentrated on race as an explanatory variable in analyzing budget incidence.

This thesis adopted a new technique of measuring the incidence of benefits obtained from state spending and the burdens imposed by tax payments. The first step involved constructing household-level microdata files for sample households. Secondly, allocation routines were developed for selected expenditures and taxes whereby the benefits and costs of fiscal action could be assigned to households. Lastly these routines were applied separately to the files of each household. The distributive effects of the expenditures and taxes could then be analyzed with respect to any relevant household variable.

There were 666 sample households drawn from urban African and Coloured areas in Durban and Cape Town. The original survey was conducted in 1982 and covered selected squatter and sub-economic housing communities identified as 'poor'. Although initially conducted with a view to investigating the perceptions and attitudes of respondent households, there was sufficient detail extracted from the questionnaire also to allow this study of budget incidence to be undertaken.

Expenditures and taxes covered in this analysis were those for which benefits and costs could be more readily allocated to individuals and households. The welfare expenditures included were social security payments, education, health, housing and transport. For taxes, only the burden to sample households of income taxes, general sales tax, customs duties and excise duties were considered. For each of these expenditures and taxes procedures were established to quantify and allocate benefits and burdens to households.

Household characteristics which were found to be significant in determining the distributive effects of fiscal actions were income, race, household size and settlement type. The influence of each of these variables was investigated in regard to the benefits obtained from state welfare spending and the burdens imposed by tax payments. Different entitlements or burdens could usually be explained by underlying household-specific demographic characteristics or by the special circumstances in which households found themselves.

Four results were identified as having potentially important implications for public policy. These were:

(a) the lack of adequate social security provision for households in obvious need;

(b) the cumulative effect of discriminatory welfare entitlements favouring Coloured over African households;

(c) the potentially prohibitive cost to the poor of the privatization of welfare services; and

(d) the regressive impact of general sales tax on the overall tax system.

This partial analysis of fiscal incidence is a contribution to research into redistribution; a field of public sector economics still in its infancy. Theoretical analysis and empirical findings about the fiscal system are important to guide in the choice of policies regarding expenditure and tax systems. These are decisions which have a direct effect on the levels of social and economic welfare in society.

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INTRODUCTION

Almost all government policies will affect the distribution of income, even if this is not their primary objective. Particularly important in terms of their effects on income distribution are state policies relating to welfare spending and taxing. These constitute the core of the welfare state, or 'mixed economy', a social system to have emerged in varying degrees and forms within most capitalist countries.

South Africa is no exception with public spending on some welfare items pre-dating Union. The range of these publicly provided goods and services has steadily increased and by 1983 welfare spending accounted for approximately 35% of total government expenditure.

However, there is evidence in a number of countries of a developing lack of confidence in the Welfare State with deliberate policies being introduced to cutback on the provision of social services. This has followed on the low levels of economic growth and the high rates of unemployment which have strained the resources necessary to finance high levels of welfare spending.

Analysis into the redistribution to occur through the tax-transfer process presents complex theoretical and empirical problems. This has resulted in a lack of knowledge about who does in fact benefit from increases in public spending and through changes in tax policies. In some cases findings of research into the welfare budget have surprised by not conforming to original impressions regarding fiscal incidence.

Within the South African context welfare provision has become a particularly sensitive area of inquiry. During the 1970s and 1980s problems associated with state provided services have been the centre of growing mass protest and resistance. Demonstrations of student and community boycott action have been directed at each of education, housing and transport which has resulted in them having become highly politicised.

This research is exploratory and investigates some aspects of South African state welfare policy. Certain items of expenditure and taxes were selected and the patterns of their incidence examined for a sample of urban African and Coloured households selected from communities identified as 'poor'.

The method followed was based on a procedure established in recent studies of redistribution in the United States and United Kingdom.

The thesis is planned as follows: CHAPTER 1 presents the theoretical framework needed to explain and understand the process of redistribution through the welfare state. At a broader level the debate hinges around ideological beliefs and values with theories closely linked to normative positions.

CHAPTER 2 selectively reviews both international and South African studies which have attempted to measure redistribution brought about through government spending and taxing policies. In CHAPTER 3 the objectives of this study are explained together with some general methodological issues common to all similar budget studies. The last section in this chapter is descriptive and gives an introduction to the demographic characteristics of households in the sample.

CHAPTER 4 provides a historical background to the development of state financing for each of the five expenditures covered, namely: social security payments, eduation, health, housing and passenger transport. Also included in this chapter are the allocation routines for expenditures whereby the benefits from state spending were assigned to households.

CHAPTER 5 and 6 detail the empirical investigation. In CHAPTER 5 the benefits to respondent households from welfare expenditures are analyzed with respect to various household characteristics. The following were found to be of interest: income, race, household size and settlement type. CHAPTER 6 looks at the tax side of fiscal incidence and examines the burdens of income tax, general sales tax, customs duties and excise duties on households in the sample.

Finally, CHAPTER 7, presents concluding remarks which include some of the problems encountered, future research suggestions, major findings and a general discussion on welfare policy in South Africa.

CHAPTER 1 THEORETICAL FRAMEWORK

1.1 THE DEVELOPMENT OF ECONOMIC THOUGHT ON INCOME REDISTRIBUTION

Early concern with equity and justice in the distribution of income was blurred by a lack of clarity arising from the natural law concepts. These concepts, which originated in the works of Grotius (1583 - 1645), Hobbes (1588 - 1679) and Locke (1632 - 1704), played a central role in the politics and political philosophy of the 18th and 19th centuries.[1]

It was in the use of the term 'natural' that ambiguities arose. In their analyses of economic justice these early philosophers had suggested the existence of natural rights and laws of nature which, if adhered to, would lead to some natural harmony and just order. Locke, for example, conceived of the law of nature as the pursuit of happiness in obedience to a natural impulse and of it being the duty of the state to secure this happiness by guaranteeing to every man the fruits of his labour. This argument assumed that the actual or 'natural' wage existing under given institutional arrangements was of necessity the just or 'natural' one.[2]

Classical political economists continued with this dual interpretation of the natural law concept. 'Natural' was used both to describe 'what actually was' and 'what ought to be'. An important distinction between the positive and normative interpretation was first made in 1836 by James Mill (1773 - 1836) when he outlawed questions relating to justice and the distribution of income from the scope of political economy. This latter he felt, should limit itself to positive theory.

> "The questions : to what extent and under what circumstances the possession of wealth is, on the whole, beneficial or injurious to its possessor, or to the society of which he is a member? what distribution of wealth is most desirable in each different state of society? and what are the means by which any given country can facilitate such a distribution? - all these are questions of great interest and difficulty, but no more form part of the science of Political Economy, in which we use the term, than navigation forms part of the science of Astronomy." [3]

Yet economists continued to comment about the effects of alternative distributive arrangements on the general level of welfare.

The classical economists were conservative in their views regarding redistribution being in agreement that it was not in the common interest. Reasons for these views differed. For example, whereas Adam Smith (1723 - 1790) had argued the importance of income inequality in capital formation, the hiring of productive labour and the resultant maximization of incomes, Malthus (1766 - 1834) was opposed to redistribution in favour of the labouring classes suggesting that this would increase the birth rate among workers thus driving down wage rates and leading to no permanent improvement in their living standards.

Ricardo (1772 - 1823) too, supported inequality justifying it on the Rawlsian principle of it being in the interests of the poorest. The alleviation of poverty could best be achieved by promoting economic progress and any redistribution would be detrimental to work incentives and savings.

> ".....(it) would be more fatal to the poor labourer than to the rich capitalist himself. This is so self-evident, that men very little advanced beyond the very lowest stations in the country cannot be ignorant of it, and it may be doubted whether any large number even of the lowest would, if they could, promote a division of property." [4]

A shift from these strict laissez-faire doctrines of the early classical economists was evident in the writings of John Stuart Mill (1806 - 1873) with some concern expressed for equity and justice in distribution. He distinguished between the laws of production which he saw as 'physical truths' and the laws of distribution which depended on the laws and customs of society. Under different institutional arrangements the distributive outcomes would also be different. This was a break with the classical view of the 'natural' distribution resulting from strict laissez-faire. Mill also broached the idea of progressive taxation - not of income - but of inheritence or estate duties. The classical beliefs regarding taxation was that it should disturb the existing distribution of income as ? little as possible which called for low non-progressive rates.

In the same year that Mill was breaking new ground in his Principles of Political Economy, Marx (1818 - 1883) and Engels (1820 - 1895) published the Communist Manifesto with its very different analysis and prognoses of laissez-faire capitalism. To them the natural wage of the classical economists was no more than the subsistence wage - the minimum wage necessary for a worker to reproduce himself and his family. The distribution of income was the result of the legal and political framework upholding private property rights.

As Marxist thought developed, it was to be argued that any redistribution of income was just an attempt to lessen the antagonism of the existing system. This however was merely a stage in the process of development of laissez-faire capitalism; an admission of the conflict between classes. This Marxist alternative is discussed in more detail in section 1.3.

The decline in classical economics in the latter part of the nineteenth century was accompanied by a major break in thinking regarding distribution and social justice. Contributing to the change was the return of the utility concept to economic theorizing. The English utilitarian Henry Sidgwick (1838 - 1900) acknowledged his debt to Bentham's (1748 - 1832) interpretation of the principle of utility when he argued for equality in the distribution of income and wealth on the grounds of this maximising 'aggregate satisfactions' in society.[5] In direct contrast to James Mill he explicitly proclaimed justice in distribution to be one of the major objectives of economic policy.[6]

Edgeworth (1845-1926) accepted this utilitarian stance and from the principles of diminishing utility justified progression in taxation.[7] Inequality of wealth was now seen as wasteful and recommendations for redistribution now became justified on economic grounds. In developing his progressive distributional theory, with social utillity as its ultimate end, Edgeworth pioneered the idea of interdependent utility functions.

> "...between the two extremes, between the frozen pole of egoism and the tropical expanse of utilitarianism, there has been granted to imperfectly-evolved mortals an intermediate temperate region; the position of one for whom in a calm moment his neighbour's happiness as compared with his own neither counts for nothing, nor yet 'counts for one', but counts for a fraction. We must modify the utilitarian integral....by multiplying each pleasure, except the pleasures of the agent himself, by a fraction - a factor doubtless diminishing with what may be called the social distance between the individual agent and those of whose pleasures he takes account."[8]

Recent theories of redistribution - discussed in the following section - have explored these possibilities.

Popular demands around this time - the close of the last century and the beginning of the present one - were also moving in the direction of redistribution with the intellectual shift from the classical Ricardo-Mill doctrines to neo-classical economies significantly influencing the politicians in their attitudes on major issues of distribution and taxation. In particular, attitudes were changing in regard to both poverty and unemployment. It was increasingly acknowledged that the state had a role to play in relieving at least the hard core of poverty.[9]

Gratuitous payments to persons in distress were supported by Alfred Marshall (1842 - 1924) who constantly rejected that these would discourage savings and capital formation - as suggested by Smith - or necessarily reduce wages through reckless procreation - as proposed by Malthus.[10] His successor at Cambridge, A C Pigou (1877 - 1959), shared these sentiments and included unemployment on the agenda for social reform. Regarding redistribution in general, Pigou held the utilitarian view and wrote:

> "It is evident that any transference of income from a relatively rich man to a relatively poor man of a similar temperament, since it enables more intense wants to be satisfied at the expense of less intense wants, must increase the aggregate sum of satisfaction." [11]

This he qualified with the proviso that redistribution must have no detrimental effect on national product.

The law of diminishing marginal utility as a base for arguing that redistribution would lead to general increases in economic welfare was shaken in 1932 by Lord Robbins. With there being no known way of measuring the magnitude of one persons satisfaction against that of another, Robbins questioned the possibility of making interpersonal comparisons of utility.[12] This inability destroyed the so-called scientific grounds put forward by neo-classical economists for redistribution - although subsequent attempts to salvage the argument by both Abba Lerner, one of Robbins' former students, and Amartya Sen had egalitarian implications in that both concluded that it was best to distribute incomes equally. [13] With the exception of these attempts, interest by economists in questions of redistribution declined, with the new welfare economics which emerged concentrating on the necessary conditions to be met for an efficient allocation of resources.[14]

The demise of the utilitarian theory by Robbins did not however result in a reversal of economic ideas regarding poverty and unemployment. The inability of the market economy to be selfadjusting had already been documented by, for example, both Marshall and Pigou. And the severe economic and social costs of the Great Depression - as witnessed by decreased production, mass unemployment and political unrest - reinforced Keynes' (1883 - 1946) position regarding the need for government intervention on the demand side of the economy to ensure a sufficient level of economic activity. [15] Keynesian doctrine - together with more liberal conceptions of social justice - were instrumental in increasing the scope of state activity that led to the emergence of the welfare state in the years following the second World War.

During the 1950s and 1960s there was generally a broad acceptance of the welfare state.[16] Thereafter with the problems of stagflation which have been in evidence from the 1970s the legitamacy of the welfare state has been increasingly questionned on a number of fronts regarding both its efficiency and effectiveness.

The normative question regarding the amount of redistribution which ought to take place elicits a continuum of responses varying according to ideological beliefs and values. From the Right - the anti-collectivists or market liberals - has come the rejection of the mixed economy and the call for a return to the free-play of market forces as set out in the classical doctrines. Premised on the values of individualism, liberty and private property, inequality is acceptable as the natural outcome of the market order with no need for public interference to rectify this. Any redistribution by the state should be strictly limited to the minimal amount for those few unable to provide for themselves.

This contrasts with other stances advocating the need for state provision. These vary in degree from the moderate collectivists (e.g. W H Beveridge, T H Marshall, R Pinker) in the Centre to the social democrats on the Left (e.g. Anthony Crosland, R M Titmus, J Le Grande).[17] All have a commitment to the welfare state, political democracy and freedom but differ in the extent of state involvement they would recommend. Moderates favour more limited social protection of citizens against poverty and extreme inequality; social democrats propose a more direct assault on inequality with the universal provision of generous social services.

More recently in response to the problems presented by welfare capitalism, a variant standpoint has emerged - corporatism - which, while supporting the integrative functions of the welfare state, is against the institutional separation by collectivists of social welfare from the functioning of the economy. Corporatism acknowledges an interdependence by linking the distributional issues of social policies to the economic issues of production: 'the corporatist view recognises the need to harmonise the economic and social within society as a whole'.[18]

Leaving aside these normative approaches to income redistribution, the next two sections turn to positive theories: that is, to those seeking to explain why the redistribution that occurs actually takes place. These are more recent in origin with both non-Marxist and Marxist theories originating in and around the 1960s. These alternatives are discussed respectively in sections 1.2 and 1.3.

The non-Marxist theories focus on the actions of individuals and groups and suggest reasons why they behave so as to redistribute market-determined incomes. The Marxist theories concentrate on the welfare state - rather than specifically on redistribution - and explain the origins and functions of social policy in the context of welfare capitalism.

1.2 NON-MARXIST THEORIES OF INCOME REDISTRIBUTION

These can be separated into three distinct groups of theories:

*1 those based on assumptions of interdependent utility functions;

*2 those involving a voting process where coalitions exercise their political power to redistribute to themselves;

*3 those which assume that the state is used as an insurance agent to provide coverage against risks that the private market cannot insure.

1.2.1. INTERDEPENDENT UTILITY FUNCTIONS

Underlying these theories is the assumption that the distribution of income has effects that are not priced in the market. This results in the need for some form of collectivised redistribution. In broad terms, the theories divide into two categories: those in which the motive for redistribution is direct; and those in which redistribution is viewed as part of a process to achieve some other objective.

When the motive for redistribution is direct, individual behaviour is assumed to be altruistic. This form of the model was developed by H.M. Hochman and J.D. Rodgers who argued that if individuals derive utility, not only from personal consumption but also from the income level of others, then redistribution is beneficial to both taxpayers and recipients.[19]

In a two-person world, with person A having a higher income than person B, then under the assumption of interdependent utility functions, A's utility function will be of the form:

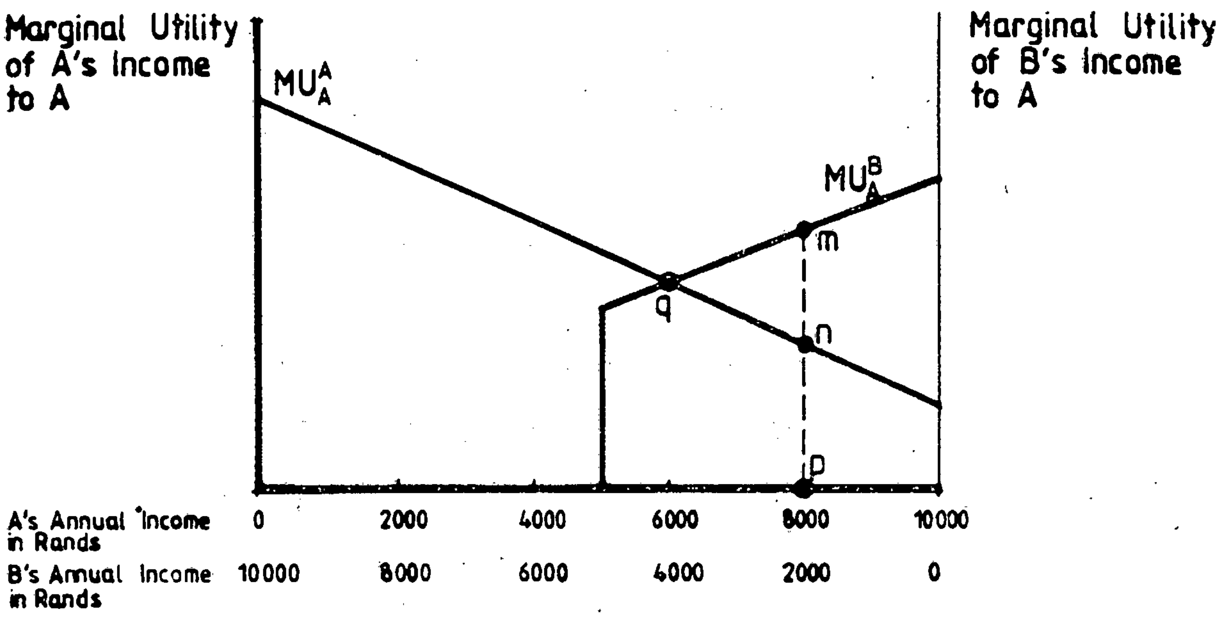
$$U_A = f\ (X_{A1},\ X_{A2}\ \ldots\ldots X_{An};\ Y_B)$$

where X_{A1}, ... X_{An} are goods consumed by person A and Y_B represents person B's level of income. Figure 1 assumes:-

(a) a decreasing marginal utility of income schedule for A, MU^A_A and;

(b) a decreasing marginal utility to A of person B's income level MU^B_A until B reaches an income level of R5000pa; thereafter A obtains no utility from further transfers to B.

FIGURE 1 REDISTRIBUTION WITH INTERDEPENDENT UTILITY FUNCTIONS



Suppose A's initial share of total income to be R8000, and B's R2000. Given this distribution of the total income of R10 000:

$$MU_A^B > MU_A^A.$$

and to increase his own utility A will transfer some of his income to B. Distributional efficiency will be at point q where $MU_A^B = MU_A^A$. At this point income inequality has been reduced with A's share of total income now R6000 and B's share R4000. Hochman and Rodgers extended this simplified version into a many-benefactor many-recipient situation and calculated patterns of income redistribution under alternative assumptions.

welfare. For example, a more equal distribution of income may lead to greater social stability which would be of benefit to the quality of life of transferors through the positive effect on their personal security and well-being.

These theories can be formalized by postulating a composite utility function for A in which at least one good is dependent on the redistribution of income as an independent variable in its production function. That is:

$U_A = f\ (X_{A1},\ X_{A2}\ \ldots\ X_{An})$ and

$X_{Ai} = g\ (Z_1,\ Z_2)$ where Z_1 is the redistribution of income.

Here the motive for redistribution is a self-interested desire to reduce some of the manifestations of inequality rather than a genuine concern for the plight of the less well-off.[23]

1.2.2. REDISTRIBUTION THROUGH A VOTING PROCESS

These theories argue that in the world of democratic, competitive politics coalitions exercise their voting rights to redistribute selfishly to themselves. One such theory is that proposed by Anthony Downs - originally formulated as an economic theory of democracy - but having implications for redistribution.[24]

Downs' theory assumed that politicians formulate policies and serve interest groups in order to gain office. With the skewed pre-tax distribution of income in most countries - relatively few persons having high incomes and most having low incomes - a government can gain votes through redistribution by depriving a few persons of income (thereby alienating them) and transferring it to the majority (thereby gaining their support). If votes are distributed equally, the poorest 51 percent of the population can use their numbers to take money from the wealthy. A proposal to redistribute to any group other than this coalition of the bottom 51 percent can be defeated by one that proposes redistribution to this group alone.[25]

In his formulation of a voting theory Gordon Tullock was in agreement with Downs that people seek to use the government to gain special benefits at a cost to others, but critical of Downs' assumption that all transfers are vertical between different income groups.[26]

He argued that in the real world massive redistribution of income occurs through the political process - not from the wealthy to the poor - but horizontally among the middle classes.[27] This redistribution does not meet any egalitarian criteria but depends on which groups organize to obtain transfers and the success of their representatives to lobby for these differential benefits. Income alone does not usually form the basis for group organization. The costs and problems of organizing Downs' bottom 51% of income recipients would be formidable and for this reason it would be unlikely this group would rally together to gain special privileges. But for other groups, such as trade and employer associations, politically powerful organizations already exist which are in a strong position to induce government to act in a way beneficial to their members. Tullock's theory suggested that it is these groups - rather than the poor - which are the major beneficiaries of state redistribution.

1.2.3. THE INSURANCE MODEL

The insurance model theory proposes that the state is used by citizens as an insurance agent to provide coverage against risks that the private market fails to insure.[28] As with private sector insurance where payments are made into a common pool from which claims to members are met, taxes too can be seen as a form of premium payment to the state in return for a form of social protection. In both the private and public 'insurance sectors' redistribution occurs to members whose circumstances are such as to call for higher than average claims.

Two reasons have been put forward to explain the failure of private markets to develop in areas traditionally covered by the government. Firstly there may be imperfections in the capital market that prevent the individual from borrowing sufficient funds to purchase insurance at the beginning of his earning years.[29] Secondly some of the events insured against by the state are not fully random in their incidence thus preventing them from being insurable in the private sector.[30]

In general, government provision via cash benefits to recipients is more amenable to this interpretation of redistribution than benefits provided in-kind. For example the event of becoming unemployed is not equiprobable across income and occupation groups with the incidence generally higher for the less well-off. The latter would form high risk groups for whom the premiums required by private insurers would most probably not be affordable - hence the need for the state to intervene as insurer. A further complication working against the provision of private insurance for unemployment would be the ability, under certain circumstances, of individuals to affect their probability of becoming unemployed. To the extent that individuals find work burdensome and seek to modify their behaviour to avoid it, the risk of being unemployed may be unsuitable for coverage under private insurance schemes.

1.3 MARXIST THEORIES OF THE WELFARE STATE

It was not until the late 1960s and early 1970s that Marxist analysis systematically focussed on the capitalist state [31] - of which the welfare state was an important aspect. Marxists were faced with the problem of explaining the contradictions inherent in welfare capitalism. On the one hand the growth of government appeared to display positive features enhancing social welfare and mitigating the hardships of the free-market economy. On the other the welfare state appeared as an agency of domination, control and repression.[32]

In particular the question became that of why welfare had developed to such an extent in capitalist societies. For some writers this was explained by the functional needs of capital. O'Connor, for example, has argued that in order to reproduce the capitalist mode of production the modern state must perform two basic and often contradictory functions: accumulation and legitimisation. The first refers to the economic functions of ensuring profitability and growth; while the second refers to the sociopolitical functions of maintaining or creating the conditions necessary for social harmony.[33] Accordingly expenditures by the state can be divided into those which are productive for capital in augmenting the rate of profit and accumulation in the economy; and those which are unproductive but necessary to fulfil the state's legitimisation function.

Both functions have meant an increased role for the capitalist state. In particular the Depression years of the 1930s exposed the need for state regulation of the economy. Thereafter state involvement in maintaining high levels of employment, output and growth became part of the accumulation function. With the course of capital accumulation new requirements sprung up in the field of social policy. Social security systems were developed; the need for a skilled and healthy workforce emerged; and urbanisation prompted the provision by the state of infrastructure, housing, transport and other urban amenities.[34] Although O'Conner separated accumulation and legitimisation for analytical purposes, empirically most state activities encompass both functions; with conflicts sometimes arising between these dual goals of social policy.

However for some Marxists it has not been sufficient to explain the origins of the welfare state solely in terms of the needs of capital. The growth of an organised working class, opposed to domination, has also exerted pressures for social expenditures. It has been argued that collective social provision has also come about in response to these working class demands and to ignore these progressive aspects of the social services would be to lose sight of real gains that have been won by labour.[35] Gough points out that in their interpretation Marxists have tended to veer towards one or other of two basic positions.

> "Some writers see the welfare state as a functional response to the needs of capital ... (others) as the unqualified fruits of working class struggle, as concessions wrested from an unwilling state...(most) stress both aspects of the welfare state but leave open the way in which they are related."[36]

Mishra suggested though, that the overall Marxist argument is that it is the logic of capital that prevails.[37]

In either context the welfare state has developed to counteract basic contraditions of advanced capitalism. In turn it has thrown up its own set of contradictions as evidence of the conflict between the functioning of an advanced capitalist economy and a system of state involvement and welfare. These conflicts are manifest in the fiscal crises currently being experienced in capitalist countries. For the working class the positive features of the welfare state in the form of state expenditures comprise a social wage - albeit one that gets paid for through taxes. But the working class is not a monolithic group with tax burdens and state expenditures uniformly spread. It is possible to distinguish between different groups of workers having distinct and competing interest. Westergaard and Resler have noted these sectional interests within the provision of state welfare.

> "The impact of social services has tended ... to be divisive: to draw lines between different categories of workers ... social security provisions distinguish 'the poor' from others; those workers who are given special help ... from those who use only the standard services. That by itself is liable to foster mutual resentments."[38]

This adds a further dimension to the Marxist analysis of the welfare state and redistribution, as outlined in this section. The growth of state welfare policies must be understood as part of a post-war settlement between capital and labour with benefits and burdens not equally spread between different fractions of labour.

In concluding this section it must be emphasized that it has not been possible here to examine systematically all the different strands of Marxist thought on the welfare state. Rather the argument has been presented in a very broad and general form with only the fundamental ideas and issues being covered.

FOOTNOTES

1. See Bonar, J, Philosophy and Political Economy, London, George Allen and Unwin Ltd, 1967, relevant sections.

2. Ibid.

3. Quoted by Hutchinson, T W,'Economists and Social Justice in the History of Economic Thought',.n Economics and Equality, A Jones (ed),Oxford, Philip Allan, 1976, pp 49-50.

4. Ibid, p 51.

5. Hutchinson, T W, A Review of Economic Doctrine, Oxford, Clarendon Press, 1953, p 283.

6. Hutchinson, T W (1976), op cit, p 53.

7. Ibid, pp 54-55.

8. Quoted by Culyer, A J, The Political Economy of Social Policy, Oxford, Martin Robertson, 1980, p 58.

9. Titmuss, R M, Social Policy, London, Allen and Unwin, 1974, pp 30-31.

10. Hutchinson, T W, (1976), op cit, p 57.

11. Quoted by Culyer, A J, op cit, p 86.

12. Robbins, L, An Essay on the Nature and Significance of Economic Science, London, Macmillan, 1935, 2nd edition.

13. Lerner, A P, The Economics of Control, London, Macmillan, 1944; Sen A K, On Economic Inequality, Oxford, Clarendon Press, 1973.

14. Culyer, A J, op cit, pp 95-96.

15. Mishra, R, The Welfare State in Crisis: Social Thought and Social Change , Brighton, Wheatsheaf Books, 1984, p 26.

16. Ibid, p 12.

17. Ibid, pp 121-160.

18. Ibid, p 104.

19. Hochman, H M, and Rodgers, J D, 'Pareto Optimal Redistribution', American Economic Review, vol 59, 1969, p 542-557.

20. Rodgers, J D, 'Explaining Income Redistribution', in Redistribution through Public Choice, H M Hochman and G W Peterson, (eds), New York, Columbia University Press, 1974, p 185.

31. For example Milliband, R, *The State in Captialist Society*., London, Quartet Books, 1973 (1st edn 1969); Poulantzas, N, *Political Power and Social Classes*, London, New Left Books, 1973 (1st edn 1968).

32. Gough, I, *The Political Economy of the Welfare State*, London, Macmillan Press, 1979, p 12.

33. O,Connor, J, *The Fiscal Crisis of the State,* New York, St. Martin's Press, 1973, p 6.

34. Gough, I, op cit, pp 32-37.

35. Ibid, p 14.

36. Ibid, pp 56-57.

37. Mishra, R, op cit, p 73.

38. Westergaard, J and Resler, H, *Class in a Capitalist Society*, Hammandsworth, Penguin, p 178. Quoted in Mishra, R op cit pp 94-95.

CHAPTER 2 REVIEW OF SELECTED STUDIES OF REDISTRIBUTION

2.1 INTRODUCTION

?

This research study focussed on redistribution through the welfare budget. Until fairly recently the distribution of benefits from public expenditures had received little attention in the study of public finance with the emphasis being on taxation.[1] Brown and Jackson have suggested the following reason for this:

> First there is a lack of information on the distribution of public expenditure benefits. Second, the theory of public expenditure benefit incidence is relatively underdeveloped. Third, there has been a general lack of regard by fiscal economists that public expenditure benefits matter to the income distribution, and finally, many of the other problems arise because public outputs are difficult to measure.[2]

It was in 1954 that Samuelson made an important contribution to public expenditure theory when, with the incorporation of collective consumption goods into individual utility functions, he formulated the theoretical conditions for optimal public expenditure.[3] Following on this, and with the increases in the relative size and scope of public expenditures, has come the realisation of their importance to redistribution ... 'Interest in the distribution of public expenditure benefits is now gathering momentum'.[4]

Ultimately though, concern rests with the assessment of benefits from public expenditure together with the burdens of taxation. A joint statement detailing expenditure benefits and tax burdens is loosely referred to as a welfare budget.

2.2 INTERNATIONAL STUDIES

The construction of a full welfare budget was pioneered in Britain by Barna with his pre-war investigation for 1937 of the redistribution of incomes through government spending and tax collections.[5] Earlier calculations had been made of the incidence of taxation by income class by Jevons (1869) and Samuel (1919).[6] For later years budget studies for Britain included those by Weaver (1950), Peacock and Browning (1954), Cartter (1955), Nicholson (1964), Merrett and Monk (1966) and Nicholson and Britton (1976). There were also the studies conducted annually from 1957 by the government Central Statistical Office, together with analyses and related papers by their initiator J.L. Nicholson. In the United States early studies concentrated on the tax side - for example, Colm and Tarasov (1941) and Musgrave, Carroll, Cook and Frame (1951). This reflected in part the difficulties met when dealing with public expenditure. However, subsequent studies incorporated the effects of both tax and expenditure programs. For example, there were those by Adler (1951), Conrad (1954), Gillespie (1965), Musgrave, Case and Leonard (1974), Reynolds and Smolensky (1974), Pechman and Okner (1974), Reynolds and Smolensky (1977), Ruggles (1979) and Ruggles and O'Higgins (1981).[7] ?

Studies have not been restricted to developed economies. One program under which numerous studies of government redistribution policy were incorporated was the Research Program on Income Distribution and Employment sponsored by the International Labour Organisation (ILO). With the switch in emphasis on development strategies from growth to employment creation, and then to the provision of basic needs, the importance of the impact of specific types of government expenditure and particular taxes led to a series of studies on the distributional consequences of government.[8]

Traditionally budget studies have attempted to allocate benefits from public expenditures and burdens from tax payments across income groups. This has involved three major steps:

(a) choosing an income base which gives the mean original income by income group in the absence of government;

(b) adding government expenditures by income class to this original income;

(c) subtracting taxes by income class to give resultant income by income group, given the existence of government.

In matrix form the problem could be defined as follows:

$$\underline{y}^1 = \underline{y}^o + \underline{gB} - \underline{xT}$$

or in expanded form as:

$$\left(y_1^1\ y_2^1 \ldots y_j^1\right) = \left(y_1^0\ y_2^0 \ldots y_j^0\right) + \left(g_1\ g_2 \ldots g_k\right) \begin{pmatrix} b_{11} & b_{12} \ldots & b_{1j} \\ b_{21} & b_{22} \ldots & b_{2j} \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ b_{k1} & b_{k2} \ldots & b_{kj} \end{pmatrix}$$

$$- \left(x_1\ x_2 \ldots x_m\right) \begin{pmatrix} t_{11} & t_{12} \ldots & t_{1j} \\ t_{21} & t_{22} \ldots & t_{2j} \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ t_{m1} & t_{m2} \ldots & t_{mj} \end{pmatrix}$$

where ${y^1}_i$ = the final mean income of the ith income group;

${y^o}_i$ = the original mean income of the ith income group;

$(g_1\ g_2 \ldots g_k)$ = the vector giving the actual magnitude of the k government expenditures allocated;

$\underline{B}$ = a matrix of order k x j giving proporational distributors for each of the k government expenditures across the j income groups, i.e. row entries sum to 1,00 for each row;

$(x_1\ x_2 \ldots x_m)$ = the vector giving the actual magnitude of the m different taxes collected;

$\underline{T}$ = a matrix of order m x j giving proportional distribution for each of the m taxes across the j income groups, i.e. row entries sum to 1,00 for each row.

Theoretical and empirical problems are met in the construction of each of the vectors in the above equation. These are discussed in more detail in chapter 3 but centre around the following:

(a) the unit of allocation to be used for redistribution, individual or household;

(b) the coverage of the income concept to measure original income;

(c) the choice of government expenditures to be included in the analysis;

(d) the assumptions adopted in assigning the benefits of government expenditures across income groups;

(e) the choice of tax receipts to be included in the analysis;

(f) the assumptions adopted in assigning the incidence of tax receipts across income groups.

In their 1977 study, Reynolds and Smolensky concisely explained their choices in the construction of the above vectors. It will be useful to outline these as fairly typical of the methodology employed generally by welfare budget studies. The question they posed was: What happens to the size distribution of income - across income groups - when household income was defined so as to include the benefits and burdens of all levels of government?[9]

Their choice of unit of analysis was the income-earning or income-spending unit regardless of whether this constituted a single individual or a multiperson unit. Original income was taken as Net National Product on the grounds that all claims to net output accrued to people. Their choice of income intervals was dictated by their data which did not consist of observations on individual income units, but was pregrouped by interval. For example, in 1970, they used the eleven income intervals as defined by the United States Current Population Survey: under \$2 000, six \$1 000 increments to \$8 000, \$8 000 to \$10 000, \$10 000 to \$15 000, \$15 000 to \$25 000, and over \$25 000. The order of the original mean income vector $\underline{y}^o$ was therefore 1 x 11 and each entry measured average Net National Product per household for households whose original income fell into that interval.

Regarding government expenditure, this was grouped under the headings listed below. The bracketed text adjacent each expenditure gives the standard distributor used for that expenditure.[10] For example, expenditure on 'elementary, secondary and other education' was distributed across income groups according to the distribution of children under age 18 in each of the income intervals. This was a relatively uncontroversial distributor although it did make the implicit assumption of there being no externalities to society from expenditure on education.[11] More problematic was the distribution of general government expenditures for which beneficiaries could not readily be identified. These were distributed one-half by the distribution of households and one-half by the share of initial income. This was an arbitrary allocation based on the rationale that households benefit on some 'equalitarian basis as well as in proportion to income'.[12]

Federal Expenditure

1. National defence, international affairs, and space research (one-half households; one-half initial income)
2. Other general expenditures (ditto 1 above)
3. Social security (receipts of social security benefits)
4. Veterans' benefits (receipts of veterans' benefits)
5. Net interest paid (interest income)
6. Agriculture (net farm income)
7. Elementary, secondary and other education (children under age 18)
8. Higher education (estimated expenditure on higher education)
9. Highways (expenditure on motor cars)
10. Labour (wages and salaries)
11. Unemployment compensation (receipts of unemployment compensation)
12. Other transfers (receipts of other public transfers)

State and Local Expenditure

1. General expenditures (one-half households; one-half initial income)
2. Public assistance (receipt of public assistance)
3. Agriculture (net farm income)

4. Elementary, secondary and other education (children under age 18)
5. Higher education (estimated expenditure on higher education)
6. Highways (expenditure on motor cars)
7. Labour (wages and salaries)

All expenditures at a federal, state and local level were included under these nineteen heads. The order of the $\underline{g}$ vector was thus fixed at 1 x 19; setting the $\underline{B}$ matrix at 19 x 11.

Taxes were also included for all levels of government, as shown below. As for government expenditure the text in brackets after each type of tax gives the allocation routine used to distribute taxes across income groups. Perhaps most controversial of these distributors is the apportioning of corporate income tax between income groups. This was distributed one-half by the distribution of dividends and one-half by estimated consumption expenditure. With the theoretical debate over the forward-shifting and/or backward shifting of corporate income tax still unresolved, a degree of arbitrariness in this assumption is always inevitable in incidence studies.[13]

Federal Taxes

1. Personal income tax (payment of personal income tax)
2. Estate and gift tax (payment of estate and gift tax)
3. Corporate income tax (one-half dividends; one-half estimated consumption expenditure)
4. Excise and custom duties (estimated consumption expenditure)
5. Social security (payment of social security tax)

State and Local Taxes

1. Personal income tax (as above for federal taxes)
2. Estate and gift tax (ditto)
3. Corporate income tax (ditto)
4. Sales taxes and excise duties (ditto)
5. Social security (ditto)
6. Property tax (one-half estimated consumption expenditure; one half housing expenditure)

Given these distributors for the eleven categories of tax receipts the vector $\underline{x}$ and matrix $\underline{T}$ were determined - $\underline{x}$ was of order 1 x 11 and $\underline{T}$ or order 11 x 11. The problem now became a purely algebraic one. Expenditure per household across income groups was given by $\underline{gB}$; taxes per household across income groups by $\underline{xT}$; and final income given the benefits and burden of all levels of government as $\underline{y}^{o}+\underline{gB}-\underline{xT}$

The results obtained by Reynolds and Smolensky will only be presented in summary form. Although they included the full range of public expenditures and tax revenues in their analysis, they emphasized the partial nature of their results because of the omission of the effects of government operating through channels other than the budget. However, having taken cognizance of this reservation and the limitations imposed by the quality of their data, their major results could be summarised as set out below

(a) Dispersion in the final distribution of income, that is, after government expenditures and tax payments had been accounted for, decreased slightly over the period 1950-1970 although these changes were not statistically significant.

(b) In each of the years 1950, 1960 and 1970 the final distribution of income was closer to equality than the original distribution of income although a comparison between years revealed that the distributive impact of each dollar spent by government had declined over the period.[14]

(c) Disaggregation revealed that over the period changes in the tax system had led to it drifting from 'progressive to proportional or perhaps even slightly regressive by 1970'.[15]

One of the restrictions of the majority of the welfare budget studies, including that of Reynolds and Smolensky just discussed, was their use of grouped data. Households were grouped by broad income categories with benefits from government expenditures and burdens from tax payments distributed across income intervals. This assumed that benefits and burdens were uniformly distributed within any one income class.

An alternative method was that pioneered by Ruggles and O'Higgins in their redistribution analyses for the United States and the United Kingdom.[16] In both cases they used household level microdata as the basis for expenditure and tax allocations. This allowed for benefits and burdens to be applied separately to each household rather than to each income interval as was usually the case. Apart from increases in accuracy, the additional advantage of this method was that it allowed for redistributional effects to be analyzed with respect of household characteristics other than income. Examples of explanatory variables used by these authors were: household size, race and gender of head of household, and number of earners in household.

Microdata files were obtained from the statistical offices of both governments. For the United States the Public Use Sample from the Census of Population was supplemented by data from the Internal Revenue Service's Tax File; for the United Kingdom household records were obtained from the Family Expenditure Survey and augmented with additional estimates from the Central Statistical Office.

In respects other than choice of database, the Ruggles and O'Higgins studies were similar in many respects to that of Reynolds and Smolensky.[17] The unit of analysis was the household; 'original income' of households was taken as income before taxes and benefits; all public expenditures were allocated with the exception of factor returns to lenders and lending by the government; and all tax payments were included. Regarding allocation of expenditure benefits the utility approach was rejected in favour of the cost method. In other words, the benefit to households was measured as the cost of the resource being expended on that household rather than the actual utility to the household.[18]

Table 1 was an example of the results obtained by Ruggles and O'Higgins when the effect of an influence other than income was investigated. In this case explanatory factors chosen were race and gender of household head. It can be seen that there appeared to be significant differences in both taxes and benefits for different race/gender groups. This was not the result of legislative intent but rather caused by correlations between these variables and others which did influence taxes and benefits. When taxes and expenditures were broken down into their component parts, these other influences could be identified. A few of these will be mentioned in brief.

(a) Female-headed households were substantially more dependent on public assistance and social security payments than male-headed households.

(b) Hospital expenditures were higher for non-white households and were, for both races, weighted towards female-headed households.[19] Ruggles and O'Higgins suggested that:

> "it seems fairly likely that the relatively high hospital expenditures allocated to the female-headed households reflect the relatively large numbers of low-income and especially elderly women who may be spending significant amounts of time in public hospitals."[20]

(c) Households headed by non-white males received more in unemployment insurance reflecting the higher rate of unemployment amongst non-whites. Non-white females were more likely to be in occupations not covered by unemployment insurance, and when covered, to have received lower payments with these being proportional to prior earnings.

TABLE 1

NET BUDGET INCIDENCE TO U.S. HOUSEHOLDS BY RACE AND GENDER OF HOUSEHOLD HEADS 1970

	RACE AND GENDER OF HOUSEHOLD HEAD				
	TOTAL	WHITE MALE	NON-WHITE MALE	WHITE FEMALE	NON-WHITE FEMALE
Mean Household Income in dollars per annum	9 685	11 304	7 893	5 125	4 207
Mean Taxes in dollars per annum	5 350 (55,2)	6 204 (54,9)	4 720 (59,8)	2 967 (57,9)	2 939 (69,9)
Mean Expenditures in dollars per annum	5 433 (56,1)	5 598 (49,5)	5 693 (72,1)	4 584 (89,4)	6 434 (152,9)
Net Budget Incidence i.e. Expenditures minus Taxes	83 (0,9)	-606 -(5,4)	973 (12,3)	1 617 (31,6)	3 495 (83,1)

Notes: Figures in brackets give absolute amount expressed as a percentage of mean household income for each race/gender group

Source: Ruggles, P and O'Higgins, M, (1981), p 156.

(d) Housing benefits were higher for female-headed households than for male-headed households and for non-white headed households than for white-headed households. With public housing being available only for households earning below a certain cut-off income, this pattern reflected the difference in mean incomes across race/gender groups.

Working through these and other specific influences Ruggles and O'Higgins confirmed the importance of race and gender of head of household in explaining differences in the burdens of taxes and the benefits of expenditures. This seemed to be the case even when income was held constant. Their large number of dependents and high level of urban residence contributed to the high level of expenditure benefits received by households headed by non-white females. For those headed by white females, their relatively low level of expenditure benefits resulted from their small average size and the fact that their heads were often pensioners.

This type of result obtained by Ruggles and O'Higgins illustrated the advantages of accessing microdata in studies of the welfare budget. Using household records allowed for an assessment of the importance of other influences, in addition to income, on the redistribution process.

Not all investigations followed those of Reynolds and Smolensky and Ruggles and O'Higgins in simultaneously allocating the full range of expenditures and taxes. Some studies were restricted to inquiring after either one or other of expenditures or taxes. Examples of tax incidence studies have been referred to earlier in the chapter. Alternatively, other investigations analyzed the influence of a specific variable on redistribution. For example, one of the working papers in the Income Distribution and Employment Programme of the ILO - "The Regional Distribution of Government Expenditures in Botswana" - discussed the effectiveness of government programmes in redistributing incomes from urban to rural areas.[21] Results suggested that several of the group programmes - for example, water provision, health, education and certain agricultural programmes - had not resulted in redistribution to rural areas despite the government's shift in emphasis to foster rural development.

Other studies focussed their attention on a partial assessment of redistribution. Lampman concentrated on the effect of money transfers - both public and private - on the incomes of the poor in the United States.[22] His definition of transfers covered social security, government pensions, veterans' pensions, private pensions, workmen's compensation, unemployment insurance and public assistance. From his results certain biases in payments were evident. For example, the better-off poor were favoured over the poorest poor; and small families tended to score more from cash payments than large families.[23] Lampman identified four competing 'mentalities' underlying the provision of all public expenditures. The first - the minimum provision mentality - was concerned with adequate benefits for those unable to provide for themselves. Included in this provision would be special services for the very poor, the disabled and the sick. The second mentality catered for irregularities in income and expenditure of regular earners for providing for insurance against losses - for example, through unemployment. This was referred to as the replacement of loss mentality. Third came the horizontal and vertical equity mentality where the emphasis was on treating equals equally and narrowing inequality between unequals. And lastly, there was the efficiency of investment mentality where the issue was not equity, but rather the final benefits to society from costs incurred in the provision of transfers of goods and services. He identified a balance among these four mentalities in the national system of transfers.[24]

In recent years investigations have also included some micro-studies of single expenditure items - for example, food subsidies, police and fire services, tertiary education, health provision, mortgage interest, subsidies - and these have attempted to introduce a class dimension into the analyses. In reviewing these latter studies Taylor Gooby pointed to the middle classes 'with their superior knowledge and ability to negotiate with welfare gatekeepers, their determination to realize their aspirations and ... their "sharper elbows" who have benefitted from the welfare state."[25] He speculated that an introduction of a gender dimension into these distribution studies would reveal similar biases in favor of males.

2.3 SOUTH AFRICAN STUDIES

Attempts to construct welfare budgets in South Africa are few. Perhaps this can partly be explained by the lack of suitable data for this type of analysis. The studies which have been conducted have mainly concentrated on race as an explanatory variable in budget incidence. In most cases studies have concentrated on one race group only.

Three investigations have compared the expenditure of Africans with the taxes paid by them. First of these was the Native Economic Commission, appointed in 1930. The Commission's fourth Term of Reference read:

> "What proportion of the public revenue is contributed by the Native population directly and indirectly. What proportion of the public expenditure may be regarded as necessitated by the presence of, and reasonably chargeable to, the Native population."[26]

This required that the Commission divide tax payments and government expenditures between two groups - Africans and non-Africans. The Commission came up against the full set of theoretical and empirical problems associated with the construction of a welfare budget and, faced in many instances with an absence of appropriate data, were forced into making some arbitrary allocations. In cases where either the beneficiary of the expenditure or the inidence of the tax could not be identified, the Commission relied on a 'National Income Ratio' (N.I.R.) to apportion between Africans and non-Africans. This ratio was the estimated share of Africans in the National Income - put at one-eighth by the Commission - and used as the ratio to debit/credit the African ledger when an expenditure/tax receipt was unallocable.

The Commission covered the full current budget of the central and provincial authorities for the financial year 1929/30 and carefully detailed their allocation routines.[27] These will not be discussed except to mention briefly the dissension over the allocation of state revenue from mining. The issue at stake was the theoretical one of allocating income shares to co-operating factors of production. For whereas the Commission apportioned the one-eighth ratio of their N.I.R. as the African share, commissioner Lucas objected and argued that it would be more fair to put the contribution at one-half.

> "It is idle to contend, because there would be no mining if there were no Europeans in the Union, that therefore all that value must be considered to be the creation of Europeans. It would be equally idle to argue, because there would be little or no mining if there were no Natives to work in the mines, that therefore all or nearly all that value must be credited to the Natives.

> It is a joint creation of both. When it is remembered that the Natives employed in mining outnumber the Europeans by more than ten to one, it would not be unfair to put the contribution of each at half."[28]

The final result of the Commission's investigation was a net surplus of expenditure made on behalf of Africans over their contribution to tax revenues. The absolute amount of this surplus was R3 702 822 which worked out at 64 cents per capita.

In the Tomlinson Commission [29] - which reported in the mid-fifties - a similar effort was made to identify the African share of expenditure and revenue for the financial year 1951/52. The analysis was seemingly less rigorous than that of the Native Economic Commission; their conclusion was a net amount transferred to the African population by the state of 'at least' R 50 335 000. This worked out at R35,08 per head.

The last of the three investigations to have only concentrated on the expenditure and taxes of Africans was that by Leistner and Van der Merwe.[30] Their estimates of net budget incidence were for four selected years over the period 1929/30 to 1964/65.

On the expenditure side only direct spending was included but from both the current and capital accounts and for all levels of government. For taxation, both direct and indirect taxes were included with sales taxes being allocated according to results from studies of African expenditure patterns and excise and customs duties allocated to final consumption using data from the 1960/61 Input-Output tables.[31] The possibility of any partial shifting to consumers of company tax was not considered. Their results - in constant 1958 prices - are shown in Table 2.

TABLE 2

PUBLIC EXPENDITURE ON AFRICANS FOR SELECTED ITEMS AND TAXES PAID BY AFRICANS, IN CONSTANT 1958 PRICES: 1929/30 - 1964/65

	R MILLION			
	1929/30	1946/47	1956/57	1964/65
I. Direct Spending on:				
1. General administration	2,9	10,5	26,2	36,5
2. Social services	5,2	37,2	84,4	133,9
a) Housing	-	1,8	10,3	20,2
b) Health	1,9	16,0	46,2	67,4
c) Education	2,5	8,9	17,3	21,3
d) Other or unspecified	0,8	10,4	10,6	24,9
3. Capital expenditure (excl housing)	0,8	2,3	23,8	26,6
TOTAL DIRECT SPENDING	8,9	50,1	134,5	197,1
II.Taxation:				
1. Direct taxes	6,2	7,4	8,2	8,7
2. Indirect taxes	7,3	14,7	16,0	26,1
TOTAL TAXATION	13,5	22,1	24,2	34,8
DIRECT SPENDING MINUS TAXATION	-4,6	28,0	110,3	162,3
DIRECT SPENDING MINUS TAXATION PER CAPITA (R)	-R0,80	R3,56	R11,85	R12,03

Source: The Africa Institute Bulletin, Vol VI, No 6, 1968, p 175.

Given the assumptions determining allocation routines, the pattern to emerge was of increasing absolute and per capita net benefits for Africans.

McGrath has illustrated the frailty of these results by altering two of the Leistner and Van der Merwe assumptions for 1964/65.[32] First, expenditure on health for Africans was deflated to reflect their lower cost per patient day for hospital care. In addition, company taxes were assumed to be entirely shifted forward to consumption expenditure. The effect of these two changes was to decrease per capita net benefits for Africans to one-quarter the value shown in Table 2.

For the Coloured population, the Theron Commission assessed their tax burden and made a comparison against direct expenditure on this group through the Vote of the Department of Coloured, Reheboth and Nama Relations.[33] Taxes included in their investigation were: personal income tax, sales tax, customs and excise duties, property rates and a small miscellaneous category. Not included was company taxation; thus implicitly assuming no shifting of incidence.[34] On the expenditure side, health spending by the provincial administrations was excluded as was any share of general government expenditure on shared unallocable expenditures. Given these restrictions, direct expenditure on the Coloured community was calculated as almost double their tax contribution from the included taxes. The Commission concluded that if all expenditures were included there would have been a net budget surplus accruing to the Coloured community.

The most comprehensive welfare budgets to have been constructed for South Africa were those by McGrath for selected years over the period 1949/50 to 1975/76.[35] These had the considerable advantage over those previously discussed in that all race groups were covered. All taxes were measured and allocated between races; as were current expenditures at all levels of government. Also useful was a sensitivity analysis using alternative sets of assumptions for allocating taxes and expenditures.

Turning first to taxation, McGrath offered three allocation routines which varied from assumptions of low incidence to Africans, to a set of intermediate assumptions and then lastly, to assumptions of high incidence on Africans. The taxes which had alternative tax allocation routines were: company tax, property tax, customs duty and sales tax. With company tax, for example, the low incidence assumption was that the incidence of the tax was fully borne by shareholders with foreign shareholdings (estimated at 20 per cent) excluded. The intermediate assumption was that one-half was borne by shareholders and the other shifted to consumers; and the high incidence assumption was that the incidence was entirely shifted forward to consumption expenditures.

The results obtained were obviously sensitive to the choice of assumptions but consistent trends to emerge were:

(a) the African share of total tax payments increased;

(b) the White and Coloured share of total tax payments decreased;

(c) the Asian share rose between the beginning and end of the period.

TABLE 3

REAL PER CAPITA TAX BURDEN BY RACE: 1975/76

(Constant 1970 prices, and intermediate assumptions)

	1949/50				1959/60				1969/70				1975/76			
	Af	As	C	W	Af	As	C	W	Af	As	C	W	Af	As	C	W
Taxes per Capita (Rand)	8	37	33	198	11	40	33	245	18	62	50	414	31	123	64	630
Personal Income per Capita (Rand)	87	214	146	913	94	194	175	1111	104	306	261	1575	155	432	333	1934
Taxes as a % of Income	9	17	23	22	12	21	19	22	17	20	19	26	20	28	19	33

Source: McGrath (1979a), p 18.

Table 3 gives the real per capita tax burdens under the intermediate set of assumptions. In addition to illustrating the tax incidence across races, the increase in scale of taxes over the period can clearly be gauged from these figures.

To assess the overall impact of the budget required the equivalent exercise for government expenditure. As with taxation the unallocable portion of expenditure was shared between groups under alternative sets of incidence assumptions. These expenditures

TABLE 4

REAL PER CAPITA PUBLIC EXPENDITURE BY RACE: 1949/50 - 1975/76

(Constant 1970 prices)

	1949/50				1959/60				1969/70				1975/76			
	Af	As	C	W	Af	As	C	W	Af	As	C	W	Af	As	C	W
Expenditure per Capita (High African benefit)	33	57	61	131	35	66	69	159	53	108	95	215	77	148	136	321
Exp. as a % of Personal Income (High African benefit)	40	27	44	15	38	35	41	15	56	36	34	14	54	36	43	17
Exp. per Capita (Low African benefit)	20	50	51	179	22	59	63	211	27	100	86	325	44	131	120	476
Exp. as a % of Personal Income (Low African benefit)	24	24	36	20	24	31	38	19	28	34	31	21	31	32	38	25

Source: McGrath (1979a), p 28.

This exercise resulted in a range of outcomes. However, under all assumptions post-budget incomes for Blacks were higher than they would have been had taxes and benefits been distributed in porportion to income levels. The opposite was the case for Whites.

However, this budget redistribution to Blacks did not fundamentally alter the degree of inequality in racial income. Whereas estimates of White per capita pre-distribution incomes in 1975/76 were more than thirteen times per capita pre-distribution incomes of Blacks, on the assumptions which yielded maximum redistribution to Black groups they were still eight times larger after redistribution.

In his conclusion, McGrath criticised racial welfare budgets in that they failed to consider income inequality within race groups. This, he felt, was a major inadequacy.

The most recent of the South African redistribution studies was that by Abedian.[36] For the period 1968 - 80 he looked in turn at the incidence of government spending, taxation and monetary policy on the lower income groups.

Expenditure was studied using two methods: the general approach and the direct money-flow approach. The former divided government expenditure into categories by function to provide an indication of the impact of the state on poverty and inequality; the latter identified all expenditures to benefit lower income groups in the form of either direct expenditure on them or as wages paid to them as state employees. Using both approaches expenditure policies emerged as favourable to lower income groups.

FOOTNOTES

1. There were exceptions. For example, in the late nineteenth century Wicksell had written of the importance of considering public expenditure together with taxation in budget analysis.

2. Brown, C V and Jackson, P M, Public Sector Economics, Oxford, Martin Robertson, 1982, p 449.

3. Samuelson, P A , 'The Pure Theory of Public Expenditures', Review of Economics and Statistics, Vol 36, November, 1954.

4. Brown, C V and Jackson P M, op cit, P 449.

5. Barna, T, Redistribution of Incomes through Public Finance in 1937, Oxford, Clarendon Press, 1945.

6. See Atkinson, A B, Social Justice and Public Policy, Brighton, Wheatsheaf Books Ltd, 1983, P 104.

7. Le Grande, J, The Strategy of Equality: Redistribution and the Social Services, London, George Allen and Unwin, 1982, p 155; Reynolds, M and Smolensky, E, Public Expenditures, Taxes and the Distribution of Income, New York, Academic Press, 1977, p7.

8. See for example Gupta, A P, 'Incidence of Central Government Expenditures in India', World Employment Programme Research Working paper No 19, 1975; Foxly, A, Aninat, E, and Arellane, J P, 'What does Social Security do to Incomes?', World Employment Programme Research Working Paper No 42, 1976; Alailima, P J, Fiscal Incidence in Sri Lanka, World Employment Program Research Working Paper No 69, 1978.

9. Reynolds, M and Smolensky, E, op cit, P 7.

10. These were called 'standard' in that they represented the conventional intermediate assumptions of previous studies. Reynolds and Smolensky also tested their results for sensitivity by using three alternative sets of assumptions.

11. See section 3.2 for discussion on this and similar methodological issues.

12. Reynolds, M and Smolensky, E, op cit, p 50. Under an alternative set of assumptions general government expenditure was distributed entirely by initial income.

13. Under alternative assumptions tried by Reynolds and Smolensky both of the following incidence assumptions were tried for corporate income tax:

    (a) 100% distribution by consumption expenditure;
    (b) 33% distribution by dividends, 33 percent by wages and salaries and 34% by consumption expenditures.

14. In other words, although there was evidence of substantial growth in overall government expenditure over the two decades, the difference between the initial and final distributions - between $\underline{y}^{o}$ and $\underline{y}^{1}$ - had not changed significantly over the period.

15. Reynolds, M and Smolensky, E, op cit, p 92.

16. Ruggles, P and O'Higgins, M, 'The Distribution of Public Expenditures among Households in the United States', The Review of Income and Wealth, Vol 27 No 2, 1981; O'Higgins, M and Ruggles, P, 'The Distribution of Public Expenditures and Taxes among Households in the United Kingdom', The Review of Income and Wealth, Vol 27 No 3, 1981.

17. The methodology detailed in the remainder of this paragraph was for the Ruggles and O'Higgins United States survey. They chose not to apply identical methods to both countries but to use routines most appropriate to each.

18. See Section 3.2 for more detail on the different approaches.

19. Allocations for hospital expenditure was made according to reported hospital care.

20. Ruggles, P and O'Higgins, M, op cit, p 157.

21. Szal, R J, 'The Regional Distribution of Government Expenditures in Botswana', World Employment Program Research Working Paper No 36, 1975.

22. Lampman, R, 'Public and Private Transfers as Social Process', in Redistribution to the Rich and Poor, K E Boulding and M Pfaff (eds), California, Wadsworth Publishing Company, 1972.

23. Ibid, p 24.

24. Ibid, p 40.

25. Taylor-Gooby, P, 'The Distributional Compulsion and the Moral Order of the Welfare State', in Dilemnas of Liberal Democracies, A Ellis and K Kumar (eds), London, Tavistock Publications, 1983, p 108.

26. South Africa, Report of Native Economic Commission 1930 - 1932,U G 22/1932, p 159.

27. Ibid, pp 161-168.

28. Ibid, pp 163-164.

29. South Africa, Summary of the Report of the Commission for the Socio-Development of the Bantu Areas within the Union of South Africa, U G 61/1955.

30. Estimates published in The Africa Institute Bulletin, Vol V, No 3, 1967, p 44; and Vol VI, No 6, 1968, p 175.

31. McGrath, M D, 'The Racial Distribution of Taxes and State Expenditures', Black/White Income Gap Project Final Research Report No 2, Department of Economics, University of Natal, 1979, p 10.

32. Ibid.

33. South Africa, Report of the Commission of Inquiry into Matters Relating to the Coloured Population Group, R P 38/1976.

34. Terreblanche has adjusted the Theron Commission allocation routines by including a share of company tax and loan account revenues and also including expenditure on housing and hospital services (See McGrath (1979a)).

35. McGrath, M D, op cit. Republished as chapter 5 in McGrath, M D, The Distribution of Personal Income in South Africa in Selected Years over the period from 1945 to 1980, Ph D Thesis, University of Natal, 1983.

36. Abedian, I, 'Public Sector Policies and Income Distribution in South Africa during the period 1968-80', Carnegie Conference Paper No 127, 1984.

37. Ibid, p 22.

CHAPTER 3 OBJECTIVES AND LIMITATIONS, SOME METHODOLOGICAL ISSUES AND DATABASE DESCRIPTION

3.1 OBJECTIVES AND LIMITATIONS

In addressing the question of redistribution and budget incidence, the original intention was to construct a full welfare budget across income groups using data collected by the Central Statisical Services. This proved impossible with available data not sufficient to derive welfare budgets other than with respect to race. These have been constructed by McGrath.[1]

The first source to be explored was the data files of the Current Population Survey (CPS), to which access had kindly been granted. Off these datafiles household level microdata records were to be constructed in a similar fashion to the Ruggles and O'Higgins studies.[2] Unfortunately the CPS files did not allow the necessary household data to be accessed off the individual records with enough detail to provide the required range of variables for the analysis.

A second attempt to use official data was made; this time with the grouped income data from the 1980 Population Census. With the exception of the work of Ruggles and O'Higgins, the majority of the international attempts to construct welfare budgets had relied on grouped income data. Here the problem encountered was the data being collected on an individual rather than household or income spending basis; the latter being the natural unit for budget analysis. Many income and expenditure decisions take place within households and as such are difficult to assign to individual members of a household.

Impeded by the unsuitability of both CPS and census data, a decision was made to restrict the analysis to a very specific group of the population, namely a sample of the urban poor. Access had been gained to household records of a survey of urban poor conducted by Prinsloo in 1982.[3] This investigation had formed part of the Second Carnegie Inquiry into Poverty and Development in South Africa, an inquiry which had as its precedent the Investigation of the Poor White Problem conducted over the period 1928 - 1932[4]. The depth of detail in Prinsloo's data allowed household records to be assembled covering the important variables for a study of budget incidence. Allocation routines for public expenditure and taxes could then be applied separately to each household record - much the same way as done by Ruggles and O'Higgins - and the results of budget actions anaylzed with respect to various household characteristics.

A full evaluation of the redistributive effect of the global welfare budget was not undertaken. With sample households being drawn from the urban poor, the basis of the analysis was altered. It was decided to concentrate on the distributive impact of public expenditure on goods and services whose consumption by households could be clearly identified. These were:

> social security payments such as pensions, grants and allowances; education; housing; health; and transport.

Excluded therefore were those indivisible expenditures of government which are not easy to allocate and which are usually assigned under a range of alternative incidence assumptions.

The emphasis of this study was therefore shifted. The objective became that of, for the urban poor, analyzing and quantifying the patterns of public spending on specific items of expenditure. Items covered were of two types:

cash payments in the form of social security to the old, the young and the disabled; and

in-kind provision of 'merit goods'.

These differ in that while the former directly increase the money income of recipients, the latter affects their real income by increasing consumption of these goods above the levels which would normally result from the regular forces of demand and supply.

Although the emphasis was on public spending, some attention was also directed to costs in the form of taxes. Again not all taxes were covered; the burdens to the sample of income tax, sales taxes and customs and excise duties were those considered.

Associated with all derivatives of welfare budgets are some general methodological issues which are discussed in section 3.2. However, even given the narrowly defined objectives of this investigation there were some specific limitations which need mentioning.

(a) Sampling was unfortunately restricted to urban areas thus excluding all rural communities from the sampling universe. It could be expected that a positive correlation would exist between urbanisation and the consumption of public expenditures. The access of urban households to public goods and services would be significantly greater than for rural households, thus guaranteeing their receipt of a higher 'social wage' from these commodities. McGrath has illustrated this urban bias in the supply of health services.[5] In fact, a bias in public spending would reinforce the already substantial urban-rural differences in market determined incomes. Wilson in his overview to the Carnegie Conference commented: ' ... there is poverty all over South Africa but it is really in the rural areas that it is most acute'.[6]

(b) Only African and Coloured households were surveyed. Given public expenditure patterns in South Africa it would be safe to generalise that, other things being equal, public expenditure on White households would be higher than for all other groups, while that on Asians would approximate that for Coloured households.

(c) Thirdly, given limitations on project resources, Prinsloo restricted her areas of selection to Cape Town and Durban. To the extent of any area-specific differences in the distribution procedure of public goods, care should be exercised when generalising the results. However, given random selection procedure inferences drawn from the sample should be fairly widely applicable.

Commenting on her choice of sampling universe, Prinsloo remarked as follows:

> "While recognising the existence of severe poverty among other ethnic groups and in other geographical situtations, especially rural African areas, the choice of focus could be justified by the levels of deprivation currently experienced in urban areas and by the continuing growth of South Africa's African and Coloured urban population."[7]

3.2 SOME METHODOLOGICAL ISSUES

Assessment of the redistributive impact of the government budget confronts numerous methodological issues which need to be discussed before embarking on such an exercise. These will be discussed under the following headings: comparative static nature of analysis, incidence of government budget action, valuation of benefits, exclusion of capital expenditure and lack of life-cycle emphasis.

3.2.1. COMPARATIVE STATIC NATURE OF ANALYSIS

Studies of budget incidence are static and partial. They involve a comparison of the distribution of income with and without the government budget, but fail to take further account of the repercussions of government spending and taxing policies on prices and quantities in the factor and product markets. To take account of the full effects of the budget would involve specifying a general equilibrium model of all markets. Brown and Jackson commented as follows:

> "To attempt to compute the full general equilibrium effects of the public expenditure side of the budget would almost be an impossible task at this moment in time. Our knowledge of the values of many of the key parameters of the system is scant as too is our knowledge of many of the economic relationships between parts of the system."[8]

On a theoretical level however, there have been developments in public sector general equilibrium model building. Perhaps one of the best know examples is that by Harberger who has developed a two sector general equilibrium analysis of taxation under a set of simplifying assumptions.[9] Atkinson and Stiglitz have also done some impressive work on both the expenditure and tax side of the budget in formulating general equilibrium models of the impact of government policy.[10]

A related problem is that of these studies of budget incidence comparing a post-budget distribution with one imagined to exist in the absence of a public sector. This hypothetical situation of a 'no government' economy has been severly criticised as a reference point against which to measure budget incidence.[11]

3.2.2. INCIDENCE

Concern with budget incidence requires knowledge of the true beneficiaries of government expenditure and the identification of who actually bears the tax burden. Central to this is the possibility, on the expenditure side, that the recipients of expenditure may not be identical to the beneficiaries of expenditure. And on the tax side, those paying the taxes may not be the ones to ultimately carry the full burden of the tax.

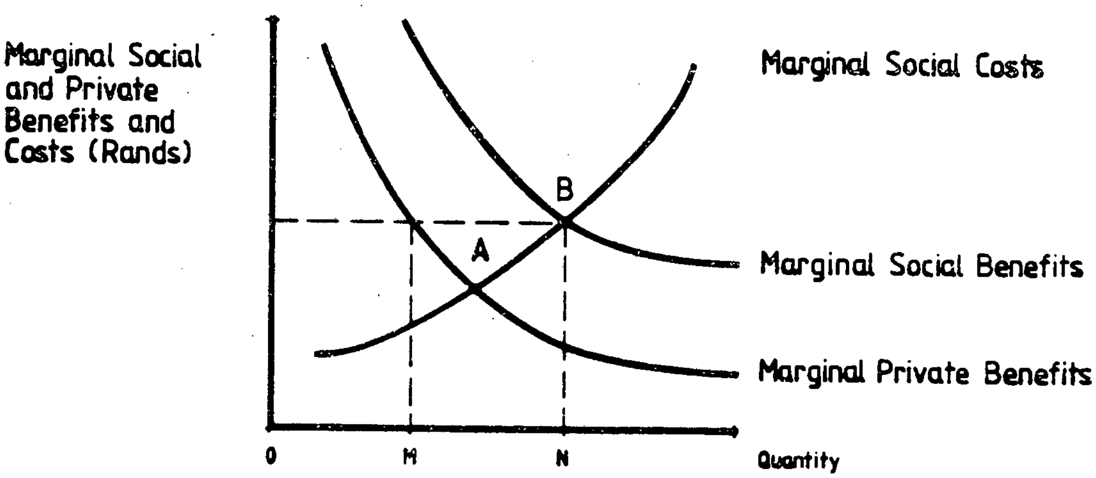
Recipients and beneficiaries of government spending may not coincide exactly because of externalities or external benefits associated with an expenditure. External benefits exist when the consumption of a commodity by one person affects others in the community by simultaneously conferring benefits on them.

Le Grand and Robinson approached this issue as follows:[12] In the absence of externalities efficient equilibrium in the consumption of any good is when marginal cost and marginal benefits are equal. However, when there are externalities, marginal benefits must be adjusted to include both marginal private benefits - as in the standard case - and marginal external benefits. That is:

private benefits + external benefits = social benefits.

The greater the externality, the greater the divergence between social and private benefits. This can be illustated diagramatically.

FIGURE 2 SOCIAL AND PRIVATE BENEFITS AND COSTS



Under a market system equilibrium will be where marginal private benefits equal marginal social cost, i.e. at point A. But the existence of external benefits leads to the market demand curve and the marginal social benefit curve not being identical. The socially efficient equilibrium position would be at the point of intersection of the marginal social benefit curve and the marginal social cost curve, i.e. at point B.

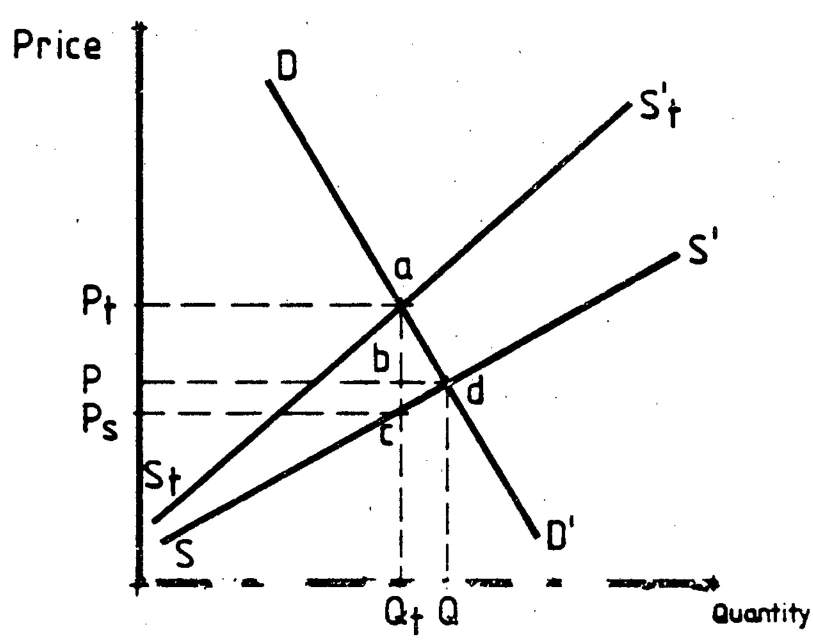
Assuming a socially efficient equilibrium at B, social benefits ON can be divided between private benefits OM and external benefits MN. Incidence studies usually only assign private benefits OM to recipients of commodities or direct users of services. For example, incidence studies allocate the private benefits from health expenditure to those directly receiving medical care and exclude the external benefits to the wider community through the decrease in spread of communicable and other diseases. Le Grande concluded:

> "If such externalities exist, then to assume that public expenditure in a particular service is incident only upon the direct users of that service, as is done in almost all the relevant studies, is incorrect.[13]

On the tax side the state of incidence theory prevents determinate answers to the degree of shifting of certain taxes - company tax being the common example. General consensus does not exist over the degree of shifting of this tax. McGrath quotes a selection of results of empirical studies which range from 100 per cent of tax being shifted forward onto consumers to results of no shifting at all.[14]

The present study did not attempt to allocate company taxes. But even with a sales tax - which was included - there are uncertainties about incidence. Whereas standard practice in redistribution studies is to allocate sales and similar taxes by consumption expenditure, results of partial equilibrium analysis indicate the possibilities of shared incidence depending on the elasticities of demand and supply of the commodities being taxed.

FIGURE 3: INCIDENCE OF SALES TAX



Consider the case of an ad valorem tax - a tax expressed in percentage terms - imposed on commodity X at the rate of ac/cQ_t. The initial price of P will increase to P_t; the price rise of P_t-P being less than the amount of the tax. The quantity consumed falls from Q to Q_t. Consumers will pay $P_t$abP of the tax; producers will pay PbcP$_s$ of the tax.
The relative burdens to consumers and producers will depend on the relative elasticities of the demand and supply curves. The

allocation of the full incidence of the tax to consumers rests, therefore, on the assumption of a perfectly elastic supply schedule of the taxed commondity.

It becomes apparent that on both the expenditure and tax side there are issues involving incidence in which the empirical studies of redistribution fail to take full account of theoretical findings; and also areas in which some of these methodological issues have not yet been settled.

3.2.3. VALUATION OF BENEFITS

Redistribution studies usually value benefits to households from public spending at the cost of provision of the commodity or service. This method identifies the recipient or intended beneficiary of expenditures and allocates to them the value used in providing the service.

The alternative approach - which rests on the concept of a household utility function - looks at the personal value placed on the expenditure by the recipient and assumes this to be the benefit received from public spending. It is quite conceivable that this personal valuation may not equal the cost of provision. However, a process to quantify personal evaluation is not readily available. Direct inquiry of beneficiaries is problematic in that there would be a tendency to conceal true valuations and provide false signals if it was suspected that results would in any way bias future public spending against them.

Personal valuations may not equal the cost of provision for a number of reasons. For example, inefficiency in the production of a good will lead to valuation of the benefits lying below their cost of provision. Or consumption externalities may lead to the marginal valuation placed on the expenditure being less than the marginal cost. In either case, using input cost as a proxy for benefits received can be argued as a potential source of imprecision.

Furthermore in the allocation routines of benefits from public goods there are frequently underlying assumptions regarding household utility functions which are not spelt out. A routine often relied upon is the allocation of public expenditures on a per household basis on the assumption that this leads to all household sharing equally in the benefits from the expenditure. But for this to be true, households will need to have identical demand curves for the good being allocated. In so far as this latter condition is not met, then, as a 'quantity taker' each household has a personal price or valuation that it will be willing to pay for the quantity provided. This suggests a need to know more about the utility functions of households.

Aaran and McGuire offered an interesting insight into the measurement of benefits from government expenditure on public goods.[15] They have shown that if certain assumptions are met, then a household's money valuation of a public good will be inversley proportional to the marginal utility of its income. In other words, for households to receive equal benefits from the allocation of public goods, these should be allocated in proportion to the reciprocal of the household's marginal utility of income.[16] Their assumptions were:

(a) each household's utility function is additively separable in private and public goods;

(b) households in each income bracket have identical utility functions;

(c) the allocation of public goods was assumed to be Pareto-efficient so that marginal cost equalled the sum of marginal rates of substitution ($MC = \sum MRS$);

(d) The marginal cost of public goods equalled the average cost at the amount supplied.[17]

For purposes of illustration Aaran and McGuire selected two arbitary, 'but nevertheless plausible', utility of income functions and used these to re-estimate the impact of government expenditure across income groups. Their results showed up the sensitivity of budget incidence studies to the tacit assumption usually made of marginal utilities of incomes being constant across income classes.

3.2.4 EXCLUSION OF CAPITAL EXPENDITURE

Most studies restrict coverage to current expenditure. The rationale for this is that spending from the capital account confers benefit to future users of the good or service, and so should not be credited to current users. What though of past capital expenditure which accrues currently to users? Ideally past capital expenditure should be compounded to a present value and included with public spending, together with current benefits which flow from present capital expenditure. This would provide a more complete measure of current benefits.[18]

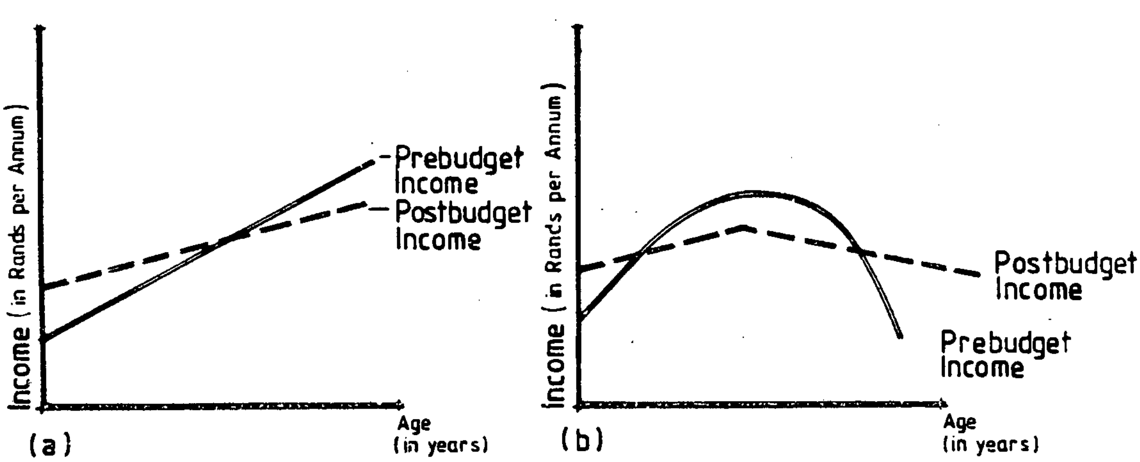
A further complicating factor is that of portions of current expenditure yielding benefits that accrue in the future. Education is the classic example here: current spending is often seen as an investment in human capital from which future benefits will flow. The allocation of the full costs of expenditure in any year to the recipients in that year therefore needs questioning. Le Grande argued however, that the full cost of the expenditure should be allocated in the current year - subject to appropriate discounting - but to all those who will benefit in the future.[19] This ties in with his treatment of external benefits, discussed in section 3.2.2. The investment portion of a current expenditure would be treated as an externality, the difference being that its value be discounted to a present value.

3.2.5. LACK OF LIFE CYCLE EMPHASIS

Benefits from public spending vary with a household's stage in its life cycle. Thus it could be argued that the redistributive impact of government be assessed over a life cycle, rather than in the current period only. Atkinson and Stiglitz used the example of a state pension scheme to suggest that although in terms of current income this would appear to transfer income to lower-income people from the better-off working population, when looked at in terms of lifetime income a pension scheme may involve no redistribution at all.[20] By focussing on the redistribution of current incomes among different households, this alternative aspect of the redistribution of income between difference periods of a given household's life cycle gets ignored.

Polinsky has looked at the role of the government in inter-temporal redistribution.[21] He argued that the government assumes the role as an inter-temporal redistributor because of imperfections in capital markets which make it difficult to borrow against future income. He suggested that to focus on the current redistribution effect of the budget is misleading. Two of his hypothetical pre-budget and post-budget income profiles are illustrated below.

FIGURE 4: HYPOTHETICAL PRE-BUDGET AND POST-BUDGET INCOME PROFILES



In the first case the individual's income is growing and the effect of a progressive budget structure is to transfer income from later periods in his life to earlier periods; thus flattening his income profile. In the second case this flattening effect is again evident as income gets transferred from middle age to both earlier and later periods. In either of these hypothetical cases the net lifetime effect of the budget will be neutral to the individual.

However, an analysis of the lifetime impact of tax and spending programs would be far from straightforward and has been beyond the scope of budget incidence studies. With individuals belonging to a number of different households over a lifetime, the problems of extending the analysis to cover life cycle aspects of distribution become daunting.

3.3 DATABASE DESCRIPTION

The source of this data has already been cited as a survey of urban poor conducted by Prinsloo in 1982. The sample covered squatter and sub-economic housing communities in both Durban and Cape Town. In Durban only African respondents were sought while in Cape Town both African and Coloured families were included in the sample.

The selection of the communities to form the sampling universe was done by conferring with community and social workers who were in a position to identify settlements which constituted the 'urban poor'. Prinsloo reported that given the difficulty of sampling in poorer areas, particularly squatter areas where listings of the sample universe were not readily available, her project decided to use random stratified sampling with different sample frames and modes of selection for each community.[22]

A total sample of 720 households was selected from the universe. Of these 54 could not be used for this particular study of budget incidence because of data problems constructing their household records. This left a sample of 666 households covering a total of 4 231 persons. Table 5 shows the distribution of these households by area and settlement type. The distribution of households between settlement types was similar for African households in Durban and Cape Town with 57% and 58%, respectively, living in squatter areas. For Coloured households only 29% were squatter residents.

The questionnaire devised by Prinsloo was long with approximate completion time estimated at between one hour and one-hour-and-a-half. Interviewers did not appear to find this a problem and reported a general willingness on the part of respondents to co-operate. Questionnaires were translated into Xhosa, Zulu and Afrikaans to allow use of the respondents' home language. Interviewers were chosen, if possible, from the survey areas themselves or, if not, were chosen so that their first language corresponded to the interviewing language. Appendix A reproduces that portion of the questionnaire applicable to this

TABLE 5

DISTRIBUTION OF HOUSEHOLDS IN SAMPLE BY AREA AND SETTLEMENT TYPE

Area	Settlement Type	Number of Dwellings[1]	Number of Households Sampled
Cape Town			
Crossroads	African Squatter	2 200	126
Guguletu	African Township	7 376	90
Modderdam	Coloured Squatter	126	52
Uitsig	Coloured Township	1 008	72
Bonteheuwel	Coloured Township	2 747[2]	55
			395
Durban[3]			
Chesterville	African Township	11 330	8
Clermont	African Squatter	3 000	34
Folweni	African Squatter	1 100	39
Inanda	African Squatter	43 000	53
Kwa Mashu	African Township	15 000	46
Lamontville	African Township	2 758	14
Malukazi	African Squatter	6 000	28
Umlazi	African Township	22 000	49
			271
All Areas			666

1. These were offical estimates of the number of dwellings at the time of the survey.

2. This figure represented the number of sub-economic houses in a community of 7 500 dwellings.

3. Whie Durban sample sizes were small, Prinsloo noted that: (i) in reference to township figures, only sub-economic households were sampled within these larger communities; and (ii) samples selected for squatter and township areas were intended to provide a collective image of their respective settlement types.

study. The remainder of the questionnaire focussed on the perceptions and attitudes of respondents to various aspects of their life and was not of relevance.

Average household size was 6,35 persons per household; above that suggested by figures provided by the Bureau of Market Research.[23] While the latter gave average multiple household sizes of 5,98, 4,91 and 4,40 respectively for Durban African, Cape Town African and Cape Town Coloured households, this survey found these averages to be 6,82, 6,26 and 5,75. It is interesting to note that the comparison preserved rank order in spite of the differences in magnitude recorded.

Table 6 gives the spread of households around these means. The distribution shows that the sample divided approximately into thirds with household size of less than or equal to 4 members forming the first third of households, 5 or 6 members the middle third, and seven or more members the last third. Breaking this down by race and urban area reveals the different patterns for each group. For both African and Coloured households in Cape Town, the modal class interval was that of 5 to 6 persons with 44% of Cape Town African households and 33% of Coloured households falling into this category. Noticeable was the latter's higher-than-average frequency of smaller households. While 7,3% of Coloured households had two or fewer household members and 26,3% had three or four, for African households in Cape Town these percentages worked out at 2,8% and 18,5% respectively. For African households in Durban the distinctive characteristics regarding household size were, firstly, the higher than average proportion of households of size two or less and secondly, that of the modal class interval being that of nine or more household members. A X^2-test conducted of household size - using the class intervals in Table 6 - against the three groups Cape Town African, Durban African and Cape Town Coloured was significant at above the 99% level of confidence suggesting statistical differences in household size between these groups.[24]

TABLE 6

DISTRIBUTION OF HOUSEHOLDS BY NUMBER OF HOUSEHOLD MEMBERS, RACE AND URBAN AREA

No of H'Hold Members	African & Coloured Total Sample		African Durban		African Cape Town		Coloured Cape Town	
	NO	%	NO	%	NO	%	NO	%
≤ 2	41	6,2	22	8,1	6	2,8	13	7,3
3 or 4	148	22,2	61	22,5	40	18,5	47	26,3
5 or 6	216	32,4	62	22,9	95	44,0	59	33,0
7 or 8	129	19,4	47	17,3	45	20,8	37	20,7
≥ 9	132	19,8	79	29,2	30	13,9	23	12,8
TOTAL	666	100,0	271	100,0	216	100,0	179	100,0

Table 7 adds settlement type to the argument and is presented as a percentage frequency distribution. It is evident that it was African township households which were responsible for Durban Africans having the high number of members per household. Interestingly a comparison of household sizes for Durban between squatter and township households reveals the opposite pattern to that for African and Coloured households in Cape Town. For both of the latter, township households had proportionately fewer large households than their squatter counterparts. This is summarized in Table 8 which gives mean household size by settlement type.

TABLE 7

PERCENTAGE DISTRIBUTION OF SAMPLE HOUSEHOLDS BY NUMBER OF HOUSEHOLD MEMBERS, RACE, URBAN AREA AND SETTLEMENT TYPE

No of H'Hold Members	African				Coloured	
	Durban		Cape Town		Cape Town	
	Squatter	Township	Squatter	Township	Squatter	Township
≤ 2	9,1	6,8	1,6	4,4	1,9	9,4
3 or 4	33,1	8,5	12,7	26,7	23,1	27,6
5 or 6	24,0	21,4	46,0	41,1	34,6	32,3
7 or 8	16,2	18,8	19,0	23,3	23,1	19,7
≥ 9	17,5	44,4	20,6	4,4	17,3	11,0
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0

TABLE 8

MEAN NUMBER OF HOUSEHOLD MEMBERS BY RACE, URBAN AREA AND SETTLEMENT TYPE

Settlement Type	African		Coloured
	Durban	Cape Town	Cape Town
Squatter	5,8	6,8	6,3
Township	8,2	5,5	5,5

Households were classified in Table 9 according to a number of alternative household structures : solitary, unrelated, nuclear family, extended family, compound and lastly, compound plus extended. For both Durban African households and Cape Town Coloured households the percentage of nuclear families was 48%. But whereas the former had 45% of households being extended families, the latter had only 34% extended families with the balance being compound or compound plus extended. This relatively higher proportion of compound formations amongst Coloured households could possibly be ascribed to almost three-quarters of Coloured households sampled being township residents whom, as a result of the acute housing shortage, were forced to share accomodation as an alternative to squatting.

African households in Cape Town were atypical in that 70% were nuclear families and only 25% extended families. A lower incidence of extended families could perhaps be explained by the peculiar constraints applicable to Africans in the Western Cape with this area being a declared Coloured Labour Preference Area. This would have made it difficult for older members of the family still resident in reserve areas to join adult working children in Cape Town.

Although the relevance of 'head of household' as a demographic variable is diminishing, all households in the sample responded to the questions regarding gender and age of household head. There was a notable consistency in the gender breakdown for each group with 69%, 70% and 68% being the percentage male for African households in Durban, African households in Cape Town and Coloured households respectively. Head of household ages, too, were similarly distributed for each group with the only real difference being that of African households in Cape Town recording proportionately fewer aged over 60 years - again perhaps due to Cape Town's peculiar position as part of a declared Coloured Labour Preference Area.

TABLE 9

PERCENTAGE DISTRIBUTION OF SAMPLE HOUSEHOLDS BY HOUSEHOLD STRUCTURE, RACE AND URBAN AREA

Household Structure	African & Coloured Both Areas	African Durban %	African Cape Town %	Coloured Cape Town %
Solitary	0,6	1,1	-	0,6
Unrelated	1,1	1,1	0,9	1,1
Nuclear	55,5	48,1	70,4	48,6
Extended	35,5	44,8	25,0	34,1
Compound	4,1	1,9	1,9	10,1
Compound & Extended	3,3	3,0	1,9	5,6
TOTAL	100,0	100,0	100,0	100,0

TABLE 10

PERCENTAGE DISTRIBUTION OF AGES OF HEAD OF HOUSEHOLD BY RACE AND URBAN AREA

Age of Head of Household in Years	African & Coloured Both Areas %	African Durban %	African Cape Town %	Coloured Cape Town %
≤20	2,1	3,3	1,4	1,1
21 - 30	7,7	9,6	3,2	10,1
31 - 40	24,8	25,1	29,6	18,4
41 - 50	29,0	26,9	33,3	26,8
51 - 60	20,6	18,1	22,7	21,8
≥60	15,9	17,0	9,7	21,8
TOTAL	100,0	100,0	100,0	100,0

Table 11 looks at certain key demographic variables. On average households in the sample had 3,7 adult members and 2,3 employed persons. For African households in Cape Town the number of workers did not vary by type of settlement; whereas both Durban African households and Coloured households recorded more employed persons in the types of settlements with the larger household size. In the case of Durban Africans this was in the townships with 2,7 persons employed, whilst for Coloured households this was the squatter areas with 2,5 persons employed.

TABLE 11

STATUS OF PERSONS IN HOUSEHOLDS BY RACE, URBAN AREA AND SETTLEMENT TYPE

Race & Urban Area	Type of Settlement	Ave No of House -hold Mem.	Ave No of Adults ≥ 18 yrs[1]	Ave No of Persns Employ	Ave No of Child- ren[2]	Ave No of Pens- ioners	Ave No of Dis- abled & ill
All African & Coloured	Squatter	6,3	3,6	2,2	2,8	0,11	0,20
	Township	6,5	3,9	2,4	2,7	0,29	0,33
	Total	6,4	3,7	2,3	2,7	0,20	0,26
African Durban	Squatter	5,8	3,3	1,9	2,5	0,12	0,24
	Township	8,2	4,6	2,7	3,6	0,26	0,33
	Total	6,8	3,8	2,2	2,9	0,18	0,28
African Cape Town	Squatter	6,8	4,0	2,6	3,3	0,07	0,12
	Township	5,5	3,5	2,5	2,6	0,16	0,11
	Total	6,3	3,8	2,5	2,3	0,11	0,12
Coloured Cape Town	Squatter	6,3	3,3	2,5	2,3	0,14	0,27
	Township	5,5	3,4	2,1	1,9	0,42	0,48
	Total	5,8	3,4	2,2	2,0	0,34	0,42

1. Includes scholars over 18 years of age and retired persons.

2. Includes all school children and those of preschool age.

Turning to children, the larger size of African households resulted in their averaging approximately 3 children per household compared with 2 per household for Coloured respondents - children being defined for these purposes as all those at school plus those still too young for school. The different number of children by settlement type - squatter or township - correlated with the differences recorded in household size for each group.

Township settlements consistently registered more retired pensioners than their squatter counterparts with Coloured township households having the highest average of 0,42 per household. Coloured township households also recorded the highest average of 0,48 disabled or ill persons per household.

Prinsloo adopted three measures of unemployment. Accepting what she termed the 'traditional approach' - unemployed economically-active individuals, whether seeking work or not, expressed as a percentage of the entire labour pool - the study areas recorded a collective 15% unemployment.[25] Township settlements had consistently higher unemployment rates than squatter settlements. For Durban, unemployment rates under this definition were particularly high at 26% for township residents and 22% amongst squatter residents. This can be compared to rates of 18% and 5% for Cape Town African township and squatter households; and 14% and 6% the equivalent rates for Coloured township and squatter households respectively.

FOOTNOTES

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22. Prinsloo, J B, op cit, p 2.

23. Bureau of Market Research, 'The Minimum and Supplemented Living Levels of Non-Whites Residing in the Main and Other Selected Urban Areas of the Republic of South Africa : August 1982', <u>Research Report</u> No 99, 1982.

24. X^2(8 DF) = 46,33 P <0,001

See Appendix B for an explanation of the X^2-test

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CHAPTER 4

STATE SPENDING ON THE WELFARE BUDGET : HISTORICAL DEVELOPMENT AND ALLOCATION ROUTINES

4.1 INTRODUCTION

The purpose of this chapter is twofold. For each of the five state expenditures included in the study, a chronological outline is given regarding changes in their financing by the state. Modifications in spending patterns reveal important changes in political philosophies as concessions get made - or removed - in various areas of state provision. Although this present investigation into budget incidence was not longitudinal in nature, a need was felt to provide a historical background against which current spending patterns could be understood.

Following on each outline is the allocation routine for that particular expenditure. For two of these - social services and education - the procedure adopted was straightforward and obvious. For the others - health, housing and transport - recourse had to be made to a series of simplifying assumptions in order to arrive at suitable routines by which expenditure could be apportioned to households.

Before discussing each item of expenditure it will be useful to outline very briefly the periods identified by Bromberger as having a certain amount of internal coherence regarding government policies affecting the distribution of incomes.[1] He roughly defined his phases as the late 1930s to 1948, 1948 to 1961, 1962 to 1971, 1972 to 1980.

(a) The Late 1930s to 1948

In the early years of Union there had been a start to state involvement with the provision of community and social services. In 1913 the Union government had begun to provide subsidies to the provinces for education; and following on the 'Flu Epidemic of 1918 the state had realised a responsibility towards the control of the spread of infectious diseases and the clearance of slum areas. Pensions for white and coloured persons had been payable from 1929.

However, it was the late thirties and forties that Bromberger identified as a period for real government acceptance of the need for the increased provision of welfare services. This was in line with the development of social philosophies abroad where the war years had been followed by a significant surge in welfarism.

In South Africa this was a period of high growth rate and rapid urbanisation during which the government began to realise a certain responsibility towards the well-being of all its citizens, both white and black. This led Bromberger to label the period as one in which there was 'limited progress towards incorporation (of) and equality (between)' all races.

(b) An Era of Retrenchment: 1948-61

The period following on the election victory of the Nationalist Parrty witnessed a reversal of these previous progressive trends as the foundations of apartheid structures were established. Whites were favoured regarding public spending with expenditure on their behalf increasing more than proportionately to that of other groups. Influx control was tightened and moves were initiated towards the implementation of territorial apartheid with the passage in 1959 of the Promotion of Bantu Self-Governing Act.[2]

(c) Signs of a Thaw: 1961-71

During this decade the harsh distributional policies of the fifties were replaced by less regressive policies with narrowing in some of the racial differences in public spending. This though was firmly linked to the effort to create separate social and political orders for each race group. In particular, the development of the reserves became a priority. Towards the end of this era important legislation in the form of the Bantu Homelands Citizen Act of 1970 was enacted in terms of which urban Africans in so-called White South Africa were to become citizens of one or other of the reserves.

(d) A Trend towards Re-Incorporation and Reduced Inequality: 1972-80

As a result of both internal and external pressures the seventies saw more progressive policies adopted regarding state welfare for all races. This was particularly noticeable in education spending. Increased spending was also directed towards reserve development as first the Transkei - following by Bophutatswana, Venda and Ciskei - accepted the status of 'full independence'. However, following on the disturbances of the early and mid-seventies there was a softening of separate development ideology and some recognition towards urban Africans being accepted on a more permanent basis.

The 1980s has seen a continuation of this trend. But a significant shift has occurred in the official viewpoint on public spending since Bromberger's first phase when the trend was towards more state provision of community and social services. Following in the path of the monetarist economic policies of Britain and the United States have been numerous moves towards the reduction of state expenditure on welfare spending.[3] These changes have not been motivated solely by the free market ideology which has been gaining ground from the late 1970s. Important, too, has been the realization that given the backlog in public spending on these items for groups other than Whites, provision by the state would now be beyond its means. A conflict has arisen between available funds and the expectations of the community for public provision.

The remainder of this chapter now traces significant changes in the delivery of the five state welfare expenditures covered in this study and the routines adopted for each in allocating expenditures between households.

4.2 SOCIAL SECURITY SERVICES

4.2.1. HISTORICAL SKETCH OF STATE FINANCING

For the purposes of this analysis social security services were assumed to include all income support payments to households by the state in the form of pensions, grants and allowances. Common to all these payments is that they are funded, not from contributions by recipients, but from general tax revenue. As such, their objective is the provision of income to those in need by means of direct cash transfers from general state funds. A brief description of the different transfers follows.

(a) Social Pensions

Prior to the late 'twenties the care of the aged, blind and other dependent persons was left to voluntary organizations with the responsibility of the state being confined to poor relief. Following on the recommendations of the Pienaar Commission, the Old Age Pensions Act of 1928 was promulgated which introduced the payment of state pensions from the following year.[4] These were non-contributory , subject to a means test, and payable only to White and Coloured men of 65 and over and women of 60 years and over. From the inception there was discrimination between groups in the rate of pension payable. In 1929 the maximum social pension for Whites was R5 per month and for Coloured persons R3 per month.

From 1936 White and Coloured blind persons, over 19 years, became eligible to claim pensions; and in 1937 White persons who were physically disabled could also claim a pension. Seven years later in 1944, the provision of old age and blind pensions was extended to eligible African and Asian men and women, but physically disabled African, Asian and Coloured persons had to await the Disability Grants Act of 1947 before becoming eligible for payments.[5] By 1948 therefore, a state non-contributory pension scheme had developed for all race groups. For each group the maximum pension payable, the allowable free income and the conditions of the means test were the same for each of the three types of pension: old age, blind persons and physically disabled. In 1947 these rates were:[6]

MAXIMUM SOCIAL PENSION: 1947

(Rands per month)

African	R 2,50
Asian	R 5,00
Coloured	R 5,00
White	R 10,00

It must be mentioned that the rate shown above was that for cities. For Whites living in rural areas a lower rate was paid; while for African, Asian and Coloured pensioners there were three rates: cities (the eight metropolitan areas), towns and rural areas.

A fourth type of pension - payable to War Veterans of the Anglo-Boer War, the Zulu Rebellion in Natal (1906) and the two World Wars - was paid at a slightly higher rate than the other social pensions, but the same pattern of discrimination between groups applied.

With the change in government in 1948, and the introduction of apartheid, the extent of discrimination in pensions was steadily increased. From the ratio of White 100: Coloured and Asian 50: African 25 in 1947, the position deteriorated until in 1966, this ratio stood at White 100: Coloured 47: Asian 41: African 13.[7] Pollak reported that this was the greatest ever discriminaition in regards to pensions ever suffered by Africans. However from the mid 1960s this deterioration was halted with the racial gap beginning to decrease marginally. Pollak commented:

> "From 1971 the official policy changed radically. The objective of the government was henceforth to reduce disparities and move away from some aspects of discrimination ... Each year from 1971 the percentage annual increase in social pensions has been greater for Coloured, Asian and African that it has been for White pensioners."[8]

By 1982 - the year in which the empircal data was collected for this study - the ratio had improved to White 100: Coloured and Asian 60: African 36.[9] In actual money terms the following rates were payable from October 1982:

MAXIMUM SOCIAL PENSION: 1982
(Rands per month)

African[10]	R 49-00	(R98 paid every second month)
Asian)	R 83-00	
Coloured)		
White	R138-00	

(b) Other Welfare - Grants and Allowances

In addition to social pensions, under certain circumstances, households are eligible for maintenance grants, foster-care grants and family allowances.

Maintenance and foster-care grants were introduced under the Children's Act of 1937 whose aim it was to provide means for orphans, widows with young children, deserted children, and families whose breadwinners were incapable of earning. Grants for Africans were only payable to children in urban areas (cities and towns) and in special cases only. It was recorded by the Social Security Committee of 1943 that maintenance grants were for some time withheld from African urban children if they could be repatriated for care to relatives in the reserves.[11]

Family allowances were introduced in April 1947 for Asian, Coloured and White families with low income and have since been paid in respect of third and subsequent dependent children. These allowances have never been extended to African families, but according to Hellman, few families actually receive this allowance. For low-income White families more favourable forms of assistance are ususaly available; while the regulations governing the eligibility of Coloured families are so harsh that few ever qualify.[12]

Scales of payment are complicated for both maintenance grants and family allowances. But for foster-care an indication of the different rates applicable around the time of this study can be gauged from the monthly grants for the financial year 1982/83. These stood at R90 for a White child, R61 for a Coloured or Asian child and R24 for an African child - a ratio of 100:68:27.[13]

4.2.2. PROCEDURE FOR ALLOCATION OF SOCIAL SECURITY EXPENDITURE

For the purposes of this study, it was assumed that the monetary transfers to households from any one of the social security services discussed above - social pensions, maintenance grants, foster-care grants or family allowances - was the extent of the benefit received by that household for this expenditure. The method of allocation was therefore straightforward and required no further procedures to identify beneficiaries. Respondents to the questionnaire furnished the amounts received by the household for each type of social security; these were summed to give total benefits received by that household from state social security payments.

It could be argued that this method of allocation exagerated the benefits to the recipient household. For example, there might be externalities associated with these payments that made at least part of their incidence beneficial to others. The security received from a maintenance grant might increase the productivity ~~or~~ of workers in the family, by reducing financial stress, thus leading to a growth in output. As such part of social security payments could be viewed as investments in human capital benefitting society at large, rather than merely the recipient. However, these and other indirect effects were ignored in the method of allocation adopted, with the benefit received by households being assumed identical in value to the cost to the state.

4.3 EDUCATION

4.3.1. HISTORICAL SKETCH OF STATE FINANCING

were

Only primary and secondary education was considered. Respondents in this investigation were unlikely to have benefitted from tertiary expenditure; nor their pre-school children from pre-primary school attendance.

Educational provision in South Africa was initially controlled by the Church. Only after 1806 when the British took over power in the Cape did a system of secular schools, mainly for Whites, evolve; African, Asian and Coloured education remained predominantly under the control of missions and churches until the twentieth century[14].

In the Cape the appointment of a Superintendent-General of Public Education in 1839 was followed by the commencement of grants-in-aid from central funds for state-aided schools. This system was later adopted in Natal and the Boer Republics. With the advent of Union, education other than higher education became the responsibility of the provincial authorities.

Under the Financial Relations Act of 1913, each province was given a subsidy by the Union Government from which to assist in the financing of the education of all groups under their jurisdiction. The subsidy was calculated according to a formula based on the expenditure of the province the previous year, with the allocation of the funds between race groups being left to the provincial authorities.

The Financial Relations Act of 1922 introduced a new system for the financing of African education. The Union Government was now to be responsible for the provision and allocation of funds; in addition some of the revenue received from the direct taxation of Africans would be specially earmarked for the financing of their own schools. The same Act of 1925 confirmed this method for financing of African education and specified that:

(i) the government would make available R680 000 from the Consolidated Revenue Fund for this purpose; and

(ii) one-fifth of the African poll tax would be paid into the 'Native' Development Fund and be used specifically for education.

This was the first time that expenditure on African education was to be linked specifically to their capacity to pay taxes rather than being provided from general state revenue.

This Act also changed the subsidy formula for Asian, Coloured and White education and based it on a per capita grant for each pupil attending school. Although the formula determining the subsidy was based on differential rates with that for Asian and Coloured pupils lower than for Whites, the intention was that the overall subsidy be a general one. However, the provinces tended to limit the expenditure on Asian and Coloured education to the amount of their annual subsidy; this was fixed at R10,50. The differences in annual per pupil expenditure are shown below:[15]

ANNUAL PER PUPIL

EXPENDITURE: 1930

African	R 4,27
Asian and Coloured	R 9,23
White	R45,20

This gave a ratio of White 100: Asian and Coloured 20: African 9.

The per pupil subsidy scheme for Asian, Coloured and White pupils was replaced in 1945, under the Financial Relations Consolidation and Amendment Act, when a scheme similar to that in operation prior to 1925 was introduced. Again the subsidy was to be linked to provincial expenditure, this time of the current year, with any additional funds having to be raised through the revenues received from the limited tax base of the provinces themselves. This removed the racial bias of the subsidy between Asians, Coloured and Whites, although considerable differences in the per capita amounts spent on pupils remained. In the case of Whites, this Act with varying amendments is presently still in operation.

Around this time there were also progressive moves made in the area of black education. By 1943 the full contribution of African taxes were being allocated for education; in addition the grant from the Union Government had also been increased. In 1945 the linking of African expenditure to their capacity to pay was discontinued and a new central government vote of 'Native Education' was created. This was an important change in that it signified a willingness to redistribute to African education from the common revenue pool.

The initial years of National Party rule did not result in any immediate attack on African education. Until 1953 expenditure continued to be drawn from the Consolidated Revenue Fund, but with the passage in this year of the Bantu Education Act spending on African education was again to be linked to taxable capacity. In terms of this Act a Bantu Education Account was created into which the state would make an annual contribution of R13 million for African education. The rest of the funds would come from the allocation of four-fifths of the general tax paid by Africans. Control of African education was transferred from the provinces to the newly-formed Division of Bantu Education of the Department of Bantu Affairs.

This was the first step in the fragmentation of education to be undertaken by the Nationalist Party after coming to power in 1948. Their policy required that education, together with all other services, should be part of the total development of each group apart and separate from any other group. The second step under this policy was the transfer in 1963 of Coloured Education from the provinces to the Department of Coloured Affairs; the third was the start of the transfer of Asian Education to the Department of Indian Affairs in 1965/66. However, unlike African education, education for Asian and Coloured pupils was to be financed from general revenue through the Consolidated Revenue Fund.

Within African education, and in keeping with the unfolding political ideology, plans were made to divide urban and rural African education with the latter ultimately to be transferred to the reserve authorities. After being granted partial

self-government in 1963, Transkei became the first reserve to assume responsibility for education within its region. Its budget, including that on education, was heavily subsidized by the government. These subsidies were not deducted from the R13 million allocated annually to the Bantu Education Account.[16]
Self-governing status and responsibility for services was granted to Bophutatswana, Ciskei and Lebowa in 1972 and to Gazankulu and Qwaqwa in 1974. [17]

The linking of African education to their taxable capacity had led to per pupil expenditure declining steadily from R17,00 in 1953/54 to R11,56 in 1962/63.[18] During the sixties - with mounting deficits in the Bantu Education Account - the less harsh approach of the Nationalist government was evident with several measures introduced to augment the funds allocated for African education. But with the high increase in pupils, and the faster rate of increase in expenditure on White education, per capita differences in education expenditure remained significant.

ESTIMATES OF ANNUAL PER CAPITA
EXPENDITURE BY THE STATE ON
SCHOOL PUPILS: 1971/72[19]

African	R 25,31
Asian	R124,40
Coloured	R 94,41
White	R461,00

This gave a ratio of Whites 100: Asian 27: Coloured 20: African 5,5.

The Bantu Education Account Abolition Act of 1972 abolished the Bantu Education Act and made provision for the funding of African education through the Consolidated Revenue Fund. Control of African education remained in the hands of the Department of Bantu Education and those reserve authorities which had legislative assemblies. This situation still holds now. The Department of Education and Training - formerly the Department of Bantu Education and renamed under the Education and Training Act of 1979 - is responsible for African education in the non-reserve areas with the education departments of the ten reserve authorities in charge of education in the areas under their jurisdiction.[20]

For Asian and Coloured education, the segregated structures remain more or less as outlined above, although attempts and failures by the Government to set up representative bodies for the Coloured and Indian communities have led to changes in the actual department delivering the services.

Coloured education passed into the control of the Administration of Coloured Affairs when the Coloured Persons' Representative Council (CRC) was instituted in 1969; when the CRC disbanded in 1980 the Department of Coloured Relations resumed responsibility for Coloured education. Indian education too, was transferred from the Department of Indian Affairs to the Executive Committee of the South Africa Indian Council in 1976 and then redelegated to the Director of Indian Education. In 1980 the Departments of Coloured Affairs, Indian Affairs and the Interior were incorporated to form the

Department of Internal Affairs; subsequently renamed in 1984 the Department of Home Affairs and National Education.

By the 1980s there had been some improvement in the relative expenditure on the other groups relative to Whites. From a ratio of 100:27:20:5,5 in 1971/72 the 1982/83 per capita expenditure ratios were White 100: Asian 63: Coloured 43: African 14. Per capita expenditure figures are shown below:[21]

ESTIMATES OF ANNUAL PER CAPITA EXPENDITURE BY THE STATE ON SCHOOL PUPILS: 1982/83

African[22]	R 192
Asian	R 872
Coloured	R 593
White	R1 385

4.3.2. PROCEDURE FOR ALLOCATION OF EDUCATION EXPENDITURE

As with welfare services, the procedure adopted for assigning benefits from education was straightforward with benefits being valued as equal to the cost of providing the service.

Per capita expenditure by the government on African and Coloured education was divided between primary and secondary education on the assumption that the 1977/78 ratio between these two expenditures still held in 1982/83. This assumption was necessary with 1977/78 being the most recent year for which official per capita expenditure figures were provided for the different levels of schooling. For 1982/83, estimated expenditure worked out as follows:

PER PUPIL EXPENDITURE	AFRICAN	COLOURED
Primary Schools	R168	R464
Secondary Schools	R321	R1 130

Households were assigned benefits from education according to their number of primary and secondary school pupils.

Assuming education expenditure was all consumed in the same year as spent, ignored the investment component of education. Also by attributing the full expenditure as a benefit to the recipient assumed no externalities from education expenditue. There are a range of external benefits from education which accure not to the beneficiary of education, but to others in society. This allocation of benefits by cost of provision could therefore have tended to overstate the individual valuation placed on education expenditure.

4.4 HEALTH

4.4.1. HISTORICAL SKETCH OF STATE FINANCING

The delivery of health care in South Africa has never been the responsibility of a single authority. Provision has always been shared between the various levels of government with the major source of funding coming from central government in the form of subsidies. This system has been repeatedly criticised for its divided control and lack of co-ordination.

Prior to Union, each colony was responsible for its own health matters. With Union, the newly-formed provincial authorities were assigned the task of establishing and administering all hospital services. Other health functions were to be controlled by the Union government with the exception of environmental services, such as water sanitation, which were to be the task of local government. The latter, however, were under the overall control of the provinces.

The outbreak of plague in Natal shortly after Union, together with the high mortality in the 1918 'Flu epidemic, led to the Public Health Act of 1919. Under this Act the Department of Public Health was created as an independent department of government. Provincial control of hospitals was left unchanged with the Department of Public Health to provide for preventitive and other public health matters. Provision was made in the Act for the delegation of control for infectious diseases from central to local authorities, with a system of subsidies for this financing. Local authorities would retain responsibility for environmental sanitation.

The Vos Committee was appointed in 1924 to report on the existing position regarding the delivery of health services.[23] It proposed, inter alia, that all control be co-ordinated by the Departmenmt of Public Health, rather than being split between the three tiers of government. No action was taken on these recommendations; the systems continued to operate and develop independently.

A steady increase in the scope of health services undertaken by the state resulted in strains to the health system. Particularly affected were the local authorities who found themselves rendering hitherto unprovided personal and family services. Rapid urbanisation during the thirties and forties led to a deterioration of social conditions which in turn exposed the inadequacies of the health system.

A number of committees and commissions were set up by the Smuts government in response to changing conditions. The Gluckman Commission was appointed in 1942 with terms of reference to advise on the proper organisation of health services.[24] The Commission's report provided a blueprint for a National Health Service to be financed from a National Health Tax and to be centrally controlled and co-ordinated. This recommendation was rejected by the Minister of Health and the provincial authorities remained in control of hospital services.

Subsequent committees and commissions in the fifties and sixties - not specially appointed to investigate the health services - also commented on the need for rationalisation and co-ordination but no major restructuring of existing health services resulted. The Commission of Inquiry into the Financial Relations between the Central Government and the Provinces appointed in 1960 under Dr C G W Schumann commented as follows:

> "It is also apparent from the reports of the various Commissions and Committees which have been appointed to enquire into the Health Services of the country, that they have been

> unanimous in finding that the existing divisions of health functions between the various authorities is unsatisfactory and should be rationalized in the interest of the sick and more economical and efficient administration."[25]

Unlike the welfare services and education, prior to the unfolding of the policy of separate development the approach to national health had been predominantly non-racial. There were disparaties in the amount of services received by different groups but these were not the result of legislation directly related to health. It was in 1970 that a proclamation distinguishing one group from others was first passed. Under this proclamation all duties regarding health in the reserves would be transferred to the Minister of Bantu Administration and Development with expenditure to be defrayed from the then S A Bantu Trust Fund. This was to be a temporary measure and in the ensuing years responsibility for health matters in the reserve areas was transferred to the respective reserve authorities. Transkei took over control in 1973, Bophutatswana and the Ciskei in 1975, Lebowa, Gazankulu and Venda in 1976, Kwazulu and Qwaqwa in 1976, and KaNgwane and KwaNdebele in 1984.

The first major revision of health legislation since 1919 was contained in the Health Act of 1977. This did not change the existing system of delivery by the various levels of government but was a consolidation of legislation which aimed to regulate and co-ordinate health services, outside of the reserves, between central government, the provinces and local authorities. Two bodies were established to assist with this: the Health Matters Advisory Committee and the National Health Policy Council. In 1980 the Department of Health published the Health Services Facilities Plan which joined the Act in subscribing to seemingly more enlightened ideas of community health by recognising the importance of basic subsistence needs and preventive medicines in the improvement of health status. However the responsibility for this was shifted to other state authorities, voluntary organisations and individuals themselves. In his discussion of the Health Act and the Health Plan de Beer noted the official stance as tending away from state health provision towards the privatisation of health services.[26]

With the new South African constitution of 1984 there was a move towards a further fragmentation of health services with health being assigned an 'own affairs' concern and thus delegated to each of the Inidan, Coloured and White councils. In September 1984 when the new constitution came into operation, three 'own affairs' health services and welfare ministers were appointed.

4.4.2 PROCEDURE FOR ALLOCATION OF HEALTH EXPENDITURE

Attempts to apportion health expenditures by race in South Africa have been made in a few instances.[27] These require certain assumptions since hospital, clinic and other health costs are not usually kept on a racial basis. For the purposes of this study, the problem was not just that of allocating between races, but also, within each race, to allocate between households. This raised the whole question of access to health services and utilization rates by households with different characteristics. It is generally held that the poor have less access and a lower utilization rate than their better-off counterparts. In their paper 'Access to Health Services in the Greater Cape Town Area', the Community Health Research Project had this to say:

> "What has been found is that areas with the greatest need are areas in which there is least access to health services. Even where services are fairly evenly distributed geographically, e.g. preventive services, the quality of the service in terms of over-crowding, doctor/patient ratios, expenditure, etc., varies. An example of this is the discrepancy in services between the Divisional Council Areas, where the morbidity and mortality are higher and socio-economic conditions poorer, as compared with the City Council areas."[28]

In the allocation of state expenditure used for this study, an attempt was made to allow for both the racial bias of expenditure and the different utilization rates between households. The first stage was to calculate a per capita health expenditure by the State for each race for the financial year 1982/83. The procedure adopted was very similar to that used by McGrath and is outlined below.[29]

(a) Expenditure by the provinces and 'non-independent' reserves was apportioned by taking patient days (out-patient attendances treated as 0,33 of a patient day), and weighting the expenditures on provincial and reserve hospitals by the estimated difference of the cost per patient for each group. McGrath estimated that for 1959/60 and 1974/5 this proportion was approximately 40%, i.e. ratio of cost per patient for White: Coloured: Asian: African was 100: 40: 40: 40. For this study these proportions were assumed to have narrowed to 100: 60: 60: 50 in keeping with trends in other state services to narrow differentials. The following qualifications should be noted:

(i) patient days and out-patient visits were available only to 1980 and it was therefore assumed that the proportional attendance by races had not changed in the two-year period to 1982;

(ii) the above included attendance at all hospitals in South Africa excluding those in the Transkei, Bophutatswana and Venda (Ciskei was not granted 'independence' until 1982); it was for this reason that expenditure by the provinces was combined with expenditure by the 'non-independent' reserves; and

(iii) with the exception of the Transkei, the budgets for all other reserves included health and welfare under the same vote. On the basis of estimates provided in the 1982 annual report of the Institute of Race Relations, it was assumed that 47% of the estimated vote was spent on health and 53% on social welfare.[30]

(b) All expenditure on health by Transkei, Bophutatswana and Venda was allocated to Africans.

(c) Expenditure by the Department of Health and Welfare on health - excluding that on mental health and infections, communicable and preventable diseases - was apportioned between Africans, Asians, Coloured and Whites in the ratio of the 1982 population (excluding that of Transkei, Bophutatswana and Venda).

(d) Expenditure by the Department of Health and Welfare on mental health - both directly and through subsidies - was allocated between the groups in the 1980 ratio of patient days in psychiatric hospitals (out-patient attendances treated as 0,33 of a patient day) and assuming equal cost per patient for all groups.

(e) Expenditure by the Department of Health and Welfare on infectious, communicable and preventable diseases was allocated as for mental health but using the 1980 ratio of patient days for tuberculosis and leper hospitals.

(f) Health subsidies by the state to the local authorities, which did not fully cover the service provided, were increased to the 100% amount and this was apportioned between African, Asians, Coloureds and Whites according to their share of the urban population. (Transkei, Bophutatswana and Venda excluded)

The financial details of this apportioning are contained in Appendix C. Under the above assumptions per capita health expenditure by race for 1982/3 worked out at:

African	R 46,42
Asian	R 54,25
Coloured	R 84,10
White	R132,14

Respondents in the survey were also questioned about their monthly expenditure on medical care. Answers ranged from zero expenditure to a maximum of R96,00. Only 13 respondents, or 2% of the sample, did not answer the question.

TABLE 12

DISTRIBUTION OF MONTHLY HOUSEHOLD EXPENDITURE ON MEDICAL CARE

EXPENDITURE INTERVAL (R)	FREQUENCY
0	239
1 - 5	216
6 - 10	95
11 - 25	80
26 - 50	19
51 - 75	1
76 - 100	3
Unspecified	13
TOTAL	666

If it was feasible to assume that none of the expenditure on medical care was for private health care or actual hospitalization -- in other words all health expenditure was for out-patient visits - then given household income, household size, health expenditure and the provincial hospitals tariff structures, it was possible to get some estimate of the number of hospital visits per household. This could serve as a proxy for utilization of health services by each household.[31]

The estimation, from the tariff structure, of the number of outpatient visits per household assumed accurate reporting of average monthly health expenditure. This latter, not being a regular payment of households, could have involved a considerable margin of error. For example, table 12 shows that 36% of households reported no expenditure on health. This was particularly high for Coloured households with almost two-thirds reporting no expenditure in comparison to the one-quarter of African households stating zero expenditure. This made the adoption of an allocation routine problematic with it highly unlikely that so many households in the sample received no state health benefits at all.

how much ?

For this reason the procedure chosen in allocating to households automatically apportioned to each some expenditure according to household size. The remainder was divided between households according to estimated number of outpatient visits on the assumption that reported health expenditure - even if not accurate in money terms - at least reflected an ordinal utilization of health services.

The method followed to allocate to each household a state subsidy from health is detailed below. Subsidies for African and Coloured households were separately apportioned but the procedure was identical for both groups; the steps followed for Africans are outlined.

(a) It was assumed that as a group the African households in the sample received their exact share of per capita public expenditure on health.[32] Given a total of 3 202 African household members in the sample, this amounted to health expenditure of R148 637 on this group by the state during the 1982/3 financial year - i.e. 3 200 x R46,42 = R148 637.

(b) Each household member was assumed to automatically receive half of their per capita annual share, i.e. each household received R23,21 times their household size.[33]

(c) The other half was put in a common pool for Africans in the sample and allocated to households according to their proportional share of total out-patient visits for their race group as a whole.

Although somewhat arbitrary it was hoped that this procedure would introduce a household-specific element into the estimate of benefits received from public health expenditure.

4.5 HOUSING

4.5.1 HISTORICAL SKETCH OF STATE FINANCING

During the early years of Union there was little provision of housing by public authorities. Increased urbanisation, together with the virtual standstill in building activity during the First World War, both contributed to the development of a housing shortage in the post-war period. Following the directives from the 'Flu Epidemic Commission of 1918 for urgent attention to slums and locations, a Housing Committee was appointed in 1919 with the following terms of reference:

> "Whether it is advisable for the government to give financial aid or other assistance to local authorities and others in providing housing accommodation in urban areas for persons of limited means including Coloured persons and natives, and if so, the best method of doing so."[34]

The recommendations of the Committee led to the passing of the Housing Act of 1920. This was the first state attempt to supervise the allocation of funds for housing. Under the Act local authorities could borrow money from the Administrator of the province, or with his consent, from other sources for the construction of approved dwellings or schemes. The Central Housing

Board, established under this Act as part of the Department of Health, was to control this borrowing of funds.

The realization that low income groups could not afford the rentals required of economic interest rates led to an amendment to the Act in 1930 which introduced the granting of loans at sub-economic rates of interest. Initially Africans were excluded from this benefit, but from 1934 under certain circumstances relating to slum clearance, sub-economic loans were extended to Africans. Special provisions were made for the aged, poor and totally unfit.

Although some local authorities did make use of these sub-economic loans - almost 18 000 houses were provided from sub-economic funds between 1930 and 1943 - continuing rapid urbanisation aggravated an already existing housing shortage. A contributory factor to the increase in urban population was the demand for labour, particularly African, stimulated by the Second World War. For the duration of the war the construction of houses was drastically curtailed. By 1943 it was estimated by the Social and Economic Planning Council that the shortage of houses in urban areas was approximately 185 000 - 60 000 for Whites and 125 000 for Blacks.[35]

An amendment to the Act in 1944 led to the Central Housing Board being replaced by the National Housing and Planning Commission entrusted with more extensive powers than the original board in that it could itself erect houses and grant loans directly to individuals. An important change also, was the introduction of differential renting within sub-economic housing schemes with rent varying according to the income of tenants. This signified an acceptance of the principle of payment according to means. The further deterioration of the housing situation led in 1945 to the promulgation of the Housing (Emergency Powers) Act which made provisions to speed up building programmes.

Progress was slow, and by 1948 a series of shanty towns had been erected by homeless Africans in the Johannesburg townships of Orlando and Alexandra. Changes in legislation introduced by the newly-elected Nationalist government were aimed jointly at the segregation of races and the curtailment of squatting. These included:

(a) the tightening of influx control measures; and

(b) the establishment of new townships on the outskirts of White areas where African families were resettled (by the newly-appointed Native Resettlement Board).[36]

Policies were also introduced to reduce the costs of African housing and townships services to the State and local authorities. For example:

(a) the Bantu Building Workers Act of 1951 made allowances for Africans to build houses in township areas, thus reducing the cost of erecting houses;

(b) a Bantu Services levy introduced in 1952 was payable monthly by all employers of African workers with these contributions to assist in the financing of township services;

(c) site and service schemes were introduced in 1954;

(d) a reduction in the granting of sub-economic loans for Africans but not for other population groups.

The formal separation of the responsibility for housing was legislated in the 1957 Housing Act. In terms of this, the National Housing and Planning Commission was replaced by the Bantu Housing Board, controlling aspects relating to African housing, and the National Housing Commission responsible for all other groups. Both boards were to make loans available to local authorities for housing. All expenditure incurred by these bodies was to be defrayed from a National Housing Fund to which all the assets of existing provincial housing loan funds would be transferred. This was to be a revolving fund with funds appropriated annually by Parliament.

Throughout the sixties and seventies the financing of state housing for non-Africans continued to be met through the National Housing Fund. The provision of low-cost housing (economic and sub-economic) was through the local authorities with the aid of funds from the National Housing Commission; while the Department of Community Development, set up in 1961, was responsible for housing of a higher standard.

But for Africans the unfolding of the apartheid programme led to restrictions being placed on the availability of finance for housing in the so-called White areas with the emphasis switching to the development of reserve townships. Substantial resources were directed towards urban housing in the reserves. Monies were allocated through the SA Bantu Trust, the reserve authorities and ?

also the Bantu Affairs Administration Boards.[37] From 1968 home-ownership rights for Africans living in townships in urban areas in the Republic were withdrawn and restrictions were placed on the provision of family housing. The inevitable result of the severe housing shortage which followed this clamp down was overdrowding and illegal squatting.

Home-ownership leasehold rights were re-introduced early in 1976 before the countrywide disturbances began in June - and were extended to the 99-year leasehold provisions later that same year. Events following the disturbances led to re-adjustments in government policy regarding the 'temporary' status of urban Africans. In November 1977 the government allocated R100 million for African housing - half of this was for reserve townships and half for housing in the Republic. For Coloured and Indian housing an additional R150 million was set aside.

The Housing Amendment Act of 1979 abolished the Bantu Housing Board. Loans for Africans, as for other groups, would be obtained through the National Housing Commission with Africans again becoming eligible for sub-economic interest rates on the same basis as for other groups.

From 1982 the sources of finance of the National Housing Commission were extended beyond the parliamentary appropriations and the Commission could, with Ministerial permission, borrow money from any source, either locally or abroad. In spite of this, and in the same year, there was a major change in government policy towards public provision of housing. Glover and Watson reported:

> "This re-orientation has taken the form, firstly, of a partial withdrawal of state responsibility for low income housing and a shift in the burden to the private sector and the low income group itself. Secondly, in those areas of housing provision for which the state will continue to take responsibility, there is to be a cutback in financial commitment through the dropping of housing standards."[38]

Important aspects in this new housing policy include:

(a) more involvement by the private sector in the provision of accommodation;

(b) a switch to home-ownership by the selling-off of houses originally funded by the National Housing Commission;

(c) new dwellings to be provided only for households earning under R150 per month;

(d) the above dwellings to be of a lower standard than before;

(e) the provision of 90% loans for the purchase of houses for the R150 per month to R800 per month earners;

(f) loans for materials for building on self-help schemes;

(g) restructuring of rent formulas to bring rents in line with market values for those earning over R150 a month

In terms of the new Constitution, the norms, standards and allocations of finance for housing are to be dealt with as a general affair so that the responsibility for housing will not be fragmented by group.

4.5.2 PROCEDURE FOR ALLOCATION OF HOUSING EXPENDITURE

For the purposes of this study, the problem was to estimate the extent of the housing subsidy received by households in the survey. The components of this subsidy were different for township and squatter households.

For township residents, their monthly housing payment could be divided into (i) a basic rent for tenants, or a monthly loan repayment in the case of home-owners; (ii) certain additional charges.

Basic rent or loan repayments were fixed according to a formula laid down by the Department of Community Development which took into account the monthly income of the tenant, the value of the house and the amount of interest charged on the loan.[39] Additional charges varied in different areas but usually included all or some of the following:

an administrative charge to recover wages and salaries;

a site rent to cover access roads, storm water drainage and similar expenses;

a rates contribution to cover the cost of electricity, water and refuse removal;

a community charge towards the costs of halls, libraries and other recreational facilities;

a school levy in the case of Africans; and

sundry other fees to cover maintenance, insurance and the loss due to unpaid rentals.

For squatter residents there was no actual rent payment, but a fee was charged to cover water, refuse removal, and sewerage disposal services and, in some cases, also a monthly charge for site occupation.

The calculation of subsidies for township and squatter households was estimated as the difference between an approximation of the cost to the authorities of the house plus services - or in the case of squatters, only the services - and the monthly housing repayment of the household. There were no apparent problems attached to obtaining the latter. Households were asked in the questionnaire to give their monthly payments. Prinsloo was confident that housing payments - being a constant amount every month - were reliably recorded by respondents and more accurate than the irregular expenditures of households.[40] However, estimates, of an 'economic cost' to the authorities of the house, plus services, were more problematic. Ideally, for township residents records for every survey house would have had to be individually assessed to obtain its approximate value; while for township and squatter residents the accounts of relevant local authorities or administration boards would have needed thorough investigation to render the 'economic costs' of providing services to particular communities under their jurisdiction. It was felt that this was beyond the scope of this investigation and that for our purposes it would suffice to make certain generalisations regarding costs. These are outlined separately for township tenants, township home-owners and squatters.

The areas surveyed were under the jurisdiction of four separate local authorities. The Cape Town African households fell under the Western Cape Administration Board; the Cape Town Coloured households fell under the Cape Town City Council; some of the Durban African households fell under the Port Natal Administration Board and the remainder under KwaZulu administration.

TOWNSHIP TENANTS

(a) Rents

The basis used here for calculating the real cost of a dwelling to the authorities was that referred to as the 'opportunity-cost' method; namely the real cost of the dwelling was taken as the income that could have been earned if the equity locked up in the dwelling had been invested at a rate of return obtainable from substitute investment opportunities, such as government securities.[41]

The question arose as what to value the 'equity' at. It was decided to use a general estimate of the replacement value, in 1982, of a sub-economic house as all tenants surveyed in both areas were in the sub-economic income group. Estimates made for the approximate costs of a standard sub-economic house of

50 square meters were put at R2 500 at 1978 prices, exclusive of land and services.[42] For our purposes, the cost of land was not taken into consideration; while the cost of services was included in additional charges.

If the cost of R2 500 was inflated to a 1982 price using the general production price index for South African commodities, the cost of the equivalent dwelling in 1982 would have been R4 263. If this money had been invested in three-year RSA stock at the November 1982 interest rate of 10,0%, the annual return would have been R426,36 or R35,53 monthly. This monthly amount was taken as the real cost to the authorities of a sub-economic dwelling, excluding land and maintenance costs.

(b) Additional Charges

Calculation of economic charges to households for services provided by local authorities were assumed equal for all township residents, regardless of area or race group. The estimate used was that provided by the Western Cape Administration Board for the Peninsula Area, inflated to R63,08 [43] from the 1981/82 figure of R53,50.[44]

Using these costs for Peninsula African townships as estimates of costs elsewhere would be inaccurate to the extent of:

(a) items included in the charges of the Peninsula African townships but not provided for Peninsula Coloured townships or Durban African townships;

(b) items not included in the charges of the Peninsula African townships but provided for Peninsula Coloured townships or Durban African townships;

(c) any difference in costs of provision of the items by the different authorities.[45]

In the absence of better data, it was felt that these estimates were sufficient as an approximate indication of economic costs for the additional charges for all townships, regardless of group or area.

TOWNSHIP HOMEOWNERS

None of the Cape Town households - African nor Coloured - were home-owners. However, in the Durban townships of Kwamashu, Lamontville and Umlazi there was some degree of home-ownership. For homeowners a problem was encountered in that the questionnaire did not ask whether households were still in the process of repaying loans. However, communication with the Kwamashu Housing Offices confirmed that given the housing payments of respondents in the Kwamashu and Umlazi townships that these households were not repaying loans but only paying service charges. Subsidies to these homeowners was then the difference between the economic cost of additional charges - R63,08 - and their monthly housing payment.

The other Durban township where a small number of respondents were homeowners was Lamontville. Housing payments here did include a loan repayment at a subsidized rate. The real cost of this subsidy to the state was calculated in exactly the same way as the rent subsidy for township tenants but only on 90% of the replacement value of the house as homeowners were usually required to make a deposit of 10%. The real cost of the loan to the authorities worked out at R31,97 monthly. This amount was then added to the economic cost of additional charges to give the full un-subsidized cost of housing provision to homeowners. Any difference between this cost - R95,05 - and their monthly housing payment was taken as a housing subsidy.

SQUATTERS

Local authorities and administration boards usually provided water, refuse removal services and sewerage disposal services for squatter communities. In addition to these, some authorities charge a monthly rent for occupation of the site. For our estimates of an economic charge for squatter households, a cost for land use was not considered.

A breakdown for 1981/82 of additional charges by the Cape Town City Council for sub-economic municipal houses in their areas gave the proportional contribution of 33,7% for electricity, water and refuse removal.[46] A similar breakdown of the service charge in Grahamstown for the 1982/83 financial year gave these same components plus sanitation a share of 35,1%.[47] Squatter areas were not provided with electricity. They did however benefit indirectly from some other facilities provided for in the additional charge paid by township residents - for example access roads, stormwater drainage, some community facilities - and their presence did involve some administrative cost. For the allocation procedure adopted for squatters it was assumed that the proportional costs of these additional benefits indirectly received plus the costs of water, refuse removal and sewerage disposal was one-third of the economic cost of additional charges in the township.

Accepting these assumptions implied that the monthly cost of a squatter household to the authorities was R21,03 - exclusive of any charge for the land use. Any squatter household having a monthly housing repayment of less than this was assumed to be receiving a subsidy to the extent of the difference.

4.6 PASSENGER TRANSPORT

4.6.1 HISTORICAL SKETCH OF STATE FINANCING

Provision of adequate transport systems has become accepted as a legitimate function of public authorities. Initially responsibility was restricted to the establishing and maintaining of roads; this was extended to the direct provision of a range of goods and passenger transport services; and later, to their subsidization when privately provided.

The concern in this study was with urban passenger transport and the subsidies which operate to reduce fares below their economic level. Passenger transport services include:[48]

(a) urban rail and road services provided by the South Africa Transport Services;

(b) bus services provided by local authorities, mainly to service the White community and operated as part of the municipal organization through which it is usually heavily subsidized;

(c) bus services owned by local authorities but under the control of a metropolitan transportation board and financially independent of the local authorities;

(d) bus services provided by private operators such as PUTCO in Johannesburg, Pretoria and Durban; and City Tramways in Capetown and Port Elizabeth;

(e) taxi services which are not subsidized at all by the state and were therefore not considered in this analysis.

Transport services provided and controlled by South African Transport Services and the local authorities did not require special legislation in order to be subsidized. Losses on the former were met from transfers through the State Revenue Fund while local authorities covered losses on their bus services from other municipal revenues. It was not until the 'fifties that special legislation was passed providing for specific subsidies on transport. This was contained in the Bantu Services Levy Act of 1952.

In terms of this Act, a levy of up to 25 cents weekly was to be paid by all employers of adult male Africans, in the larger towns, who did not supply free accommodation. This levy would be paid into a Services Levy Fund. Provision was made in the Act for up to 5 cents out of this 25 cents to be used for subsidizing transport services. In these towns where employers contributed to the fund, local authorities or private companies which ran transport services for African commuters could apply for subsidies from the levies collected in their area.[49] The size of the subsidy was calculated on two factors: the operating costs of the bus company or local authority concerned, and the ability of the commuter to pay the economic fare. The difference between the 'economic fare' and the affordability of this fare to commuters in the area would be met with a subsidy paid directly to the bus company and payable only on a weekly clip-card or monthly ticket to bona fide workers.

An announcement towards the end of 1956 that fares were to be increased for commuters in Johannesburg and Pretoria led to a bus boycott, beginning January 1957 in the Alexandra Township, and spreading widely. As a direct result of this, the Bantu Transport Services Act was passed in June of that year to supplement the Bantu Services Levy Act. In terms of this new Act the control of that portion of employer levies used for subsidizing transport services was transferred from the then Native Affairs Department to the Department of Transport, and provision was made to allow the Minister to increase employer contributions from 5 cents to a maximum of 10 cents weekly.

Over the years these contributions proved insufficient to meet the subsidy requirements for bus services and central government were called upon to pay a balance of R3,8 million over the period from 1957 to 1972.[50] In this latter year the Act was amended with employer contributions being extended to include employers of all African women, with the exception of domestic workers. The maximum amount payable was raised to 20 cents per worker.

Also passed in 1972 was the Transport Services for Coloured Persons and Indians Act which made allowances for the Minister to extend the provisions for employer contributions to Coloured and Indian workers within declared areas. These contributions would be paid into a Coloured Transport Account and an Indian Transport Account respectively.

There were two other forms of subsidy already in operation, not yet mentioned, namely:

(a) the fares of African commuters travelling daily between the reserves and their places of employment were subsidized from a share of township liquor profits paid over to the then Department of Bantu Administration and Development; and

(b) the fares of third class railway journeys between the urban centres and certain townships were subsidized by the Department of Transport.

In 1974 the Bantu Transport Services Amendment Act widened the area in which levies could be imposed on African workers and changed the contribution to a monthly basis, fixing the maximum amount at R1 per worker per month. Some indication of the extent of all subsidies at about this time can be obtained from Table 13 which presents figures for the financial year 1976/77.

TABLE 13

CONTRIBUTIONS FROM TRANSPORT LEVIES AND SUBSIDIES BY THE STATE TOWARDS PUBLIC TRANSPORT COSTS

SOURCE OF FUNDS	AMOUNT (R)
BUS TRANSPORT	
Funds voted by Parliament - Africans	29 074 626
Funds voted by Parliament - Coloured Persons	975 653
Black Township Levies Account	10 054 556
Coloured Transport Levies Account	6 403 214
Profits on Sales of Liquor in African Townships	2 500 000
TRAIN TRANSPORT	
Funds voted by Parliament	38 000 000
TOTAL	87 008 049

Sources: South Africa, Report of the Commission of Inquiry into Legislation Affecting the Utilisation of Manpower, R P 30/1979, p 125; South Africa, Second Interim Report of the Commission of Inquiry into Bus Passenger Transportation in the Republic of South Africa, R P 103/1982, p 35.

Given low wages and the siting and relocation of African and Coloured residential areas on the outskirts of cities, the transport costs of workers from their homes to their work-place were progressively needing higher levels of subsidizing. With employer contributions remaining constant post - 1976, the state's share of the transport subsidy was increasing. The Black Transport Services Amendment Act of 1982 sought to 'correct' this imbalance between the employers' and departments' contributions by making provision for increases in employer contributions. These increases were effected later that same year when the maximum rate for African workers was increased from R1 to R3 monthly and for Coloured and Indian workers from 20 cents to 60 cents weekly. Contributions were now also payable in respect of domestic workers who did not sleep in.

By the 1982/83 financial year, the year used for to this analysis, the total amount paid in public transport subsidies was in the region of R402 million, R374 million of which came from the central Treasury and R28 million from employers' contributions.[51] This excluded the subsidy of local authority bus services from revenue obtained from other municipal sources, mainly property rates. The Welgemoed Commission into Bus Passenger Transportation estimated this to be in the region of R30 million or more per annum.[52]

4.6.2 PROCEDURE FOR ALLOCATION OF PASSENGER TRANSPORT SUBSIDIES

In the case of bus subsidies paid to local authority or private operators, the level of subsidy depends on a number of factors:-

(a) the average wages of workers to be transported;
(b) the distance over which passengers have to be transported;
(c) the passenger density; and
(d) the operating costs of the bus operator.

The first of these provides an estimate of the amount workers can afford; the remainder are used to calculate the 'economic tariff' which must be charged in order to provide the service profitably.

The difference between the two, as calculated by the Department of Transport, gives the subsidy paid. Subsidy levels will therefore vary considerably by route and area. It has been estimated that bus commuters in Cape Town and on the Witwatersrand pay an average of about 50% of the economic tariff while those in Bloemfontein and Pretoria pay more than this.[53] Other examples of subsidies paid on four specific routes are shown in Table 14.

TABLE 14

SUBSIDIES TO PASSENGERS ON SPECIFIC ROUTES: 1981/82

AREA	ROUTE DISTANCE	PASSENGER PAYS FOR 10 JOURNEYS	SUBSIDY FOR 10 JOURNEYS	TOTAL FARE FOR 10 JOURNIES	% OF ECONOMIC FARE PAID BY PASSENGER
RURAL AREAS					
(From Bophutatswana)					
Lichtenburg	65,00km	R3,25	R9,98	R13,23	25%
Rustenburg	80,90km	R3,00	R9,64	R12,64	24%
URBAN					
Durban	30,03km	R4,15	R4,15	R8,30	50%
Johannesburg	29,20km	R5,10	R3,90	R9,00	57%

Source: South Africa, <u>Second Interim Report of Commission of Inquiry Into Bus Passenger Transportation in the Republic of South Africa</u>, R P 103/1982.

In allocating transport subsidies to our households the first assumption which needed to be made was what percentage of the economic fare was paid by those workers in this sample who used subsidized transport. This would obviously have varied for each worker but for the purposes of this study it was necessary to settle for an average for all workers. Given the above calculations of Voges' and those given in table 14 , it seemed reasonable to assume that bus commuters paid 50% of the economic fare. In the absence of any better estimates, it also seemed not too improbable that subsidies on rail services were of the same order as those on buses. This resulted in the first assumption becoming that all workers who commuted to and from work on subsidized transport - bus or rail - paid exactly half of the economic fare with the other half being met through state and employer subsidies.

The second assumption to be tackled was the proportion of commuting to and from work which took place on subsidized transport - as opposed to in private cars and taxis. As with the first assumption it was necessary to make a generalization applicable to all workers and this was done using projections provided in the Driessen Committee of Inquiry into Urban Transport Facilities; these are shown in Table 15.

TABLE 15

PROJECTIONS OF PERCENTAGE USAGE OF ALTERNATIVE MODES OF TRANSPORT FOR AFRICAN, ASIAN AND COLOURED COMMUTERS: 1980

MODE OF TRANSPORT	CAPE TOWN %	DURBAN %
Car	33,0	30,1
Taxi	0,4	1.9
Bus	36,0	34,5
Railway	30,6	33,5
TOTAL	100,0	100,0

Source: South Africa, Report of the Committee of Inquiry Into Urban Transport Facilities in the Republic, R P 60/74, p 92.

Being poor, the respondents in our households would most probably have used cars less than the average amount, if at all. On the other hand, the Driessen Commission may well have underestimated the increase in usage of taxi-kombis as an alternative to public transport. It was decided to increase the bus and train proportion from approximately two-thirds to three-quarters, leaving 25% of expenditure to be shared between expenditure on private cars and taxis. This resulted in the second assumption being that, for all households, 75% of commuting to and from work was on subsidized bus or rail transport.

Lastly, it was necessary to divide household expenditure on transport between weekly transport to and from work using a clip-card and other transport where no subsidy was granted. This was apportioned using the difference between the transport allocation of the Minimum Living Level and that of the Supplemented Living Level, on the assumption that the former was 'essential' travel and the latter 'additional' travel. This difference was looked at for Coloured households in Cape Town and Indian households in Durban; African expenditures could not be used as additional travel allowed for in the Supplemented Living Level included the cost of holiday travel.[54] For Coloured and Indian households the proportion of essential travel to total travel costs averaged out at 84%. This was reduced to 80% to allow for some essential shopping travel where no subsidy would apply.

Combining assumptions 2 and 3 above resulted in the estimate that 60% of each house's reported transport expenditure was on subsidized public transport to and from work, i.e. 75% of 80% of expenditure. With the first assumption that exactly half of the economic fare was paid in the form of subsidies, the extent of benefits to household from state and employer subsidies, was therefore assumed to be also equal to 60% of their stated expenditure on transport.

FOOTNOTES

1. Bromberger, N, 'Government Policies Affecting the Distribution of Income, 1940-1980', in South Africa: Public Policy Perspectives, R Schrire (ed), Cape Town, Juta and Co Ltd, 1982.

2. Schrire, R, 'The Homelands: Political Perspectives', in South Africa: Public Policy Perspectives, R Schrire (ed), Cape Town, Juta and Co Ltd, 1982, p 116.

3. For example, the De Lange Commission into Education Provision suggested that the state obligation to provide free, compulsory education be limited to the first six years of schooling; thereafter the state's contribution would need to be supplemented from other sources. See also the change in government policy towards public provision of health and housing, sections 4.4.1 and 4.5.1 respectively.

4. Human Awareness Programme, 'State Pension Scheme and Private Pensions Funds - How they affect black people in South Africa', Carnegie Conference Paper No 138, Cape Town, 1984.

5. Ibid.

6. Pollak, H, 'State Social Pensions, Grants and Social Welfare', in Race Discrimination in South Africa: A Review, S T van der Horst (ed), Cape Town, David Philip, 1981.

7. For the period 1948-1968 Asian pensioners were paid at a lower rate than Coloured pensioners; this discrimination was due to National Party policy regarding Asians as 'foreigners'.

8. Pollak, H, op cit, p 160.

9. See Annual Reports of Deptartments of Health and Welfare, Internal Affairs and Co-operation and Development, Relevant Year.

10. Africans outside reserve areas whose pensions are paid by the Department of Co-operation and Development.

11. Reported in: Rheinalt Jones, J D, 'Social Welfare', in Handbook of Race Relations in South Africa, E Hellman (ed), Cape Town, Oxford University Press, London , 1949, p 430.

12. Hellman, E, op cit, p 169.

13. South African Institute of Race Relations (SAIRR), Annual Survey 1983, pp 511-512.

14. Even after control of all school education was vested in the provinces in 1910, the Churches and missions continued to administer much of the education received by Asians, Coloured and African pupils. Subsidies were made by the provinces to these schools.

15. Jones, R C, 'The Education of the Bantu in South Africa', in Education in Southern Africa, B Rose (ed), London, Collier-MacMillan, 1970, p 51.

16. Horrell, M, Laws Affecting Race Relations in South Africa, Johannesburg, SAIRR, 1978, p 308.

17. Blignaut, S, Statistics on Education in South Africa, 1968-79, Johannesburg, SAIRR, 1981, p 7.

18. Bromberger, N, op cit, p 177.

19. Blignaut, S, op cit, p 48.

20. These are the four "independent states" - Transkei, Bophutatswana, Ciskei, Venda - and the six "non-independent" reserves, viz: Gazankulu, KaNgwane, KwaNdebele, KwaZulu, Lebowa and Quaqwa.

21. Simkins, C, Abedian, I, Hendrie, D and Le Roux, P, 'Justice, Development and the National Budget', Carnegie Post - Conference Series No 6, Cape Town, 1985.

22. Excludes Transkei, Bophutatswana, Ciskei, Venda.

23. See Report of the Commission of Enquiry into the Financial Relations between Central Government and the Provinces, R P 35/1964, p 62.

24. South Africa, Report of the National Health Services Commission , U G 30/1944.

25. South Africa, Report of the Commission of Enquiry into the Financial Relations between Central Government and the Provinces, R P 35/1964, p 65.

26. De Beer, C, The South African Disease: Apartheid Health and Health Services, Johannesburg, South African Research Service, 1984, pp 37-41.

27. See section 2.3.

28. Community Health Research Project 'Access to Health Services in the Greater Cape Town Area', SALDRU Working Paper No 55, 1983.

29. McGrath, M D, 'The Racial Distribution of Taxes and State Expenditures', Black/White Income Gap Project Final Research Report No 2, Dept of Economics, University of Natal, 1979.

30. In this report it was stated that social pensions accounted for 56% of the 1982/3 vote in Lebowa, 51,9% in Venda and at least 50% in KwaZulu.

31. Appendix D sets out the procedure for moving from monthly medical care expenditure per household to number of outpatient visits per month. It also gives the tariff structure for Cape and Natal provincial hospitals for 1982.

32. In the absence of more information it cannot be said whether this would have over- or under- estimated the actual amount of public health expenditure on this group. Being urban-based, access to health services would have been greater than for rural households; however, having been specifically chosen as low-income households their utilization of health service may have been below average.

33. This ignored that utilization of health facilities could well be age-specific with certain age groups - for example, children, women in their child-bearing years and the elderly - consuming in excess of their share.

34. Quoted in Morris, P A, A History of Black Housing in South Africa, Johannesburg, South African Foundation, 1981, p 16.

35. Quoted in: Hellman, E, 'Urban Areas', in Handbook on Race Relations in South Africa, E Hellman, Cape Town, Geoffrey Cumberlege, 1949, p 244.

36. Not only squatters were re-settled. Residents with freehold tenure rights in older townships - for example, Sophiatown (Johannesburg), Cato Manor (Durban) and Lady Selbourne (Pretoria) - were also compelled to move to a new townships and lose their freehold rights. See Morris, P and Van der Horst, S T, 'Urban Housing', in Race Discrimination in South Africa, Van der Horst, S T (ed), Cape Town, David Philip, 1981, p 93.

37. These had been established in 1971 to take over the local control of the affairs of Africans from the municipalities.

38. Glover, C and Watson, V, 'The 'affordability' of the new housing policy and its likely impact on the 'Coloured' housing crisis in Cape Town', Carnegie Conference Paper No 161, 1984, p 4

39. Human Awareness Programme, Black Housing: An Assessment, Special Report No 5, Johannesburg, 1984, p 75.

40. Prinsloo, J, op cit, p 84.

41. Le Grande, J, The Strategy of Equality, London, George Allen and Unwin, 1982, p 87.

42. Skeen, C,' Provision of Housing for the Low Income Group', The Road Ahead Conference, July 1978, p 7.

43. The services component of the consumer price index was used for this calculation: Index 1981 - 188,7; Index 1982 - 222,5.

44. As quoted in Bekker, S and Humphries, R, From Control to Confusion: The Changing Role of Administration Boards in South Africa, 1971-1983, Shuter and Shooter, Pietermaritzburg, 1985, p 154. This cost of provision for the Peninsula area was above the average of R45,91 for nine outlying regions controlled by the Western Cape Administration Board.

45. Bekker and Humphries singled out the Port Natal Administration Board as having particularly high costs of administering and of providing services because of the relatively small number of residents in their area of jurisdiction.

46. Human Awareness Programme, op cit, P 78.

47. Bekker, S and Humphries, R, op cit, p 152.

48. Human Awareness Programme, 'Black Urban Public Road Transport: An Assessment', Special Report No 3, 1982, p 22.

49. Horrell, M, Laws Affecting Race Relations in South Africa 1948-1976, Johannesburg, SAIRR, 1978, p 107.

50 Horrell, M, ibid, p 108.

51. South Africa, Report of the Committee for Constitutional Affairs of the President's Council on the Urbanisation Strategy for the Republic of South Africa, P C 3/1985, p 101.

52. South Africa, Second Interim Report of the Commission of Inquiry into Bus Passenger Transportation in the Republic of South Africa, R P 103/1982, p 35.

53. Voges, E M, Accessibility, Transport and the Spatial Structure of South African cities: an Historical Perspective, Technical Report R T 19/83, Revised September 1984, NITRR, CSIR, Pretoria. Quoted in P C 3/1985, op cit, p 102.

54. Bureau of Market Research, 'The Minimum and Supplemented Living Levels of Non-Whites Residing in the Main and Other Selected Urban Areas of the Republic of South Africa: February 1983', <u>Research Report</u> No 101, 1983

CHAPTER 5

ANALYSIS OF STATE SPENDING ON WELFARE SERVICES TO SAMPLE HOUSEHOLDS

This chapter explores the incidence of state expenditure on sample households in the form of social security payments, education, health, housing and transport. Direct expenditure and subsidies by government on these items of state welfare amounted to approximately R8,0 billion in 1983.[1] This accounted for 35% of total government expenditure. In contrast to other public spending, expenditure on these items, is more easily allocated to individuals or groups.

The assumptions under which these state expenditures and subsidies were quantified and allocated to sample households were developed in the previous chapter. Allocation routines were applied separately to each household which then enabled distributional effects from spending to be analyzed with respect to various household characteristics. The following were found to be of interest: income, race, household size and settlement type. Benefits from expenditures were looked at both in absolute terms and in relation to original household income; the latter being defined as all disposable (after tax) income from wages, lodgers and any other payments excluding contributions from social security.

Before discussing redistribution by household characteristic, the next section presents a general description of the benefits accruing to households from each of the items considered. Taken together the overall money value to the average household from all five items was R1 822 per annum with spending varying from a maximum value of R8 516 per annum to a minimum of R199 per annum. Table 16 gives the distribution of expenditure within this range.

TABLE 16

DISTRIBUTION OF BENEFITS TO SAMPLE HOUSEHOLDS FROM STATE EXPENDITURES ON WELFARE IN RANDS PER ANNUM

CLASS INTERVALS IN RANDS PER ANNUM	NO	%
0	0	-
1 - 1 000	156	23,4
1 001 - 2 000	270	40,5
2 001 - 3 000	159	23,9
3 001 - 4 000	49	7,4
4 001 - 5 000	18	2,7
> 5 000	14	2,1
TOTAL	666	100,0

5.1 GENERAL DESCRIPTION OF STATE EXPENDITURES ON WELFARE

5.1.1 STATE WELFARE EXPENDITURES PROVIDING CASH BENEFITS

Cash benefits were obtained from the four social security payments included in this study: namely pensions, maintenance grants, foster-care grants and family allowances. Benefits received from these expenditures could be distinguished from those received from education, health, housing and transport in that while all composed a social wage to households, it was the former which actually increased their money income.

From Table 17 it appears that less than one-quarter of households were social security recipients. Most of the payments came from pensions. Households falling in the highest class interval all had more than one recipient of benefits per households with the maximum being three in any one household. For households receiving payments the average annual receipt from social security worked out at R912 per annum.

TABLE 17

DISTRIBUTION OF CASH PAYMENTS TO SAMPLE HOUSEHOLDS FROM SOCIAL SECURITY IN RANDS PER ANNUM

CLASS INTERVALS IN RANDS PER ANNUM	SOCIAL SECURITY PAYMENTS NO	%
0	513	77,0
1 - 100	1	0,2
101 - 200	1	0,2
201 - 300	6	0,9
301 - 400	17	2,6
401 - 500	20	3,0
501 - 600	11	1,7
601 - 700	2	0,3
701 - 800	7	1,1
801 - 900	37	5,6
901 - 1 000	4	0,6
> 1 000	47	7,1
TOTAL	666	100,0

Using the minimum living level (MLL) as an assessment of extreme poverty, more than half of the households receiving payments could be termed very poor in that their original incomes fell below the

MLL relevant to their household circumstances. Table 18 shows that in absolute terms this meant tHat 84 out of the 153 social security recipient households were very poor. Of these eightfour households with pre-transfer income below the MLL, twentysix had their incomes pushed above the MLL after receipt of transfer income.

TABLE 18

FREQUENCY DISTRIBUTION OF HOUSEHOLDS COMPARING INCOME LEVELS BETWEEN HOUSEHOLDS RECEIVING AND NOT RECEIVING SOCIAL SECURITY PAYMENTS

INCOME STATUS	RECIPIENT HOUSEHOLDS	NON-RECIPIENT HOUSEHOLDS	TOTAL
Below MLL	84	174	258
Above MLL	69	339	408
TOTAL	153	513	666

From Table 18 it also emerges that in addition to the eightfour very poor households who received payments, there were more than double this number who had incomes below the MLL but were not being caught in the safety net of social security. Most of these would not have been eligible for relief under the existing social security system which only provides a limited range of selective benefits to households as opposed to general means-tested assistance to all these in poverty. However there was some evidence of potential recipients not claiming benefits - for example, there were 27 cases of eligible repondents, over pensionable age, not claiming their social pensions. Reasons for this could not be ascertained from the coded data but probable causes could have included administrative delays and problems, ignorance of rights and, perhaps, fear that to claim would draw attention to an 'illegal' aspect of their life such as unauthorised presence in an area.

TABLE 19

DISTRIBUTION OF HOUSEHOLDS RECEIVING SOCIAL SECURITY PAYMENTS BY AREA AND SETTLEMENT TYPE

AREA	SETTLEMENT TYPE	NO OF HOUSE-HOLDS RECEIVING SOCIAL SECURITY PAYMENTS (1)	NO OF HOUSE-HOLDS SAMPLED (2)	(1) AS A % OF (2) FOR EACH AREA
CAPE TOWN				
Crossroads	African Squatter	9	126	7,1%
Gugulelu	African Township	17	90	18.9%
Modderdam	Coloured Squatter	6	52	11.5%
Uitsig	Coloured Township	40	72	55,6%
Bonteheuwel	Coloured Township	29	55	52,7%
DURBAN				
Chesterville	African Township	1	8	12,5%
Clermont	African Squatter	4	34	11,8%
Folweni	African Squatter	4	39	10,3%
Inanda	African Squatter	4	53	7,5%
Kwamashu	African Township	12	46	26,1%
Lamontville	African Township	8	14	57,1%
Malukazi	African Squatter	3	28	10,7%
Umlazi	African Townsip	16	49	32,7%
ALL AREAS		153	666	23,0%

Households receiving benefits from social security were not evenly spread throught the sample areas. From Table 19 distinct biases in the incidence of households receiving social security can be noted. Firstly, of the Coloured households in the sample 42% received income from social security compared to the 16% of African households who benefitted from payments. Secondly, township households scored better than their squatter counterparts with 9% of the latter receiving income from social security compared to the 37% of township households who benefitted from payments.

Heads of households tended to be older in households receiving social security with mean age of 57,9 years compared to that of 43,2 years for households not receiving benefits. The former also recorded relatively more female headed households. Table 20 shows this to have been consistently true for each of the three groups - Durban Africans, Cape Town Africans and Cape Town Coloured - with an overall average of 52% of female headed households amongst social security recipients and only 25% amongst non-recipient households.

TABLE 20
COMPARISON OF PERCENTAGE DISTRIBUTION OF GENDER OF HEAD OF HOUSEHOLD BETWEEN HOUSEHOLDS RECEIVING AND NOT RECEIVING SOCIAL SECURITY PAYMENTS

GROUP AND AREA	GENDER OF HOUSEHOLD HEAD	% DISTRIBUTION FOR HOUSEHOLDS RECEIVING SOCIAL SECURITY	% DISTRIBUTION FOR HOUSEHOLDS NOT RECEIVING SOCIAL SECURITY	% DISTRIBUTION FOR ALL HOUSEHOLDS
African Durban	Male	50,0	74,0	69,4
	Female	50,0	26,0	30,6
	Total	100,0	100,0	100,00
African Cape Town	Male	50,0	72,6	69,9
	Female	50,0	27,4	30,1
	Total	100,0	100,0	100,0
Coloured Cape Town	Male	46,7	83,7	68,2
	Female	53,3	16,3	31,8
	Total	100,0	100,0	100,0

The deviation of household structure from the average was in the expected direction with relatively fewer nuclear families amongst households receiving social security and relatively more extended families. Households receiving benefits also recorded fewer compound households. Table 21 shows this to have been the pattern for each group and area. The net effect of these differences was a slightly larger household size and more adult members for households receiving benefits. These households averaged 6,7 members of whom 4,1 were adults in comparison to the equivalent rates of 6,3 members and 3,6 adults for households not receiving benefits.

TABLE 21

COMPARISON OF PERCENTAGE DISTRIBUTION OF HOUSEHOLD STRUCTURE BETWEEN HOUSEHOLDS RECEIVING AND NOT RECEIVING SOCIAL SECURITY PAYMENTS

GROUP AND AREA	HOUSEHOLD STRUCTURE	% DISTRIBUTION FOR HOUSEHOLDS RECEIVING SOCIAL SECURITY	%DISTRIBUTION FOR HOUSEHOLDS NOT RECEIVING SOCIAL SECURITY	% DISTRIBUTION FOR ALL HOUSEHOLDS
African Durban	Solitary	1,9	0,9	1,1
	Unrelated	-	1,4	1,1
	Nuclear	13,5	56,4	48,1
	Extended	82,7	35,8	44,8
	Compound	-	2,3	1,9
	Compound and extended	1,9	3,2	3,0
	TOTAL	100,0	100,0	100,0
African Cape Town	Solitary	-	-	-
	Unrelated	-	1,1	0,9
	Nuclear	53,8	72,6	70,4
	Extended	46,2	22,1	25,0
	Compound	-	2,1	1,9
	Compound and extended	-	2,1	1,9
	TOTAL	100,0	100,0	100,0
Coloured Cape Town	Solitary	-	1,0	0,6
	Unrelated	2,7	-	1,1
	Nuclear	37,3	56,7	48,6
	Extended	49,3	23,1	34,1
	Compound	6,7	12,5	10,1
	Compound and extended	4,0	6,7	5,6
	TOTAL	100,0	100,0	100,0

5.1.2 STATE WELFARE EXPENDITURES PROVIDING BENEFITS IN-KIND

The four welfare expenditures analyzed in respect of the in-kind benefits which their provision transferred to households were education, health, housing and transport. Households were eligible for each of these collectively provided services according to the conditions set out in the allocation routines developed in the previous chapter. A great number of assumptions and estimates were made in establishing these allocation procedures and the results must be interpreted with care. Table 22 sets out the frequency distribution of benefits to households under each of the routines.

TABLE 22

DISTRIBUTION OF BENEFITS TO SAMPLE HOUSEHOLDS FROM STATE SPENDING ON EDUCATION, HEALTH, HOUSING AND TRANSPORT IN RANDS PER ANNUM

CLASS INTERVALS	EDUCATION		HEALTH		HOUSING		TRANSPORT	
	NO	%	NO	%	NO	%	NO	%
0	163	24,5	0	-	8	1,2	88	13,2
1-100	0	-	41	6,2	18	2,7	304	45,6
101-200	45	6,8	191	28,7	219	32,9	168	25,2
201-300	0	-	163	24,5	87	13,1	63	9,5
301-400	72	10,8	107	16,1	0	-	21	3,2
401-500	76	11,4	53	8,0	1	0,2	10	1,5
501-600	22	3,3	28	4,2	2	0,3	6	0,9
601-700	68	10,2	27	4,1	59	8,9	4	0,6
701-800	0	-	19	2,9	13	2,0	0	-
801-900	50	7,5	4	0,6	63	9,5	0	-
901-1000	53	8,0	8	1,2	145	21,8	1	0,2
>1000	117	17,6	25	3,8	51	7,7	1	0,2
TOTAL	666	100,0	666	100,0	666	100,0	666	100,0

Benefits from state spending on education were allocated to households according to the number of primary and secondary schoolchildren in each household. Only one-quarter of households registered no children at school with the average over the sample being two per household - 1,3 at primary school and 0,7 at secondary school. Given per capita expenditures on African and Coloured education, the money value to the average household would have been R443 per annum if African and R1 394 per annum if Coloured.[2]

This inequality of expenditure between groups had two separate components. In part it could be explained by blatant discrimination against African schoolchildren which would be reflected in indicators such as pupil:teacher ratios in 1982 of 39:1 for African schoolchildren against the equivalent ratio of 27:1 for Coloured schoolchildren.[3] But a second factor contributing to the lower per capita expenditure on African pupils would have been the lower qualifications of teachers in African schools which would have served to reduce the wage share portion of overall expenditure on African education. For example whereas only 24% of African teachers had a school qualification above a standard 8, half of all Coloured teachers had attained this level or higher.[4]

The allocation routine for assigning health expenditure apportioned some expenditure according to reported utilization - with the remainder being allocated on a per capita basis according to household size. Both were problematic. Regarding the former it was felt that Coloured households in particular had tended not to respond accurately to the question relating to monthly medical spending. It was hoped however that reported utilization at least reflected the rank order of benefits from state health; in other words, households reporting zero expenditure per month used the health services less than those answering to a positive monthly health expenditure.

The remaining allocation, according to the number of household members, was racially based in that it had been estimated that per capita health spending on Africans was almost half that for Coloured persons - R46 per capita as opposed to R84 per capita. This could have overstated the differences in health services accessible to urban Africans relative to Coloured persons if services in the rural areas were in fact responsible for pulling down the African average.

In the absence of comparative microstudies on urban-rural differences the allocation routine was accepted - with reservation - as a rough approximation of health spending on sample households. Health expenditure for households ranged from a maximum of R4 132 per annum to a minimum of R23 per annum with the mean averaging out at R350. This was slightly more than half the household average of R621 per month on education - reflecting the lower proportion of government spending on health relative to education.

With households almost equally divided between township residents and squatter residents, the frequency distribution for benefits from state spending on housing was bimodal with squatter households receiving on average R172 per annum while township households received R888 per annum. This difference was the result of township households receiving either a rent or loan subsidy from the state and, in addition, benefitting from a higher level of subsidized services.

The gap in state spending between township and squatter residents must be carefully interpreted. It reflected the substantially higher cost to the state of conventional housing in comparison to the lower cost involved in the provision of alternative housing. Households in the sample who had secured township houses through past priority on housing lists were beneficiaries of this higher state spending at the time of the survey. But future state housing policy is to be aimed at reducing this subsidy either by the selling off of homes or the increasing of rent payments to economic levels for all except those earning less than R150 per month. This is to be coupled with a policy of increased provision of serviced sites. If implemented, this policy would tend to reduce the future differential in state spending between township and other residents.

Transport subsidies were allocated according to reported household expenditure on transport. Eighty-eight or 13% of households recorded no transport expenditure. Presumably the majority of these were households with no employed persons and those with earners working in the informal sector - either at home or close to home. Transport expenditure increased for households as the number of earners per family increased and also according to distances travelled between home and work. Of the four welfare expenditures rendering in-kind benefits - education, health, housing and transport - the latter had the lowest average transfer at R111 per annum or R9 monthly. Of this approximately 7% was a subsidy from employers.[5]

5.2 ANALYSIS OF BENEFITS FROM STATE EXPENDITURES BY INCOME GROUP

The above discussion was limited to the absolute size of transfers. But transfers can also be assessed in relation to original income to enable an analysis of biases in the distribution of transfers towards different income categories. For this purpose, rather than using original income to rank beneficiaries of state expenditure, it was decided to use the annual per capita poverty gap which was a linear transformation of income and felt to be a better measure of overal household welfare than original income.

The annual poverty gap is calculated as the difference between the original pre-transfer disposable income for each household and the minimum living level (MLL) for that household.[6] It therefore relates the income of each household to its needs as measured by the MLL - that is the theoretical minimum financial requirement of a household if it is to survive and have acceptable standards of hygience and clothing. A negative annual poverty gap indicates the shortfall in annual income relative to the MLL; a positive annual poverty gap indicates the surplus in annual income relative to this minimum. It must be emphasized that this is a surplus <u>relative</u> to the MLL and not a surplus of income.[7]

Although the annual poverty gap relates income to household requirements, it fails to take into account household size when presenting the actual shortfall or surplus. Dividing through by household size, the resultant annual per capita poverty gap becomes a useful measure of relative family welfare against which transfers can meaningfully be assessed. It has the advantage over original income in that it takes into account economies of scale in living costs, and by definition, allows for household size and differences in the age composition of household members.

For each household the annual per capita poverty gap was calculated using the MLL relevant to their household circumstances - that is, their race, urban area and size. Households were then ranked and grouped according to annual per capita poverty gap. For each household, benefits from state expenditure on each of the five welfare items was calculated using the allocation routines.Table 23 shows annual mean benefits for each decile of poverty gap.

TABLE 23

ANNUAL MEAN BENEFITS FROM STATE WELFARE EXPENDITURES ON SAMPLE HOUSEHOLDS, GROUPED BY DECILE OF POVERTY GAP PER CAPITA

DECILES OF ANNUAL PER CAPITA POVERTY GAP (R)	NO OF HOUSE HOLDS	ANNUAL MEAN BENEFITS FROM CASH PAYMENTS (R)	ANNUAL MEAN BENEFITS FROM IN-KIND PAYMENTS (R)	ANNUAL MEAN BENEFITS FROM CASH AND IN-KIND PAYMENTS (R)
≤ -357	66	637	1 709	2 346
356 to -205	65	268	1 798	2 066
-204 to -105	68	156	1 607	1 763
-104 to 20	67	143	1 612	1 755
21 to 141	66	149	1 720	1 869
142 to 262	66	193	1 545	1 738
263 to 413	67	167	1 581	1 748
414 to 620	67	159	1 576	1 735
621 to 955	67	162	1 558	1 720
> 955	67	69	1 431	1 500

In general, as households became less poor - that is, as they moved from a negative to a positive annual poverty gap - cash payments tended to decrease. However, the relationship was not monotonic with relative payments from the third through to the ninth deciles fluctuating around a mean of R161 per annum. Comparing the annual average payments of R637 and R268 for the bottom two deciles with that of R69 per annum for the top decile does however suggest that these payments favoured the poorest poor.

This pro-poor bias was not as pronounced for in-kind payments. If these payments were broken down by welfare item it was apparent that while the education and health components were inversley related to per capita proverty gap, benefits from housing and transport varied proportionately.

Table 24 relates benefits to annual mean income for each decile of poverty gap. Their lower income combined with a higher level of benefits emphasized the importance of payments to poorer households in the sample. This was particularly striking for households in the first decile whose average pre-transfer income was only R512 per annum. For one-third of these households their pre-transfer income was zero. Even after adding cash payments disposable income for this group only averaged R1 149 per annum or R96 monthly.

TABLE 24

ANNUAL MEAN BENEFITS FROM STATE WELFARE EXPENDITURE AS A PERCENTAGE OF ANNUAL MEAN PRE-TRANSFER INCOME FOR SAMPLE HOUSEHOLDS GROUPED BY DECILE OF POVERTY GAP PER CAPITA

DECILES OF ANNUAL PER CAPITA POVERTY GAP	ANNUAL MEAN INCOME (R)	ANNUAL CASH PAYMENTS AS A % OF ANNUAL MEAN INCOME	ANNUAL IN-KIND PAYMENTS AS A % OF ANNUAL MEAN INCOME	ANNUAL TOTAL PAYMENTS AS A % OF ANNUAL MEAN INCOME
1	512	124%	334%	458%
2	1 914	14%	94%	108%
3	2 562	6%	63%	69%
4	3 294	4%	49%	53%
5	4 123	4%	42%	45%
6	4 473	4%	35%	39%
7	5 156	3%	31%	34%
8	6 335	3%	25%	27%
9	7 353	2%	21%	23%
10	9 994	1%	14%	15%

The households characteristics of this poorest decile overlapped to a degree with the profile of social security recipients outlined in section 5.1.1. This was to be expected with 56% of households in this decile registering at least one beneficiary in their households. This meant that amongst these poorest 10% of households there was proportionately more Coloured households than the average over the whole sample and there was also a higher than average number from the townships. Head of households were older than the sample average and a higher proportion were females. Household structures were biased away from nuclear households to extended and compound households.

Durban African households and Cape Town Coloured households were over-represented in this decile. Table 25 compares the percentage frequency of household size for households in this poorest decile with that for the full sample. There were only five Cape Town

African households - too few to enable any generalization on household size amongst the poor. But for Durban African households poorer households tended towards being either of size 2 or less or of size 8 or more - with there being proportionately fewer middle sized households of 3-7 members. For Cape Town Coloured household it was the smaller households of sizes two or three which had the proportionately higher representation amongst the poorest poor.

TABLE 25

COMPARISON OF PERCENTAGE DISTRIBUTION OF HOUSEHOLD SIZE BETWEEN HOUSEHOLDS IN POOREST DECILE AND OTHER HOUSEHOLDS

GROUP AND AREA	HOUSEHOLD SIZE	% DISTRIBUTION FOR HOUSEHOLDS IN POOREST DECILE	% DISTRIBUTION FOR HOUSEHOLDS IN TOP NINE DECILES	% DISTRIBUTION FOR ALL HOUSEHOLDS
African Durban	1	5,7	0,4	1,1
	2	8,6	6,8	7,0
	3	5,7	7,6	7,4
	4 - 7	25,7	50,8	47,6
	> 7	54,3	34,3	36,9
	TOTAL	100,0	100,0	100,0
African Cape Town	1	-	-	-
	2	20,0	2,4	2,8
	3	-	4,3	4,2
	4 - 7	60,0	71,6	71,3
	> 7	20,0	21,8	21,8
	TOTAL	100,0	100,0	100,0
Coloured Cape Town	1	-	0,7	0,6
	2	26,9	3,3	6,7
	3	19,2	7,2	8,9
	4 - 7	46,2	64,7	62,0
	> 7	7,7	24,2	21,8
	TOTAL	100,0	100,0	100,0

A linear regression equation was fitted between total payments from state welfare as the dependent variable (Y) and annual per capita poverty gap as the independent variable (X). The resultant equation was:

$$Y = 1804 - 0{,}29X \qquad \text{S.E. (regn co-ef)} = 0{,}063$$
$$R^2 = 0{,}03$$

Statistically, therefore, annual per capita poverty gap was not a useful explanatory variable in determining the overall size of benefits which households could expect to receive from state welfare. Total welfare spending needed to be broken down into its component items of expenditure to identify significant influences of annual per capita poverty gap.

With the sample being small, it was decided to classify households by thirds of annual per capita poverty gap rather than by deciles as done above. The thirds divided as follows:

<u>Annual Per Capita Poverty Gap</u>

<-R 76 per annum	Lowest Third
-R76 to R356 per annum	Middle Third
> R356 per annum	Highest Third

All households in the lowest third had negative poverty gaps indicating original pre- transfer income below the MLL. In the middle third, household income ranged from slightly less than the MLL to just above the supplemented living level (SLL) which is defined at approximately 20% above the MLL and allows for additional expenditure on a few items. The highest third of households had incomes above the SLL with average household income, for this group, being R7723 per annum.

TABLE 26

BENEFITS FROM STATE EXPENDITURES FOR SAMPLE HOUSEHOLDS GROUPED BY THIRDS OF ANNUAL PER CAPITA POVERTY GAP, IN RANDS PER ANNUM

	ANNUAL PER CAPITA POVERTY GAP			
	ALL HOUSEHOLDS	LOWEST THIRD	MIDDLE THIRD	HIGHEST THIRD
NO OF HOUSEHOLDS	666	222	221	223
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4 583	1 820	4 191	7 723
MEAN BENEFITS PER HOUSEHOLD				
Social Security	209 (4,6)	316 (17,4)	190 (4,5)	123 (1,6)
School Education	621 (13,6)	665 (36,5)	669 (16,0)	530 (6,9)
Health	350 (7,6)	413 (22,7)	328 (7,8)	309 (4,0)
Housing	531 (11,6)	498 (27,4)	504 (12,0)	590 (7,6)
Transport	111 (2,4)	83 (4,6)	115 (2,7)	135 (1,7)
TOTAL BENEFITS PER HOUSEHOLD	1 822 (39,8)	1 975 (108,5)	1 806 (43,1)	1 687 (21,8)

NOTES: ROW 1 Mean benefits per household in rands per annum
ROW 2 (Figures in brackets) - Mean benefits per household expressed as a % of mean pretransfer income for each third
Figures may not add exactly due to rounding

Table 26 gives benefits from each of the public expenditures by third of annual per capita poverty gap. Grouped by thirds, the bias of social security payments was pronounced with mean transfers for the lowest third of households substantially higher than for the other two thirds. This was obviously a direct result of the higher incidence of recipients in this group - particularly of pensioners. This is illustrated by the following figures:

	Mean No of Pensioners per Household
Lowest Third	0,28
Middle Third	0,19
Highest Third	0,13

Transfers for school education were closer in range than were social security payments with payments to the lower and middle thirds very close in absolute terms. Given household sizes of 7,1, 6,3 and 5,7 for households in the lower, middle and upper thirds respectively, the distribution of school pupils shown below could be expected; although the fewer number of secondary pupils in the lowest thirds was anomalous. A possible explanation could perhaps have been a higher drop-out rate for children in these poorest households with there being few incentives to remain at school and a high opportunity cost attached to not seeking employment.

	Mean No of School Pupils Per Household	Mean No of Primary Pupils Per Household	Mean No of Secondary Pupils Per Household
Lowest Third	2,5	1,8	0,6
Middle Third	2,2	1,4	0,8
Highest Third	1,5	0,8	0,7

Transfers from public health expenditure also favoured the lowest income poor; partly because of their larger household sizes and also partly from higher utilization due to ill-health. It is generally believed that the poor get sick due to bad nutrition, inadequate housing and poor sanitation and this would be a contributory factor to their increased share of public health expenditure. In fact, not only do the poor get sick, but there exists often a vicious circle in that the sick also get poor and the one reinforces the other.

Absolute values of housing expenditures tended to favour the highest income third above the lowest and middle income groups. This resulted from the greater proportion of households in township accommodation in the highest third and the subsidy they received from charges being set at below the economic rate. With average incomes above R1 800 per annum for households in each of the thirds, most of these households would be amongst those to be affected by the government's new policy towards the withdrawal of state subsidized housing to those earning above R150 per month.

N.B.

Transfers for transport followed the same pattern as housing with increasing absolute amounts being received as households become less poor, although - as for housing - as a proportion of mean original income households in the lower thirds scored best. Higher absolute benefits from transport subsidies reflected, in part, the higher average number of earners in the less poor thirds. Earners would have to commute daily to and from work, thus qualifying for state subsidies from clip-card tickets.

	Mean No of Earners per Household
Lowest Third	1,7
Middle Third	2,4
Highest Third	3,0

To formalise these results, differences in public expenditures received by thirds of annual per capita poverty gap were tested for statistical significance using analysis of variance tests which, under certain assumptions, test for statistical differences between the means of groups or categories.[8]

TABLE 27

F-RATIOS OBTAINED FROM ANALYSIS OF VARIANCE BETWEEN MEANS FOR HOUSEHOLDS GROUPED BY THIRDS OF ANNUAL POVERTY GAP PER CAPITA

	F-RATIO	PROBABILITY OF EXCEDING F-RATIO IF GROUP MEANS WERE EQUAL
Social Security Payments	10,29	0,0000
School Education	3,16	0,0429
Health	11,41	0,0000
Housing	4,29	0,0140
Transport	10,83	0,0000
Total Benefits	4,38	0,0128

For all items of welfare expenditure the size of the F-ratio obtained in these tests was of the order to suggest group differences in payments between thirds of annual per capita poverty gap, although in the case of education, the level of significance was only 95%. For all the others this level was above the 99% confidence level.

However, there was substantial variation in payments within each third of poverty gap indicating that there were other explanatory variables also influencing the level of benefits to households. Three of these will be looked at in turn - sections 5.3, 5.4 and 5.5 examine the effects of race, household size and type of settlement on level of benefits received.

5.3 ANALYSIS OF BENEFITS FROM STATE EXPENDITURES BY RACE

In South Africa race is an obvious choice for explanatory variable underlying public spending with there having been marked racial differences, since Union, in the provision of expenditure on groups. As outlined in the historical sketches in the previous chapter, policies have not always been uniformly applied but have changed over time.

Table 28 confirms that race was indeed a useful indicator of public expenditure benefits with transfers to Coloured households exceeding those to African households for all items with the exception of public transport.

Looking first at social security payments, it can be seen that mean payments to Coloured households were almost five times those to African households and mounted to 10% of mean income for Coloured households and only 2% for African households. This resulted both from the higher rate of payments to Coloured beneficiaries and the greater incidence of recipients amongst Coloured households. The latter is shown below for pensioners.

	Mean No of Pensioners per Household
African	0,15
Coloured	0,34

On average African households had less than half the number of pensioners as Coloured households. If African households were broken down by urban area, it was the Cape Town households particularly which recorded the lowest incidence of pensioners.

This was not surprising - the enforcement in the Western Cape of the Coloured Labour Preference Policy has restricted the movement of non-workers to Cape Town, thus giving Cape Town an atypical age distribution pyramid. Published 1980 census results showed that while on a national level 3,5% of the African population was 65 years of age or older, in the Cape Peninsula only 2,1% fell into this age group. This was more pronounced in the squatter areas than the townships - residents in the latter areas were more likely to have had permanent urban residence rights and their household structures to conform to normal demographic patterns.

<u>Mean No of African Pensioners by Urban Area and Settlement Type</u>

	African Durban	African Cape Town
Squatter Settlements	0,12	0,07
Townships	0,26	0,16

The black education system in South Africa has been in crisis since 1976 with the expenditure differences by the state being one reason for the continuing school unrest. The effects of these inequalities between Coloured and African households can be gauged from Table 28 which shows annual average expenditures of R504 for African households compared to R939 per annum for Coloured households. The disparity in expenditure was less for household expenditures than for per capita expenditures because of the higher incidence of school children in African households. This held true at both the primary and secondary levels.

TABLE 28

BENEFITS FROM STATE EXPENDITURES FOR SAMPLE HOUSEHOLDS GROUPED BY RACE, IN RANDS PER ANNUM

	AFRICAN AND COLOURED	AFRICAN	COLOURED
NO OF HOUSEHOLDS	666	487	179
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4 583	4 496	4 821
MEAN BENEFITS PER HOUSEHOLD			
Social Security Payments	209 (4,6)	101 (2,2)	506 (10,5)
School Education	621 (13,6)	504 (11,2)	939 (19,5)
Health	350 (7,6)	298 (6,6)	492 (10,2)
Housing	531 (11,6)	471 (10,5)	693 (14,4)
Transport	111 (2,4)	114 (2,5)	104 (2,2)
TOTAL MEAN BENEFITS PER HOUSEHOLD	1 822 (39,8)	1 487 (33,1)	2 734 (56,7)

Notes: ROW 1 Mean benefits per household in rands per annum

ROW 2 (Figures in brackets) - Mean benefits per household expressed as a % of mean pretransfer income for each race

Figures may not add exactly due to rounding

	Mean No of Primary Schoolchildren per Household	Mean No of Secondary Schoolchildren per Household
African	1,4	0,85
Coloured	1,2	0,35

Differences in these figures may have been still greater were school attendance compulsory for African children. For Coloured children compulsory school attendance has gradually been introduced as from 1974.

Health transfers showed a similar pattern to those for education; again resulting from a higher Coloured per capita expenditure. Estimated per capita expenditure for Africans was R44 per annum while for Coloured persons it worked out at almost double, at R86 per annum.

The allocation routine for housing did not make a racial distinction but apportioned according to ownership and type of settlement with subsidies to township households exceding those for squatters. The larger mean transfer to Coloured households from housing resulted from the sampling procedure with 71% of Coloured households sampled being township residents compared to only 43% for African households. On average, Coloured households had a higher monthly housing payment than African households - R22,49 for township households and R7,35 for squatter households as compared to R18,12 and R6,79 respectively for African households.

Transport was the only item of welfare expenditure for which the payments to Africans exceded that to Coloured households. As benefits from transport were calculated from reported expenditure on transport, this indicated more being spent, on average, by African households. Transport expenditures would have varied for households depending on their number of earners, home location and daily distances travelled to and from work.

The net outcome of these differences in expenditures between races resulted in mean total benefits of R1 391 per annum to African households and almost double this, R2 655 per annum to Coloured households. Again, differences were tested for significance using analysis of variance.

TABLE 29

F-RATIOS OBTAINED FROM ANALYSIS OF VARIANCE BETWEEN MEANS FOR HOUSEHOLDS GROUPED BY RACE

	F-RATIO	PROBABILITY OF EXCEDING F-RATIO IF GROUP MEANS WERE EQUAL
Social Security Payments	119,10	0,0000
School Education	70,82	0,0000
Health	64,53	0,0000
Housing	49,83	0,0000
Transport	0,77	0,3797
Total Benefits	239,91	0,0000

From the computed F-ratios it seemed that, with the exception of transport, race was an important factor in determining the benefits from expenditure on welfare items. This was to have been expected given both the present and past biases of South African state spending.

With both race and income important as explanatory variables it seemed worth combining these to examine their joint influence on the level of transfers received by households. Results for this are shown in Table 30.

Social security payments fell for both races as the poverty gap rose - both in absolute and proportional terms. For each third, mean social security payments to Africans were less than one fifth those to Coloured households. This resulted from both the lower rate paid to Africans and the lower incidence of African recipients in each category.

TABLE 30

BENEFITS FROM STATE EXPENDITURES FOR SAMPLE HOUSEHOLDS GROUPED BY RACE AND THIRDS OF ANNUAL PER CAPITA POVERTY GAP, IN RANDS PER ANNUM

	ALL HOUSE HOLDS	AFRICAN ANNUAL PER CAPITA POVERTY GAP			COLOURED ANNUAL PER CAPITA POVERTY GAP		
		LOWEST THIRD	MIDDLE THIRD	HIGHEST THIRD	LOWEST THIRD	MIDDLE THIRD	HIGHEST THIRD
NO OF HOUSEHOLDS	666	169	166	152	53	55	71
MEAN PRE-TRANSFER HOUSEHOLD INCOME (In Rands per Annum)	4 583	2 002	4 104	7 697	1 239	4 455	7 779
MEAN BENEFITS PER HOUSEHOLD							
Social Security Payments	209	149	94	54	849	478	271
	(4,6)	(7,4)	(2,3)	(0,7)	(68,5)	(10,7)	(3,5)
School Education	621	567	529	407	979	1 091	793
	(13,6)	(28,3)	(12,9)	(5,3)	(79,0)	(24.5)	(10,2)
Health	350	400	269	216	453	509	508
	(7,6)	(20,0)	(6,6)	(2,8)	(36,6)	(11,4)	(6,5)
Housing	531	427	440	555	723	699	666
	(11,6)	(21,3)	(10,7)	(7,2)	(58,4)	(15,7)	(8,6)
Transport	111	94	115	133	49	115	138
	(2,4)	(4,7)	(2,8)	(1,7)	(4,0)	(2,6)	(1,8)
TOTAL MEAN BENEFITS PER HOUSEHOLD	1 822	1 637	1 447	1 365	3 052	2 891	2 376
	(39,8)	(81,8)	(35,3)	(17,7)	(246,3)	(64,9)	(30,5)

NOTES: ROW 1 Mean benefits per household in rands per annum

ROW 2 (Figures in brackets) - Mean benefits per household as a % of mean pre-transfer income for each category

Figures may not add exactly due to rounding

The pattern for school education differed slightly between African and Coloured households, but both reflected the distribution of school pupils across thirds of annual per capita poverty gap. The lower level of transfers for Coloured households in the lowest third resulted from the high incidence of elderly persons with no children in this category.

Health transfers varied more across poverty gap categories for African households than for Coloured households with the latter appearing to receive more or less the same quantities of health transfers regardless of income while, for the former, utilization was inversely related to per capita poverty gap.

The patterns for African and Coloured housing subsidies were mirror images of one another. The pattern for African households suggested that there were more squatter households amongst the less poor households, while for Coloured households the reverse was true with more squatter households among the less poor households.

Benefits from transport were very similar for African and Coloured households in all but the lowest third. Coloured households in this category had a high incidence of pensioners and a low incidence of earners and this tended to keep transport expenditures low.

In total, benefits to both African and Coloured households tended to be inverseley related to annual per capita poverty gap - in other words, higher average payments were made to the poorest poor and vice-versa. However, as expected, payments to African households were substantially below those to Coloured households at all levels of income.

5.4 ANALYSIS OF BENEFITS FROM STATE EXPENDITURES BY HOUSEHOLD SIZE

This study adopted the household as the unit of allocation for expenditure benefits. As such, it seemed worth measuring how transfers varied across households of difference sizes. Looking first at total benefits Table 31 shows that in absolute terms, total benefits increased considerably with household size - although as a proportion of original income, benefits were worth more to smaller than larger households.

Smaller households had the largest mean transfers from social security payments which resulted from their higher incidence of welfare recipients, particularly pensioners. Middle-sized households - with four to seven members - recorded the lowest incidence of pensioners.

No of Persons in Household	Mean No of Pensioners
≤ 3	0,30
4 - 7	0,15
≥ 8	0,26

TABLE 31

BENEFITS FROM STATE EXPENDITURES FOR SAMPLE HOUSEHOLDS GROUPED BY HOUSEHOLD SIZE, IN RANDS PER ANNUM

	ALL HOUSEHOLDS	NO OF PERSONS IN HOUSEHOLD		
		≤ 3	4-7	≥8
NO OF HOUSEHOLDS	666	86	394	186
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4 583	2 570	4 375	5 956
MEAN BENEFITS PER HOUSEHOLD				
Social Security Payments	209	332	172	232
	(4,6)	(12,9)	(3,9)	(3,9)
School Education	621	67	592	939
	(13,6)	(2,6)	(13,5)	(15,8)
Health	350	224	319	475
	(7,6)	(8,7)	(7,3)	(8,0)
Housing	531	545	523	542
	(11,6)	(21,2)	(12,0)	(9,1)
Transport	111	82	104	140
	(2,4)	(3,2)	(2,4)	(2,4)
TOTAL MEAN BENEFITS PER HOUSEHOLD	1 822	1 250	1 708	2 328
	(39,8)	(48,6)	(39,0)	(39,1)

NOTES: ROW 1 Mean benefits per household in rands per annum

ROW 2 (Figures in brackets) - Mean benefits per household as a % of mean pre-transfer income for each category of household size

Figures may not add exactly due to rounding

Education transfers rose in both absolute and proportional terms as household size increased. Bigger households tended to have more schoolchildren at both the primary and secondary level; this was particularly pronounced for African households reflecting demographic patterns resulting from a young population still experiencing very high rates of population increase.

No of Persons in Household	Mean No of Schoolchildren Per Household	
	African	Coloured
$\leqslant 3$	0,16	0,21
4 - 7	2,0	1,4
$\geqslant 8$	3,5	2,7

On a national level the African population can be shown to have a more youthful age structure than the other groups which has resulted from declining mortality not yet having been matched by declining fertility. Total fertility rates for African and Coloured women were estimated at 5,2 and 3,29 respectively for 1980.[9]

Health transfers increased with household size, which was to be expected. Housing however remained more or less constant across household size with households of varying sizes equally represented in both squatter and township communities.

Larger households obtained more in the way of transport transfers than did smaller households which resulted from their averaging three earners per household compared to only two for middle-sized households and one for smaller households.

With the exception of housing, all other payments showed significant differences by household size confirming the importance of household size on the distribution of welfare expenditures.

TABLE 32

F-RATIOS OBTAINED FROM ANALYSIS OF VARIANCE BETWEEN MEANS FOR HOUSEHOLDS GROUPED BY SIZE

	F-RATIO	PROBABILITY OF EXCEEDING F-RATIO IF GROUP MEANS WERE EQUAL
Social Security Payments	4,64	0,0100
School Education	61,07	0,0000
Health	17,88	0,0000
Housing	0,24	0,7851
Transport	9,11	0,0001
Total Benefits	32,02	0,0000

5.5 ANALYSIS OF BENEFITS FROM STATE EXPENDITURES BY SETTLEMENT TYPE

The final explanatory variable explored in this chapter was settlement type. Households in the sample were almost equally divided between squatter and township residents. It seemed possible that there would be differences in key demographic variables leading to welfare spending being unequal for households in these two settlement types. Table 33 suggests that this was indeed the case. In absolute terms mean total benefits to squatter households were less than half those to township households; while in proportional terms squatter household received one quarter of their mean original income in benefits compared to almost one half for township residents.

Social security payments were heavily biased in favour of township households. If households were further broken down by race and urban area, the number of social security recipients in the townships was consistently higher for each of the three subgroups - Durban African, Cape Town African and Cape Town Coloured. In the case of pensioners, for example, the average number per household in the township areas was double that recorded for squatter settlements.

Mean No of Pensioners Per Household

	African Durban	African Cape Town	Coloured Cape Town
Squatter	0,12	0,07	0,14
Township	0,26	0,16	0,42

This, in part, reflected the lower incidence of older members of pensionable age in the squatter areas. But there was also some evidence of higher numbers of potential pensioners not claiming benefits amongst squatter households. Residing in illegal structures may have prevented some squatter pensioners from applying for pensions for fear of being noticed by the authorities and thus increasing the risk of having their shacks demolished.

Mean No of Potential Pensioners per household not claiming benefits

	African Durban	African Cape Town	Coloured Cape Town
Squatter areas	0,071	0,024	0,077
Township areas	0,068	0,011	0,039

It was interesting that in Durban this difference was only marginal; authorities in the areas falling under Kwazulu administratioon are apparently more tolerant than in other areas of squatting as a housing option.[10]

TABLE 33

BENEFITS FROM STATE EXPENDITURES FOR SAMPLE HOUSEHOLDS GROUPED BY SETTLEMENT TYPE, IN RANDS PER ANNUM

	BOTH SETTLEMENT TYPES	TYPE OF SETTLEMENT	
		SQUATTER	TOWNSHIP
NO OF HOUSEHOLDS	666	332	334
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4 583	4 392	4 774
MEAN BENEFITS PER HOUSEHOLD			
Social Security Payments	209 (4,6)	68 (1,5)	350 (7,3)
School Education	621 (13,6)	546 (12,4)	696 (14,6)
Health	350 (7,6)	340 (7,7)	360 (7,5)
Housing	531 (11,6)	172 (3,9)	888 (18,6)
Transport	111 (2,4)	102 (2,3)	120 (2,5)
TOTAL MEAN BENEFITS PER HOUSEHOLD	1 822 (39,8)	1 226 (28,0)	2 413 (50,5)

NOTES: ROW 1 Mean benefits per household in rands per annum

ROW 2 (Figures in brackets) - Mean benefits per household as a % of mean pre-transfer income for each settlement type.

Figures may not add exactly due to rounding

N.B.

For education and health the higher per capita expenditure recorded in Table 33 for township households was misleading. A breakdown revealed that it was the Durban township areas with their larger household sizes which had swung the relationship this way. For

N.B.

Cape Town African and Cape Town Coloured households the reverse was in fact true with squatter households receiving higher payments than their township counterparts for both these two expenditures.

Underlying these differences in payments was relative household sizes. Durban township households were particularly big, whereas in the case of both Cape Town African and Cape Town Coloured households, average number of household members was significantly lower for township households. Number of schoolchildren per household reflected these same tendencies as household size.

<u>Mean No of Schoolchildren per Household</u>

	Afrcian Durban	African Cape Town	Coloured Cape Town
Squatter areas	1,5	2,7	1,7
Township areas	2,7	2,3	1,4

<u>Mean Household Size</u>

	African Durban	African Cape Town	Coloured Cape Town
Squatter areas	5,8	6,8	6,3
Township areas	8,2	5,5	5,5

Benefits from housing for township residents were substantially above those for squatter households which was to be expected given the allocation procedures. Under the assumptions adopted in the routines township households were subsidized on their rent or loan repayment - depending on their occupancy status. In addition township households benefitted from a higher level of subsidized services than did their squatter counterparts.

In general benefits from transport subsidies worked out to be higher for township residents. But, as with education and health, this result was not uniform across all groups with the exception being

Cape Town Coloured households for whom the reverse held true.

Mean Benefits per Household From
Transport Expenditure, in Rands Per Annum

	African Durban	African Cape Town	Coloured Cape Town
Squatter areas	119	77	112
Township areas	153	104	101

A tentative reason which could explain the low transport expenditure in the African Cape Town squatter area - namely Crossroads - would have been the higher involvement in the informal sector, which may have tended to suppress the extent of work commuting amongst household earners. N.B.

As an explanatory variable influencing the relative magnitude of state welfare spending, settlement type threw up both some clear and some confounded results. Regarding expenditure on social security payments and housing, biases did seem to exist towards township households. On the other hand for benefits from expenditure on education, health and transport there were conflicting tendencies not well explained by type of settlement.

FOOTNOTES

1. Simkins, C, Abedian, I, Hendrie, D and Le Roux, P, 'Justice, Development and the National Budget', Carnegie Post-Conference Series No 6 1985, pp 6-7; also section 4.6.1 for state subsidies on transport.

2. This assumes the overall average of 1,3 primary schoolchildren and 0,7 secondary schoolchildren for both African and Coloured households.

3. Pillay, P N, 'The Development and Underdevelopment of Education in South Africa', Carnegie Conference Paper No 95, 1984, p 14.

4. Ibid, p 18. African and Coloured figures for 1980 and 1982 respectively.

5. See section 4.6.1.

6. Lampman, R, 'Public and Private Transfers as Social Process', in Redistribution to the Rich and the Poor: The Grants Economics of Income Distribution, K Boulding and M Pfaff (eds), California, Wadsworth Publishing Company, 1972, p 25.

7. For a critique on the shortcomings of the minimum living level see Budlender, D,' A Critique of Poverty Datum Lines', SALDRU Working Paper No 63, 1985.

8. See Appendix E for a discussion of analysis of variance as a method for comparing group means.

9. R S A, <u>Report of the Science Committee of the President's Council on Demographic Trends in South Africa</u>, P C 1/1983, p 45.

10. Hofmeyr, J F, 'The Subsidization of Low-income Housing', <u>South African Journal of Economics</u>, Vol 50, No 1, March 1982.

CHAPTER 6 ANALYSIS OF THE INCIDENCE OF SELECTED TAX PAYMENTS ON SAMPLE HOUSEHOLDS

This chapter examines the distribution of the costs of public spending to sample households in the form of taxes. In secton 6.1 some aspects of South Africa's tax system, both past and present, are highlighted; in section 6.2 the tax allocation routines for allocating tax burdens to sample households are developed; and in section 6.3 these routines are applied to the sample to give the incidence of taxes both in absolute terms and grouped by each of annual per capita poverty gap, race, household size and settlement type. Section 6.4 concludes by setting up mobility matrices for both taxes and welfare expenditures.

6.1 SOME ASPECTS OF SOUTH AFRICA'S TAX SYSTEM

South Africa's tax ratio - the ratio between the total amount of taxes collected and national income - had risen to 30% by the financial year 1982/83 from a level of 18 % in 1967[1], the year of appointment of the Franzsen Commission of Enquiry into Tax in South Africa. Even at 30% this total tax ratio was lower than that of many of the highly developed economies. Thomas and Links provided the following international comparisons of taxes collected as a ratio of Gross National Product for 1976:[2]

Sweden 51%	Italy 33%
Netherlands 46%	Switzerland 31%
West Germany 39%	United States 30%
United Kingdom 36%	Spain 22%

Taxes imposed by the authorities are of two kinds:

(i) direct taxes levied directly on the income of individuals and companies; and

(ii) indirect taxes levied on certain commodities and transactions.

The most important source of the former is the normal income tax levied by the Central Government in terms of the Income Tax Act of 1962. From 1914 to 1969 all taxpayers in similar financial circumstances paid similar amounts of tax, regardless of race. However, from 1969 and until February 1984 Africans were taxed separately in terms of the provisions of the Bantu Taxation Act, later renamed the Taxation of Blacks Act. Under this Act they were disadvantaged to the extent of the Act not taking into account their family circumstances and not making available provisions for deductions and rebates allowed under the Income Tax Act. From March 1984 the position reverted to its pre-1969 situation with discriminatory rates for Africans being abolished and the taxation of all groups again being under a single Act.

The main sources of indirect taxes are the general sales tax, introduced in 1978, and the customs and excise duties levied in terms of the Customs and Excise Act of 1964. Other central government revenue from indirect tax is raised from transfer and stamp duties and taxes on marketable securities while the provinces' main sources of indirect taxes are the licensing of motor vehicles and taxes on entertainment, auction sales, racing and betting. For local authorities the main sources of revenue are made up of property rates and taxes.

Table 34 gives a breakdown of taxes and other revenues collected by the central government departments of Inland Revenue and Customs and Excise. As a percentage of total taxes, the central government is responsible for the collection of approximately 95% of all taxes with the remaining 5% accruing to the provinces and local authorities.[3] The figures in Table 34 are for 1982/83, the year the empirical work for this investigation was undertaken.

In a paper on 'Shifts in Indirect Taxation: A Special Type of Racial Discrimination', Theron has periodised significant changes in the effects of indirect taxation on low-income groups.[4] In his analysis he identified four periods within which more or less coherent trends could be identified.

(a) Before 1969

In this period leading up to the recommendations of the Franzsen Commission, the relative proportion of direct to indirect taxes in overall revenue collections increased. By 1968 Graaff estimated the

TABLE 34

MAJOR DIRECT TAXES, INDIRECT TAXES AND OTHER INCOME COLLECTED BY DEPTS OF INLAND REVENUE AND CUSTOMS AND EXCISE: 1982/83

	AMOUNT R 000	%
DIRECT TAXATION		
INCOME TAX		
Individual Income Tax	4 288 012	24,6
Company Income Tax	5 140 521	29,5
Interest on Overdue Tax	14 312	0,1
OTHER TAX		
Non-Resident Shareholder Tax, Non-Resident Tax on Interest and Undistributed Profits Tax	266 038	1,5
TOTAL DIRECT TAXATION	9 708 883	55,6
INDIRECT TAXATION		
Customs and Excise	2 346 000	13,4
Sales Tax	3 183 453	18,2
Marketable Securities Tax, Stamp Duty, Transfer Duty and Diamond Export Duty	409 847	2,3
TOTAL INDIRECT TAXATION	5 939 300	34,0
OTHER SOURCES		
Donations Tax, Estate Duty, Leases to Mining Companies	462 157	2,6
OTHER REVENUE		
Interest and Dividends, Levies, Recoveries of Loans and Advances, Departmental Activities and Close Corporations	1 340 888	7,7
TOTAL COLLECTIONS	17 451 228	100,0

Source: South Africa, Department of Finance, Inland Revenue Statistical Bulletin No 3, 1985.

combined contribution to total revenue of direct taxes on personal incomes and company profits to stand at about 60 per cent.[5] This shift in emphasis to direct taxation was due to the share of personal income tax increasing and that of customs duties decreasing - this latter a result of government policy encouraging import replacement. The importance of personal income tax as one of the principal taxes had inevitably led to high average rates to maintain yields; and to achieve progression, marginal rates had to exceed average rates, so both were high.[6]

(b) 1969 - 77

In view of the relatively high marginal tax rates on personal income and in order to broaden the tax base, the report of the Franzsen Commission recommended the introduction of a selective sales duty at the importer/manufacturer stage. Special care was taken to exclude essential items of consumer expenditure so not to burden low inome groups. This recommendation was accepted by the government and a selective sales duty was introduced in 1969 at an average rate of 10%. Concessions to cushion its impact included the lowering of the rate for income tax on individuals and the reduction of the annual general poll tax on African men from R3,50 to R2,50 per person.

The selective nature of the sales duty in exempting food, clothing and all essentials and in taxing other necessities at reasonably low rates prevented any real broadening of the tax base as envisaged by the Franzsen Commission. Contrary to their expressed intention, the share of direct taxes in overall tax revenue continued to grow - from 61% in 1969 to 71% by 1977[7] - with a significant share of this being collected from personal income tax on individuals.

Theron argued that in spite of the introduction of the selective sales duty the incidence of this change in tax policy did not fall heavily on low income groups; in fact it seemed that an effort was made to protect them from too heavy a tax burden. The maximum marginal rate of personal income tax remained high throughout the period. In spite of a Franzsen Commission recommendation that the maximum rate be 60%, by 1977 it had reached 66%, or an effective 72% if the effect of the loan levy was taken into account.

(c) 1978 - 1984

The failure of the selective sales duty to broaden the tax base led in 1978 to the introduction of the general sales tax (GST) at a rate of 4% to be levied on all items which were not destined for resale or processing. Concessions introduced to compensate for this tax on consumption included:

(i) to the high income groups, the abolition of the surcharge on personal income tax which effectively reduced the maximum marginal rate first to 60% and later to 50%;

(ii) to the low income groups there were some transitional concessions which included increases in social pensions and food subsidies and the abolition of the general poll tax on African men.

The introduction of a general sales tax had considerable success in increasing the proportional share of indirect taxes in total tax revenue. The rate at which GST was levied was increased to 5% in March 1982; to 6% in September 1982 and to 7% in February 1984. By the 1983/84 financial year the contribution of GST to total tax revenue had increased to 19% while the share of personal income tax had fallen from just more than 30% at the start of this period to around 25% by 1982.

The shift in taxation over this period was therefore from a progressive personal income tax to a regressive sales tax and Theron argued that the incidence of this shift fell to a large extent on low income groups rather than other groups. This was the case, he argued, in spite of tax concessions made between 1978 and 1984; of particular note being the abolition from March 1984 of the Taxation of Blacks Act, discussed above.

(d) July 1984 onwards

In July 1984 there was the simultaneous announcement of an increase in GST to 10% and of the exemption of certain basic foodstuffs from GST. Items to be exempted were the following - bread, maize meal, unsifted wheat flour, raw meat, raw fish, fresh fruits and vegetables, fresh milk, butter, margarine and raw eggs.

Theron argued that although these July exemptions had considerable impact on reducing the proportion of consumption expenditure subject to GST for the low income groups, the disposable incomes of these groups had still been detrimentally affected by the introduction of GST. His calculations showed that the progressive effects of the exemptions were almost completely neutralized by the simultaneous hike in GST to 10%. For African households in Kangwane, Ciskei and

Venda his figures showed that even if the July exemptions were taken into account, these groups suffered a real loss of between 4,9% and 5,8% of their disposable income as a direct result of the evolution of GST. Hence his conclusion - 'beyound dispute' - of the regressiveness of GST as a source of tax revenue. [8]

In terms of international trends it does seem that sales taxes have assumed an important role in the tax portfolios of most countries. South Africa's rate of 12% - increased from 10% as from March 1985 and with exemptions for basic foodstuffs - is fairly average as can be gauged from the following examples given for January 1984.[9]

(i) United States of Amercia - Sales tax is levied on a state rather than a national level; ranges from nil in some states to highest rate of 8,25 per cent in New York City.

(ii) Australia - Three separate tax rates imposed by the Federal Government. New household goods subject to a 7,5 per cent sales tax; exempt are food and clothing. On consumer items, sales tax of 20 per cent levied; while luxury items on non-essential items subject to a 32,5 per cent sales tax.

(iii) Britain - Basic VAT (value added tax) rate is 15 per cent imposed on a wide variety of goods excluding transport, children's clothes and essential foods.

(iv) Sweden - Rate of 23 per cent levied on most consumer goods including food.

(v) Denmark - Rate of 22 per cent.

(vi) Italy - Tax ranges from 8 - 24 per cent.

(vii) France - Ranges from 3,5 - 33 per cent.

(viii) Portugal - Tax is 17 per cent, but excludes such utilities as electricity.

(ix) Zimbabwe - Sales tax on basic goods 18 per cent; on consumer and luxury items 23 per cent.

6.2 PROCEDURES FOR ALLOCATION OF TAX BURDENS TO SAMPLE HOUSEHOLDS

In the setting up of tax allocation routines the tricky theoretical questions regarding burdens and incidence needed to be tackled. These were discussed in chapter 3, together with other methodological issues relating to budget incidence studies. To recap, a distinction had to be made between the immediate money burden of each tax and the long run changes made in the economy as a result of a given tax structure. By not taking the latter into consideration the investigation assumed a static nature; this was standard practice for empirical studies of this type.

Having restricted the analysis to assessing direct money burdens, the problem became that of determining the incidence of each of the taxes. This is not always a straightforward task with the real taxpayer not always being the one who actually pays the tax. Taxes may be shared between different groups; or shifted backwards or forwards onto others.

For our purposes only those taxes whose incidence was relatively clear were allocated to households. These were:

(i) individual income tax;

(ii) sales tax and

(iii) customs and excise duty.

As a contribution to total tax revenue these three taxes combined to give a share of central government tax revenue of 53,2% - of which 24,6% came from individual income tax, 18,2% from sales tax and 13,4% from customs and excise duty.[10]

Although the analysis was therefore only partial, interesting patterns emerged in the distribution of tax burdens amongst households. These are discussed in section 6.3.

For purposes of allocation the standard incidence routines were adopted. Individual income taxes were assumed to be fully borne by the taxpayer, while sales tax, excise duties and customs duties were assumed to be shifted completely forward into higher prices for consumers.

Assuming no tax evasion, income tax was apportioned on wage earnings to households according to the two schedules of tax rates in operation in 1982 - Coloured households were allocated taxes under the Income Tax Act of 1962 while African households were allocated taxes under the Taxation of Blacks Act of 1969. The differences between the two Acts have been outlined in section 6.1.

Sales tax was standing at 6 per cent from the last quarter of 1982. Household consumption expenditure on all taxable items was therefore summed and a rate of 6 per cent levied on this expenditure to give an estimate of sales tax paid by households.

?

The same allocation routine was dopted for customs and excise duties, but with these being levied at different rates depending on the item of expenditure, two simplifying assumptions needed to be made:

(i) all expenditure on liquor by households was on local semi-sweet white wine; and

(ii) all expenditure on cigarettes and tobacco was on cigarettes.

Both of the procedures for allocating tax burdens from sales taxes and customs and excise duties relied on the stated consumption expenditures of households.

Prinsloo remarked on the difficulties of collecting accurate data on household expenditure and the lack of precision which could emerge. She concluded however:

> "I feel that the expenditure data gathered in a study such as this is useful, despite its possible difficulties of precision, as long as details are not attributed with a power greater than they deserve."[11]

TABLE 35

COMPARISON OF HOUSEHOLD EXPENDITURE BY ITEM, IN RANDS PER MONTH: 1982

ITEM OF EXPENDITURE	MONTHLY HOUSEHOLD EXPENDITURE (R)	
	SAMPLE HOUSEHOLDS	MINIMUM LIVING LEVEL[1]
Food	95,44	117,22
Liquor	8,74	-
Cigarettes	7,52	-
Clothing (including uniforms)	28,90	32,80
Housing payments, fuel and light	37,48	43,80
Washing and cleaning materials	10,18	4,95
Education	11,45	2,81
Transport	15,66	13,61
Medical and dental services	7,63	4,10
Replacement of household equipment	18,79	7,71
Taxes	2,92	1,09
Recreation	3,82	-
TOTAL	248,53	228,09

1. Average for Durban African, Cape Town African and Cape Town Coloured households.

Source: Bureau of Market Research, The Minimum and Supplemented Living Levels of Non-Whites Residing in the Main and Other Selected Urban Areas of the Republic of South Africa, February 1983, Research Report No 99, 1983.

For the purposes of analyzing the tax burdens of sale tax and customs and excise duties, it was assumed that stated household expenditures were sufficiently accurate to be used for the basis of this tax incidence study. As a check on their accuracy, average expenditure on essential budget items for this sample was compared with those calculated by the Bureau of Market Research (BMR) for their Minimum Living Levels. These results are shown in Table 35.

The comparison of respondents' household expenditure with that estimated by the BMR suggested no major differences - particularly if it was considered that many of the items for which sample household expenditure exceded the BMR amounts were items for which additional expenditure was allowed for in calculating the supplemented living level.[12] It should also be noted that the average housing expenditure for the sample was considerably decreased by the lower monthly payments of squatter households.

6.3 ANALYSIS OF BURDEN OF TAXES

6.3.1 GENERAL DESCRIPTION OF DISTRIBUTION OF TAXES

For each of the taxes, Table 36 sets out their distribution between households. All households paid a contribution to sales tax - the average being R145 per annum or R12 monthly. With the rate of sales tax being 6%, this suggested that households monthly expenditure on taxable items was approximately R200.

TABLE 36

DISTRIBUTION OF TAXES PAID BY SAMPLE HOUSEHOLDS, IN RANDS PER ANNUM

CLASS INTERVALS IN RANDS PER ANNUM	SALES TAX		EXCISE TAX		INCOME TAX		TOTAL TAXES	
	NO	%	NO	%	NO	%	NO	%
0	0	-	240	36,0	415	62,3	0	-
1 - 100	213	32,0	293	44,0	217	32,6	123	18,5
101 - 200	327	49,1	85	12,8	17	2,6	252	37,8
201 - 300	95	14,3	36	5,4	4	0,6	136	20,4
301 - 400	22	3,3	5	0,8	3	0,5	69	10,4
401 - 500	6	0,9	4	0,6	1	0,2	42	6,3
>500	3	0,5	3	0,5	9	1,4	44	6,6
TOTAL	666	100,0	666	100,0	666	100,0	666	100,0

One-third of the households professed no expenditure on liquor, tobacco or cigarettes. Although this could not be reliably checked it is commonly felt that respondents tend to under-estimate their expenditure on these items in an attempt to appear virtuous. For most households their contribution to customs and excise duties through the consumption of liquor and cigarettes was less than R100 per annum - the mean annual payment for the sample being R60.

Just less than two-thirds of the households were not liable for any income tax with their taxable incomes falling below the threshold. Of the remaining third, most were eligible for payments of less than R100 per annum with the mean annual payment - at R43 per annum - being lower than for sales or excise tax.

6.3.2 ANALYSIS OF TAX BURDENS BY ANNUAL PER CAPITA POVERTY GAP

In absolute terms table 37 shows that although the relationships were not all monotonic, each of the taxes tended to increase as annual per capital poverty gap increased. This result was to be expected. The increased levels of consumption expenditure associated with relatively higher incomes would inevitably have led to larger absolute contributions to sales and excise taxes while progressive income tax schedules are defined so that income tax payments increase with increasing income. The slight drop in mean income tax payment between the third and fourth deciles could be explained by households having been taxed according to the two separate tax schedules. The fourth decile had relatively more Coloured households who, being taxed under the Income Tax Act, most likely had a taxable income below the threshold demanding tax payments.

In fact, households in this sample paid very little in the way of income tax with only the top decile having a significant mean contribution of R328 annually. The effect of a sales tax in broadening the tax base can clearly be illustrated by comparing tax collections from the different taxes. With the exception of the top decile, taxes collected from sales tax was far greater for all other deciles than collections from either excise or income tax. Looked at in another way, households in the sample had a total annual tax contribution of R165 177 of which 58% (or R96 489) came from sales tax. As it could be safely assumed - given their relative income levels - that tax payments under the pre-1978 selective sales tax were minimal, the introduction of a general sales tax in 1978 more than doubled the tax burden for this sample of households.

TABLE 37

ANNUAL MEAN TAXES PAID BY SAMPLE HOUSEHOLDS GROUPED BY DECILE OF POVERTY GAP PER CAPITA

DECILES OF ANNUAL PER CAPITA POVERTY GAP	NO OF HOUSEHOLDS	ANNUAL MEAN SALES TAX (R)	ANNUAL MEAN EXCISE TAX (R)	ANNUAL MEAN INCOME TAX (R)	ANNUAL MEAN TOTAL TAXES (R)
1	66	90	29	0	119
2	65	112	36	1	149
3	68	115	49	5	169
4	67	139	75	4	218
5	66	145	66	7	219
6	66	135	44	7	185
7	67	148	66	12	226
8	67	164	65	23	252
9	67	183	73	41	297
10	67	215	98	328	641

TABLE 38

ANNUAL MEAN TAXES AS A PERCENTAGE OF MEAN PRE-TRANSFER INCOME FOR SAMPLE HOUSEHOLDS GROUPED BY DECILE OF POVERTY GAP PER CAPITA

DECILES OF ANNUAL PER CAPITA POVERTY GAP	ANNUAL MEAN PRE-TRANSFER INCOME (R)	SALES TAX AS % OF MEAN ORIGINAL INCOME	EXCISE TAX AS % OF MEAN PRE-TRANSFER INCOME	INCOME TAX AS A % OF MEAN PRE-TRANSFER INCOME	TOTAL TAXES AS A % OF MEAN PRE-TRANSFER INCOME
1	512	17,6	5,7	0,0	23,2
2	1914	5,9	1,9	0,1	7,8
3	2562	4,9	1,9	0,2	6,6
4	3294	4,2	2,3	0,1	6,6
5	4123	3,5	1,6	0,2	5,3
6	4473	3,0	1,0	0,2	4,1
7	5156	2,9	1,3	0,2	4,4
8	6335	2,6	1,0	0,4	4,0
9	7353	2,5	1,0	0,6	4,0
10	9994	2,2	1,0	3,3	6,4

A useful technique for presenting the results of tax incidence studies is to express taxes as a percentage of income for each decile and then to assess the pattern over the range of deciles. The advantage of this method is that it allows the relative progressiveness or regressiveness of the tax to be gauged. A tax is described as progressive when the ratio of taxes paid to mean income rises; and regressive when this ratio decreases. These concepts are linked to the ability-to-pay approach to taxation which had its foundations in the writings of both Adam Smith and John Stuart Mill. According to this approach taxes should be levied according to what individuals could afford to pay. According to Mill:

> "... all are thought to have done their part fairly when each has contributed according to his means, that is, has made an equal sacrifice for the common object...".[13]

The notion of 'equal sacrifice' is controversial and will not be dealt with here beyond mentioning it as a commonly used arguement for progressive rates of taxation.

Table 38 illustrates the regressive nature of the sales and excise taxes with poorer households paying a relatively higher proportion of their incomes towards these taxes than less poor households. Income tax on the other hand is progressive with households in the bottom nine deciles all paying insignificant but increasing proportions of their incomes in tax and households in the top decile having the highest average income tax rate of 3,3%. With sales and excise taxes dominating tax contributions for the bottom nine deciles of households, the overall impact of taxes considered here were, on balance, regressive over these deciles. However, this pattern was broken in the tenth decile when the effect of progressive income tax rates on average tax rates could be noticed.

For symmetry with the method adopted in Chapter 5 for welfare spending, Table 39 summarizes Tables 37 by presenting the taxes by thirds of annual per capita poverty gap. All trends in both absolute and relative terms were identical to those discussed above for the analysis by decile. Furthermor F-ratios calculated for each type of tax and total taxes showed significant differences between thirds at levels of significance exceeding 99%.

TABLE 39

TAX PAYMENTS BY SAMPLE HOUSEHOLDS GROUPED BY THIRDS OF ANNUAL POVERTY GAP PER CAPITA, IN RAND PER ANNUM

	ANNUAL PER CAPITA POVERTY GAP			
	ALL HOUSE-HOLDS	LOWEST THIRD	MIDDLE THIRD	HIGHEST THIRD
NO OF HOUSEHOLDS	666	222	221	223
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	583	1820	4191	7723
MEAN TAXES PER HOUSEHOLD				
Sales Tax	145	108	144	183
	(3,2)	(5,9)	(3,4)	(2,4)
Excise Tax	60	40	60	80
	(1,3)	(2,2)	(1,4)	(1,0)
Income Tax	43	2	8	118
	(0,9)	(0,1)	(0,2)	(1,5)
TOTAL MEAN TAXES PER HOUSEHOLD	248	150	213	381
	(5,4)	(8,2)	(5,1)	(4,9)

NOTES: ROW 1 Mean taxes per household in rands per annum

ROW 2 (Figures in brackets) - Mean taxes per household as a % of mean pretransfer income for each third

Figures may not add exactly due to rounding

When exploring the incidence of benefits from welfare spending on households three variables other than income were suggested as explanatory variables. These were race, household size and type of settlement. These variables also have some bearing on taxes paid and sections 6.3.3 throgh to 6.3.5 look briefly at these.

6.3.3 ANALYSIS OF TAX BURDENS BY RACE

In Section 5.3 significant differences were shown to exist in welfare entitlements by race. This ws was not a surprising result given discriminatory legislation and practice in South Africa. On the tax side differences by race were also evident. These are shown in Table 40. Sales and excise tax payments of African households were lower in both absolute and relative terms than for Coloured households with analyses of variances testing for differences in group means being signficant at above the 99% level of confidence for sales tax, and at the 98% level of confidence for excise tax. Some of the difference in these tax payments could be attributed to a lower mean original income for African households which would in turn have led to lower consumption expenditure. But the other important claim on the budget of African households - which would have lowered their disposble income avaiable for consumption - was remittance payments to extra household individuals. Whereas only 5% of Coloured households reported contributing money to other individuals or households on a regular basis, 38% of African households were remittance senders. Of these 64% reported spending in excess of R300 annually. [14] Of course, some of this money could in turn have been paid in sales taxes by remittance recipients - although a significant amount was reported by respondents as having been specifically earmarked for the schooling of children in rural areas.

Returning to Table 40 and the income tax row, the effect of the Black Taxation Act in extracting higher tax payments from African earners can clearly be seen. This resulted both from the lower threshold at which African incomes were taxable and from there being no rebates or deductions for African taxpayers. Tax schedules are fairly complicated with tax payments very specific to marital status, number of dependants and source of income. In this respect it should be noted that there were exceptions to the above generalisation that all African taxpayers were discriminated against under the Black Taxation Act. It was estimated by the government that approximately 20% of African taxpayers actually paid less under the Black Taxation Act than they would under the Income Taxation Act. [15]

TABLE 40

TAX PAYMENTS BY SAMPLE HOUSEHOLDS GROUPED BY RACE, IN RANDS PER ANNUM

	AFRICAN AND COLOURED	AFRICAN	COLOURED
NO OF HOUSEHOLDS	666	487	179
PRE-TRANSFER HOUSEHOLD MEAN INCOME (in Rands per Annum)	4583	4496	4821
MEAN TAXES PER HOUSEHOLD			
Sales Tax	145 (3,2)	132 (2,9)	180 (3,7)
Excise Tax	60 (1,3)	55 (1,2)	73 (1,5)
Income Tax	43 (0,9)	55 (1,2)	9 (0,2)
TOTAL MEAN TAXES PER HOUSEHOLD	248 (5,4)	243 (5,4)	262 (5,4)

NOTES: ROW 1 Mean taxes per household in rands per annum
ROW 2 (Figures in brackets) - Mean taxes per household as a % of mean pretransfer income for each race
Figures may not add exactly due to rounding.

TABLE 41

TAX PAYMENTS BY SAMPLE HOUSEHOLDS GROUPED BY RACE AND ANNUAL PER CAPITA POVERTY GAP, IN RANDS PER ANNUM

	ALL HOUSE-HOLDS	AFRICAN ANNUAL PER CAPITA POVERTY GAP			COLOURED ANNUAL PER CAPITA POVERTY GAP		
		LOWEST THIRD	MIDDLE THIRD	HIGHEST THIRD	LOWEST THIRD	MIDDLE THIRD	HIGHEST THIRD
NO OF HOUSEHOLDS	666	169	166	152	53	55	71
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4583	2002	4104	7697	1239	4455	7779
MEAN TAXES PER HOUSEHOLD							
Sales Tax	145	104	131	165	122	186	218
	(3,2)	(5,2)	(3,2)	(2,1)	(9,8)	(4,2)	(2,8)
Excise Tax	60	39	59	70	42	64	102
	(1,3)	(1,9)	(1,4)	(0,9)	(3,4)	(1,4)	(1,3)
Income Tax	43	3	10	164	0	3	22
	(0,9)	(0,1)	(0,2)	(2,1)	(-)	(0,1)	(0,3)
TOTAL MEAN TAXES PER HOUSEHOLD	248	145	200	398	164	252	342
	(5,4)	(7,2)	(4,9)	(5,2)	(13,2)	(5,7)	(4,4)

NOTES: ROW 1 Mean taxes per household in rands per annum
ROW 2 (Figures in brackets) - Mean taxes per household as a % of mean pretransfer income for each category.
Figures may not add exactly due to rounding

The differences between races in contributions from sales and excise taxes on the one hand, and income taxes on the other, cancelled out and mean overall tax payments were very similar for African and Coloured households. Table 41 combines race and income to show their joint influence on tax liability. These presented no surprises. For both races absolute tax payments increased with per capita poverty gap for each tax while in relative terms sales and excise taxes were regressive and income tax progressive. Overall tax burdens were heavier for Coloured rather than African households in the lowest and middle thirds, whereas for the highest third the effect of the Black Taxation Act was apparent in its effect on imposing a heavier burden on African households.

6.3.4 ANALYSIS OF TAX BURDENS BY HOUSEHOLD SIZE

The effects of household size on sales tax was in the expected direction with taxes paid increasing with household size. Households of size three or less spent on average R153 per month on taxable items compared to the monthly expenditure of R197 and R231 for middle-sized and big households respectively.

TABLE 42

TAX PAYMENTS BY SAMPLE HOUSEHOLDS GROUPED BY HOUSEHOLD SIZE, IN RANDS PER ANNUM

	ALL H/HOLDS	NO OF PERSONS IN HOUSEHOLD		
		$\leqslant 3$	4-7	$\geqslant 8$
NO OF HOUSEHOLDS	666	86	394	186
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4583	2570	4375	5956
MEAN TAXES PER HOUSEHOLD				
Sales Tax	145	110	142	167
	(3,2)	(4,3)	(3,2)	(2,8)
Excise Tax	60	56	56	70
	(1,3)	(2,2)	(1,3)	(1,2)
Income Tax	43	42	50	28
	(0,9)	(1,6)	(1,1)	(0,5)
TOTAL MEAN TAXES PER HOUSEHOLD	248	207	249	265
	(5,4)	(8,1)	(5,7)	(4,4)

NOTES: ROW 1 Mean taxes per household in rands per annum

ROW 2 (Figures in brackets) - Mean taxes per household as a % of mean pretransfer income for each category

Figures may not add exactly due to rounding

Excise taxes paid were identical for the first two categories of household size suggesting no increase in consumption of liquor and cigarettes in spite of the increase in the number of household members. One causative factor could have been the greater proportion of Coloured households in the category of households of size three or less - Coloured household expenditure on these times being reported as higher than that for African households. The distribution of income tax between households of different sizes was interesting. In spite of their higher overall household income, households with more than eight members carried the least income tax burden. These households - mainly African and therefore taxed under the Black Taxation Act - averaged three earners and it was their lower earnings per worker which reduced their tax liability to below that for other household sizes. Most of the higher wage earners in the sample belonged to middle-sized households which in turn resulted in more income tax than either smaller or larger households.

Total taxes increased with household size but in proportion to pre-transfer income were regressive. These differences in tax burden between households of different sizes were tested using analysis of variance but were found to be statistically insignificant.

6.3.5 ANALYSIS OF TAX BURDENS BY SETTLEMENT TYPE

The procedure adopted for assigning tax burdens to sample households did not use type of settlement as a basis for any of the allocations; neither did tax legislation discriminate against one or other of squatter and township households. With both average household size and number of earners per household similar for both settlement types, differences in relative tax burdens were influenced by sampling procedure which led to 57% of African households being squatter residents compared to 29% of Coloured households. This resulted in the squatter vs township pattern of tax distribution tending towards that for the African vs Coloured distribution. This is presented in table 43. Squatter households paid less sales tax, less excise tax and more income tax than their township counterparts. The cancelling out effect led to total tax liability being almost identical for both squatter and township households.

TABLE 43

TAX PAYMENTS BY SAMPLE HOUSEHOLDS GROUPED BY SETTLEMENT TYPE, IN RANDS PER ANNUM

	BOTH SETTLEMENT TYPES	SETTLEMENT TYPE	
		SQUATTER	TOWNSHIP
NO OF HOUSEHOLDS	666	332	334
MEAN PRE-TRANSFER HOUSEHOLD INCOME (in Rands per Annum)	4583	4392	4774
MEAN TAXES PER HOUSEHOLD			
Sales Tax	145	128	162
	(3,2)	(2,9)	(3,4)
Excise Tax	60	55	65
	(1,3)	(1,3)	(1,4)
Income Tax	43	65	21
	(0,9)	(1,5)	(0,4)
TOTAL MEAN TAXES PER HOUSEHOLD	248	249	247
	(5,4)	(5,7)	(5,2)

NOTES: ROW 1 Mean taxes per household in rands per annum
ROW 2 (Figures in brackets) - Mean taxes per household as a % of mean pretransfer income for each category

Figures may not add exactly due to rounding

6.4 MOBILITY MATRICES

Often ignored in studies of redistribution is the fact that both taxing and state spending policies can alter the ranking of households within the original market determined income distribution.[16] This changing of position of households, relative to other households, introduces the concept of mobility to the tax-transfer reshuffle with some households gaining at the expense of others. Without developing the idea fully, this section looks briefly at this mobility amongst sample households.

For each household there were three states which could be identified. First there was the pre-tax state which was the first-round distribution of income dictated by market conditions. This was modified by the imposition of progressive individual income taxes and regressive sales and excise taxes to give the post-tax state for each household. Finally, benefits in the form of social security payments, education, health, housing and transport were supplied to households to give a post-tax plus post-benefit state.

Table 44 presents a mobility matrix for households as they moved from their pre-tax to their post-tax states. A two-way table was constructed dividing households into deciles according to their pre-tax annual per capita poverty gap for the columns and according to their post-tax annual per capita poverty gap for the rows. Any movement of households between deciles illustrates a degree of mobility resulting from taxing policy.

TABLE 44

PRE-TAX VS POST-TAX MOBILITY TABLE

POST-TAX DECILE GROUP OF ANNUAL PER CAPITA POVERTY GAP	PRE-TAX DECILE GROUP OF ANNUAL PER CAPITA POVERTY GAP									
	1	2	3	4	5	6	7	8	9	10
1	65	1								
2	1	60	5							
3		4	59	5						
4			4	57	6					
5				5	56	4				
6					4	57	6			
7						6	55	5		
8							6	60	1	
9								2	61	3
10									4	64

An inspection of the table shows that the diagonal elements are dominant. This suggests limited re-ranking of households induced through taxing with intra-decile movement limited to the relatively few elements bordering the diagonal. The the can be contrasted to the results shown in Table 45 which compares pre-tax deciles of poverty gap with post-tax plus post-benefit deciles. Here the dominance of the diagonal element is clearly no longer the case with there being evidence of substantial intra-decile shifting resulting from the tax-benefit reshuffle.

The factors behind this intra-decile shifting would be twofold. Despite the original pre-tax state of households having been standardized into deciles according to per capita poverty gap, within each decile there would have been households with differing needs. For example, large-sized households would demand more resources in the form of public goods than smaller ones. This would drop them below the diagonal to join others who had also gained relatively over households in their original decile. This component of intra-decile shifting - based on the needs of households - could be justified on equity grounds.

However, the other cause of mobility between deciles would be the favouring of one group of households at the expense of others. This form of discrimination would be a violation of the horizontal equity principle which dictates that households in similar circumstances get equally treated in fiscal policy. Gaps in equivalent spending levels between African and Coloured households would fall into this category. On average Coloured households would have improved their original ranking in the pre-tax distribution,relative to African households with identical needs. Separating out these two components of re-ranking - that is, those based on need and those based on discrimination - would have provided an additional method of assessing the patterns of fiscal redistribution.

Not done here?

TABLE 6.13 45 ?

PRE-TAX VS POST-TAX-PLUS-BENEFITS MOBILITY TABLE

POST-TAX AND POST-BENEFIT DECILE GROUP OF ANNUAL PER CAPITA POVERTY GAP	PRE-TAX DECILE GROUP OF ANNUAL PER CAPITA POVERTY GAP									
	1	2	3	4	5	6	7	8	9	10
1	36	26	3	1						
2	7	20	29	10						
3	3	8	20	29	8					
4	8	6	9	9	25	8	1			
5	2	1	2	10	19	25	7			
6	3	3	2	4	9	19	24	3		
7	5		1	2	2	8	17	31		
8	1	1	1	2	3	5	15	27	12	
9	1		1			1	3	5	44	12
10						1		1	10	55

FOOTNOTES

1. Abedian, I, 'Public Sector Policies and Income Distribution in South Africa during the Period 1968-80', Carnegie Conference Paper No 127, 1984, p 16.

2. Lectures given by Thomas, W H and Links, E, 'Taxation and Socio-economic Reforms in South Africa', Centre for Extra-Mural Studies, University of Cape Town, 1985.

3. Abedian, I, op cit, Appendix D.

4. Theron, T, 'Shifts in Indirect Taxation: A Special Type of Racial Discrimination', Conference on Economic Development and Racial Domination Paper No 15, 1984.

5. Graaff, J de V, 'The Future of Taxation', South African Journal of Economics, Vol 36, No 1, 1968

6. Ibid, p 183.

7. Abedian, I, op cit, p 16.

8. Theron, T, op cit, p 24.

9. Argus, 27 January 1984.

10. Table 34.

11. Prinsloo, J B, 'Introduction to the Urban Poor: A Description of Income, Expenditure and Earning Patterns from Households in Cape Town and Durban', SALDRU, March 1984, p 89.

12. See section 5.2 for brief discussion of the Supplemented Living Level.

13. As quoted in Brown, C V and Jackson, P M, Public Sector Economics, Oxford, Martin Robertson and Co Ltd, 1982.

14. Prinsloo, J, op cit, pp 999-104.

15. The Star, 2 March 1984.

16. Atkinson, A B, Social Justice and Publilc Policy, Brighton, Wheatsheaf Books Ltd, 1983, p 94.

CHAPTER 7 CONCLUSION

7.1 SUMMARY OF OBJECTIVES, DIFFICULTIES ENCOUNTERED AND FUTURE RESEARCH SUGGESTIONS

This study set out to investigate some aspects of South African state welfare policy as it has evolved to its present stage of collectivised provision of a range of goods and services. The development of a global welfare budget was not attempted; rather, attention was only directed to specific welfare expenditures and sources of tax revenues. Allocation routines were established whereby benefits from state spending and burdens from tax payments were assigned to households in the sample. All households were urban-based and being drawn from either squatter or sub economic communities identified as 'poor'. This was confirmed by survey data which suggested that:

(i) one-third or respondents had household income below the minimum living level (MLL);

(ii) one-half had household income below the supplemented living level (SLL).

Most of the difficulties encountered in this exercise centered around the setting up of procedures for allocating benefits to households from state spending. Social security payments and education did not present any problems in that recipients could be more easily identified and benefits quantified. But for each of health, housing and transport recourse had to be made to a series of simplifying assumptions to enable allocation procedures to be established. Some of these were standard assumptions commonly used in the construction of all welfare budgets. Others resulted from insufficient data collected from respondent households on relevant welfare issues.

Regarding this latter, it must be remembered that the original questionnaire was not designed with a welfare budget in mind. Prensloo's principle interest was with 'the perceptions and attitudes of people living in poverty concerning their problems, pleasures, goals, activities and abilities to generate income, involvement with their neighbours and community, opinions about causes of poverty and responsibilty for remedies, and ideas about who they consider to be poor'.[1] It just happened that as a by-product of the detail extracted from the questionnaire, there was sufficient information to allow this study of budget incidence. Any future work involving the construction of a welfare budget from household records should take particular care to include specific questions on each household's utilization of, and access to, state - provided and subsidized services.

Unfortunately this gap in data requirements could not always be filled by turning to comparable studies and accepting their utilization rates and imputed benefits. There has hitherto been a lack of South African microstudies concentrating on the benefits accruing to communities from particular forms of state spending. If there had been results available from previous studies on the distributional impact of individual public expenditures, these would have allowed for the refinement and sophistication of procedures adopted in our allocation routines.

For Britain, Le Grande has recorded the findings of the numerous microstudies and research in the fields of education, health, housing and transport.[2] Benefits from state spending on specific items have been analyzed across a number of variables including race, class, age group, and geographical area. In many instances the results have tended to undermine established beliefs about the use of services by differnt groups. This has led to the questionning of the ability of the welfare state to achieve redistribution through the provision of social services. In the final paragraph of his book Le Grande concluded:

> "The strategy of equality through public provision has failed. It failed primarily because it implicitly accepted the ideology of inequality. Any alternative strategy has to have as an essential part an attack on that ideology; otherwise it too will fail".[3]

does this mean that equality is necessarily good, or achievable?

Considerable potential exists for similar studies of the welfare services to be undertaken in South Africa. Race, class and gender differentials, urban-rural differences and age specific utilization rates are all amongst the alternatives open for future research. These microstudies into welfare expenditures would highlight differentials in both entitlements and utilization rates between groups and areas and provide a springboard for more macro-investigations into overall budget incidence.

7.2 SOME IMPORTANT FINDINGS AND MAJOR ISSUES

Although data problems made it necessary to rely on some brave assumptions, it is hoped that these would have had their effect on the actual quantification of benefits as opposed to on the broad trends to have emerged. All welfare budgets lean heavily on assumptions and need to be interpreted with care. McGrath commented on this and described these attempts at measuring budget redistribution as intricate pieces of "forensic economics".[4]

General trends to have emerged in the benefits and burdens of state activity were presented and discussed in previous chapters. Different entitlements to state spending or burdens from taxes were usually explained either by household-specific characteristics or by the special circumstances in which households found themselves. Household size was an example of the former. More household members tended to increase benefits from health for large-sized households; more schoolchildren directly affected their benefits from education; and more earners per household increased their share of subsidy from transport. In terms of total benefits, table 31 shows that large-sized households cost the state almost double in spending on welfare than did small households.

An example of how welfare benefits can be related to household circumstances can be obtained from the analysis by settlement type. The additional cost to the state of conventional housing over squatter housing averaged out at approximately fourfold. Housing was assumed to also include some adminstation costs, essential services and community facilities. But table 33 also shows that type of settlement had an effect on other benefits. Payments from social security were heavily biased in favour of township households and the effect of large household sizes in the Durban African township was reflected in a higher average education expenditure on township households.

It would be repetitive to summarize all the patterns to have emerged when expenditure and taxes were analyzed by income, by race, by household size and by settlement type; chapters 5 and 6 contain these details. Arising out of the empirical analysis in these chapters, four issues have been singled out as important for further discussion. These are: lack of social security provision; differences in entitlements between African and Coloured households; privatization of welfare services and the question of affordability; and the burden of general sales tax on low income groups.

7.2.1 LACK OF SOCIAL SECURITY PROVISION

Almost one quarter of households had household income below the (MLL) yet were not recipients of any form of social security. A further one-tenth recieved social security payments but were still left with incomes below the MLL.

Two points about this must be emphasized. First that it was household income that fell below the MLL, not the breadwinner's income or the income of a single earner only. And secondly, the MLL is a very harsh measuring rod against which to compare household income.

Formally the MLL is defined as 'the minimum financial requirements of members of a household if they are to maintain their health and have acceptable standards of hygiene and sufficient clothing for their needs'.[5] It is a theoretical minimum in that rational expenditure is assumed throughout. Given this, Budlender suggested that the MLL living level is in fact not reached until the wage is at least equal to the SLL which works out at approximately 1,2 times higher than the MLL.[6] Households with overall incomes below the MLL are therefore indisputably poor.

Under the existing system of social security in South Africa, no provision is made for these households to safeguard them against their destitution or to raise their incomes to an estimated poverty line. It is felt that these households should at least qualify for some 'safety-net' provision of social security particularly those in long-term need such as the long-term unemployed, the disabled, those suffering long illnesses, single-parent families, widows and deserted wives not readily able to work. This recommendation is conservative; even the new Right accept this type of minimum payment as falling within the proper limits of state action.[7]

7.2.2 DIFFERENCES IN ENTITLEMENTS FOR AFRICAN AND COLOURED HOUSEHOLDS

Of course it did not need the construction of a welfare budget to illustrate the discrimination governing entitlements between race groups in South Africa. There is more than enough evidence of this documented elsewhere. However, Table 28 giving the breakdown of benefits from state spending by race does succeed in emphasizing the cumulative effect of this discrimination when spending on the specific welfare payments of social security, education, health, housing and transport are combined. This bias of spending favouring one group over another would have been even more pronounced had White households been included in the survey.

Accepting that justice or equity requires non-discriminatory welfare entitlements, the formidable problem becomes that of narrowing this racial gap in spending. Simkins et al have examined this question in a budget exercise assessing the feasibility of redressing discriminatory expenditures between groups over the period from 1983/84 to 1990/91.[8] They assumed three scenarios for government revenue and expenditure - pessimistic, median and optimistic. Under each scenario education, health, social security payments and housing were assigned as priority expenditures. With the exception of health which was not dealt with racially, all real increases in welfare spending were assumed to accrue to Africans with expenditures on other groups remaining pegged at their 1983/84 level. On their median and optimistic scenarios - based respectively on compound annual growth rates in the economy of 3,6% and 4,8% - noticeable advances in relative African expenditures could be realized. Under their pessimistic scenario, which assumed a compound annual growth rate of 2,4%, only a small movement in the direction of greater equality would be attained.

It is of interest to apply their scenarios for social security payments and education to respondent households in this survey.[9] Table 45 sets out the results that priorities towards greater equality would realize for households in the sample by the year 1990/91. It has been assumed that household characteristics remained constant and that the full increase in social security expenditure was used to increase monthly rates of payments.[10]

TABLE 46

FORECAST OF POTENTIAL BENEFITS FROM STATE EXPENDITURE ON SOCIAL SECURITY AND EDUCATION FOR SAMPLE HOUSEHOLD GROUPED BY RACE, IN RANDS PER ANNUM: 1990/91.

MEAN POTENTIAL BENEFITS PER HOUSEHOLD	SCENARIOS	AFRICAN	COLOURED[1]
Social Security Payments	Pessimistic	152	628
	Median	204	628
	Optimistic	290	628
Education	Pessimistic	785	1 052
	Median	896	1 052
	Optimistic	1 163	1 052

1. Expenditure on Coloured households has been increased to the 1983/84 levels, the base year used by Simkins et al. Social security payments increased by 24,1%, between 1982/83 and 1983/84 while per capita education expenditure was assumed to have increased by 12%.

Given these assumptions average benefits from social security for African households would remain below those for Coloured households under all scenarios. With annual rates of payment and number of recipients both low for African households in base year 1983/84, overall social security expenditure would need to increase by more than the annual rate of 2,4%, 4,5% and 7,2% allowed respectively in each scenario for households to receive more equal benefits from these payments.

However with education afforded a higher priority ranking than social security, the potential advance in education spending on African households is evident. Also, African households averaged 2,25 schoolchildren per household compared to the 1,55 for Coloured households and this significantly increased their household allocation from education spending.

These advances towards more equal welfare entitlements could only be achieved by a purposeful assault on current inequities. This assault will obviously be constrained by both structural and political factors. Simkins et al single out the latter in their conclusion.

> "We are well aware that the goals of justice and development are not always served by the working of political forces. If changes of the sort discussed here or better ones are to be realised, the dedication of many people with technical expertise and political commitment will be required."[11]

7.2.3 PRIVATIZATION OF WELFARE SERVICES AND THE QUESTION OF AFFORDABILITY

For each of education, health, housing and transport privatization has been proposed by the state in order to supplement public provision. The De Lange commission into education recommended that if pupils continued through to formal secondary education, finance was to be drawn from 'the individual and the community, to supplement the state's contribution'.[12] The guide to the Health Act proposed a shift in responsibility of health care to the individual and to private practitioners.[13] Various state appointed housing commissions have motivated a reorientation in housing policy with the burden of housing to be shifted from the state to the private sector and the low income group itself.[14] And the Welgemoed Commission into bus transportation was 'of the opinion that it is necessary to phase out subsidies in the long term'.[15]

The question of private provision of welfare services is a sensitive one and the debate being waged over public vs private provision will not be entered into here except regarding its effects on households who are poor. The estimates provided in Table 26 suggest that overall benefits to households from welfare spending amounted to approximately 40% of original income. For the poorest third of households - all of whom had incomes below the MLL - benefits from the state slightly exceded original income with total benefits estimated at 109% of income. These households would have had no room in their budgets to make up any reduction in state spending on welfare. Living at this level already precludes any surplus income over and above the minimum for existing. If privatization was to be introduced into the delivery of welfare services, this cost would serve to prohibit the access of poor households, unless either:

(i) wage levels were to increase; or

(ii) households were provided with a form of negative income tax or similar security payment.

7.2.4. BURDEN OF GENERAL SALES TAX ON LOW INCOME GROUPS

The introduction of the general sales tax (GST) in 1978 was an attempt to broaden the tax base and reduce the reliance on direct taxes. By the 1983/84 financial year the contribution of GST to total tax revenue had increased to 19%. For the average household in this sample the introduction of GST almost doubled their immediate tax burden - from R103 per annum before the 1978 announcement to R189 per annum afterwards. Having low incomes had led to many households having minimal tax obligations pre - 1978. The effect of GST in lowering the threshold and widening the tax base so as to include these households as taxpayers is clearly evident.

Table 47 traces average contributions to GST through the changes in the rates from its introduction - assuming that household expenditure remained constant over the period. For the average household in the sample, annual sales tax contributions increased from R86 in 1978 to R213 in March 1985 - or from 2,1% to 4,6% of annual income. This can be compared to the relative burdens of income tax and customs and excise duties which averaged out at 0,9% and 1,3% of original incomes.

TABLE 47

ANNUAL CONTRIBUTION TO GENERAL SALES TAX BY THE AVERAGE HOUSEHOLD IN THE SAMPLE: 1978-1985

DATES	RATE OF SALES TAX	ANNUAL CONTRIBUTION TO GST IN RANDS	ANNUAL CONTRIBUTION TO GST AS A % OF INCOME
1978-March 1982	4%	86	1,9%
March-Sept 1982	5%	108	2,4%
Sept 1982-Feb 1984	6%	129	2,8%
Feb 1984-July 1984	7%	151	3,3%
July 1984-Mar 1985	10%[1]	177	3,9%
March 1985-	12%[1]	213	4,6%

1 From July 1984 basic foodstuffs exempted from GST. It was assumed that two-thirds of households expenditure on food was on these basic foodstuffs, i.e. on bread, maize meal, unsifted wheat flour, raw meat, raw fish, fresh fruits and vegetables, fresh milk, butter, margarine and raw eggs.

These results confirm Theron's findings that disposable incomes of low income groups had been detrimentally affected by the introduction of GST - despite the exemption of basic foodstuffs.[16] Budlender argued that the exempted goods are not often those bought by the very poor who, without adequate refrigeration, are forced to buy tinned and other food which is not exempt. Other essential goods which she cited as not included in the exemptions are rice, tea and sugar.[17] There seems a case for arguing that to ease the burden of GST on low income groups basic foodstuffs should be more widely defined to include a greater range of items. For example, Budlender quoted Kupugani - an organisation which attempts to provide cheap food to the poor - as having found that only 3 out of the 84 lines which they stock qualified for exemption.[18]

7.3 GENERAL DISCUSSION

The overall impact of the state on the redistribution of income is impossible to quantify, especially when all aspects and ramifications of government activity are taken into consideration. The empirical work in this study has dealt with only a fraction of the redistribution to occur within the functioning of the welfare state. Tullock pointed out that this redistribution is a relatively minor part of the redistribution to occur in the modern state. His voting theory, outlined in Chapter 1, concentrates on explaining what he terms as the 'massive redistribution of income' - both visible and invisible - that occurs through the political process. These transfers of funds are not those from the wealthy to the poor, but mainly among people who lie between the twentieth and the ninetieth percentile of income - 'the group with the largest taxable capacity, and also the area where political power is concentrated in a democracy'.19

However, it was to Tullocks 'relatively minor transfers' that attention was turned in this study. State protected minimum standards for social security, education, health, housing and public transport have all become legitimate entitlements within the welfare state. Together with food and clothing they constitute the physical basic needs which are usually defined as forming the core of the developmment process.[20] In South Africa, legislation both past and present has strongly influenced the entitlements of different groups. Chapter four has outlined some of these discriminatory practices as they have developed historically. Yet for all groups there does exist a modicum of a welfare state. Why?

As so often the case, many interpretations fit the observed phenomena with both traditional Liberal and Marxist theories able to explain the development of welfarism in South Africa.

Liberals would argue that redistrubitron occurs because individuals have a preference for a greater degree of equality than the market generates. The underlying rationale of the preference for economic equality has been explained in many ways of which the classical argument is based on interpersonal comparisons of utility. Alternative forms of interdependent utility functions were discussed in Chapter 1. In summary, either the assumption that individuals care for one another, or the assumption that they feel it in their own interest to care for one another, leads to externalities which result in redistribution. The existence of the welfare state is provided as evidence of a particular type of caring whereby only specific forms of consumption result in these externalities.

Country-specific characteristics can be incorporated into this Liberal interpretation of redistribution. For example 'unlike externalities' could be used to explain the differential in entitlements between groups in South Africa. If person A obtains a higher utility from person B's consumption or income level, rather than person C's, this would result in the discriminating practice of person B being favoured over person C in the tax-transfer reshuffle.

This viewpoint, based as it is on the acceptance of a social preference for equality, can be contrasted to the Marxist framework which sees the welfare state as part of a post-war settlement between the needs of capital and the demands of labour. Marxists argue that a class conscious political directorate has emerged in order to:

(i) override the short-term sectional interests of particular fractions of capital; and

(ii) to deal with a more powerful and articulate working-class movement.[21]

Within the context of South Africa Marxists have explained the welfare state in these terms. In the case of transport, for example, McCarthy and Swilling suggest that through apartheid, proletarianisation in South Africa has been based on the separation of the community and the work place. This separation has substantially increased the cost of reproducing the work force and, with wages low, there was a need for the development of a cheap transport system. Workers too, joined forces through bus boycotts and mass action to express their dissatisfaction with high transport fares. It was as a joint response to the needs of capital and the demands of workers that 'the South African state, a few transport monopolies, and employers formed an alliance to establish a capitalist transport system that met this requirement'.[22] Through this alliance the transportation of bona fide workers became subsidized.

A third interpretation of the welfare state which can be argued infers social rights of state provision from civil and political rights. Okun, an adherent of this approach, commented:

> "It would be hard, indeed, to imagine any set of consistent social preferences that would give weight to each citizen's freedom of speech (or suffrage, or any other right) and none to his ability to exercise that right in the face of malnutrition or inadequate health care. Starvation would, to put it mildly, compromise 'mutual respect'".[23]

This is more a pragmatic approach than a theoretical one, and for this reason was excluded from the theoretical discussion of Chapter 1. Furthermore in South Africa where civil rights are curtailed and full political rights not granted to the majority of the population, this approach of explaining the welfare state as the extension of citizenship to encompass civil, political as well as social rights must lack relevance.

More feasible in the South African context if inferences are to be drawn from the domain of rights, would be the arguement that the satisfaction of basic needs through the provision of state welfare is the right of each individual simply because of his existence.[24] While not in itself a theory explaining the development of welfare capitalism, this basic needs approach does provide both a normative stance on rights and a motive to explain state redistribution through the welfare state.

Whichever theory is chosen to explain state welfare provision in South Africa, it is likely that issues relating to redistribution will become increasingly salient in this country. Education, housing and public transport are already all highly politicized as evidenced in student protests, refusals to pay rent and bus boycotts. Pressures will be placed on the state to direct more resources to welfare provision. Some changes may be attempted to alter the boundaries between public and private provision. However, it will be politically unfeasible to remove the bulk of welfare rights and entitlements which have some bearing on maintaining minimum standards.

It is to be hoped that questions of justice and equity will become central in future changes and development in the provision of welfare in South Africa and that policies will be planned so as to be more equitable between individuals and groups. This priority would lead to questions of the benefits and burdens of state activity becoming fundamental to policymakers with decisions between alternative expenditure and tax systems having a direct effect on the levels of welfare and the quality of life of communities. This research into budget incidence is a contribution to an area of study which could become increasingly important in the future struggle against the inequalities of South African society and the fight for social rights.

FOOTNOTES

1. Prinsloo, J B, 'A Description of Income, Expenditure and Earning Patterns for Households in Cape Town and Durban', Carnegie Conference Paper No 16, Cape Town, 1984.

2. Le Grande, J, The Strategy of Equality: Redistribution and the Social Services, London, George Allen and Unwin, 1982.

3. Ibid, p 151.

4. McGrath, M D, The Distribution of Personal Income in South Africa in Selected Years over the Period from 1945 to 1980, Ph D Thesis, University of Natal, 1983, p 190.

5. Budlender, D, 'A Critique of Poverty Datum Lines', SALDRU Working Paper No 63, Cape Town, 1985, p 20.

6. Ibid.

7. Carter, C, 'The Purposes of Welfare Services', in Discussing the Welfare State, Policy Studies Institute Discussion Paper No 1, 1980, p 10.

8. Simkins, C, Abedian, I, Hendrie, D and Le Roux, P, 'Justice, Development and the National Budget', Carnegie Post Conference Series No 6, Cape Town, 1984.

9. The allocation routines adopted for health and housing could not usefully accommodate the approach used in the forecast of Simkins et al; while transport subsidies were not covered by them.

10. This is a simplification. Firstly, demographic characteristics will change in the period to 1990/91; and secondly, some of the social security payments could go towards improving coverage.

11. Simkins, C et al, op cit, p 18.

12. Quoted in Nasson, B, 'Education and Poverty: Some Perspectives', SALDRU Policy Paper No 2, Cape Town, 1983, p 22.

13. De Beer, C, The South African Disease: Apartheid, Health and Health Services, Johannesburg, South African Research Service, 1984, p 39-40.

14. Glover, C and Watson, V, 'The "Affordability" of the New Housing Policy and its Likely Impact on the "Coloured" Housing Crisis in Cape Town', Carnegie Conference Paper No 161, Cape Town, 1984, p 4.

15. Quoted in McCarthy, J and Swilling, M, 'Transport and Political Resistance: Bus Boycotts of 1983', in South African Review Two, South African Research Service (ed), Johannesburg, Ravan Press, 1984, p 33.

16. Theron, T, 'Shifts in Indirect Taxation: A Special Type of Racial Discrimination', Conference on Economic Development and Racial Domination Paper No 15, 1984, p 24.

17. Budlender, D, op cit, p 9.

18. Ibid.

19. Tullock, G, 'The Charity of the Uncharitable', in Against Equality: Readings on Economic and Social Policy, W Letwin (ed), London, Macmillan Press, 1983, pp 336.

20. Ghai, D P, Khan, A R , Lee, E L H and Alfthan, T, The Basic Needs Approach to Development: Some Issues Regarding Concepts and Methodology, Geneva, International Labour Organisation, 1977, pp 6-9.

21. Gough, I, The Political Economy of the Welfare State, London, Macmillan Press, 1979, pp 62-63.

22. McCarthy, J and Swilling, M, op cit, p 26.

23. Okun, A M, 'Further Thoughts on Equality and Efficiency', in Economics for Policymaking: Selected Essays of Arthur M Okun, J A Pechman (ed), Massachusetts, Massachusetts Institute of Technology, 1983, p 610.

24. Ghai, D P et al, op cit, p 12.

APPENDIX A RELEVANT SECTIONS OF SURVEY QUESTIONNAIRE USED FOR HOUSEHOLD INTERVIEWS

Household Identification Number ____________________

Street ____

Area ____

Interviewer ____

Record of Unsccessful Visits: ________________________

	ONE	TWO	THREE
Date			
Time			
Remarks			

Date of Interview ________________________________

Time of Interview: From ________________ to ____________ Total Time __________

Remarks:

____

Hello,

My name is ________________. I am working with some people at the University of Cape Town. We are talking with many people in this area to find out what they feel are their worst problems. We would be glad if you would help us by answering a few questions. We hope to be able to use your information when we talk with businessmen, church people and others who wish to start projects in this community.

We do not need your surname.

All answers are confidential.

There are no 'right' or 'wrong' answers. It is your own opinion that is important.

GENERAL INSTRUCTIONS

THE UNIT OF STUDY

The basic study unit is the 'Household', defined for this purpose as: One or more families, group of persons or a person dependent on a common or pooled income, and living in the same house. Persons temporarily absent (e.g. household members at boarding school, away on holiday, or in hospital) are included in this definition. Also included are family members with "live-in" jobs elsewhere, as long as that person stays at the household dwelling regularly each week <u>and</u> the majority of his wages go to the household.

Not included are 'boarders' (i.e. persons paying all their own expenses, including rent), who are regarded as separate households on their own; and family members with established households elsewhere, despite the fact that they may contribute some of their wages to the household income.

PERSON(S) TO BE INTERVIEWED

Interviewer to request to speak with the household head or the most senior household member present at the time. The interviewer should then ask that senior person to invite all other household members who are present and who are 18 years or older to participate as well.

All questions are for joint response unless otherwise indicated.

CODING INSTRUCTIONS FOR TABLE A1

1 NUMBER: Write 'R' against the number of all household members who participate in answering questions.

2. NAME: Only first name is necessary.

3. SEX: Male - M; Female - F.

4. AGE: Give age in years.

5. MARITAL STATUS: Married - M
Living Together - LT
Widowed - W
Divorced - D
Never Married - NM

6. RELATION TO HOUSEHOLD HEAD:

Head - HD	Son - S
Husband - H	Daughter - D
Wife - W	Grandfather - GF
Father - F	Grandmother - GM
Mother - M	Lodger - L
Brother - B	Not Related - NR
Sister - Z	

Note: all relationships are indicated by the first letter in the words describing the relationship, with the exception of 'Z' for Sister. Complicated family relationships can be described in the same manner. (For example: Mother's Sister's Son would be recorded MZS).

7. ACADEMIC EDUCATION: Record highest educational level obtained. If never attended school - 0. Record Sub-A as 21 and Sub-B as 22.

8. VOCATIONAL EDUCATION: Write in post-J.C. teaching diploma, nursing qualification, trade qualifications, etc.

9. GAINFULLY WORKING: Includes all people who earn <u>money or goods</u> for work done in their own house or away from their house.

10. MONTHS UNEMPLOYED: Write the number of months since last job. If never employed, write 'X'.

11. LOOKED IN PAST MONTH? Write 'Yes' or 'No'.

12. HOUSEHOLD DUTIES IN OWN HOME: Tick if person has major responsibility for child care or domestic work in own home.

Questions 13, 14, 15, 16, 17, 18, 19, 20: Tick all answers which apply to respondent.

TABLE A1 CURRENT HOUSEHOLD COMPOSITION

First, please tell me about the people who live in your household.

									IF NOT WORKING										
NO 1	NAME 2	SEX 3	AGE 4	MARITAL STATUS 5	RELATION TO HOUSEHOLD HEAD 6	ACADEMIC EDUCATION 7	VOCATIONAL EDUCATION 8	GAIN-FULLY WORKING 9	MONTHS UNEMPLOYED 10	LOOKED IN PAST MONTHS?	DOMESTIC DUTIES IN OWN HOUSE 12	PRE-SCHOOL 13	AT SCHOOL 14	RETIRED PENSIONER 15	RETIRED NON-PENSIONER 16	DIS-ABLED /ILL 17	INTEND TO WORK LATER	RESTING OR ON HOLIDAY 19	OTHER 20
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			

LIST ALL OTHER SOURCES OF HOUSEHOLD INCOME

Source	Amount Income/Month
☐ Lodgers	______
☐ Rents Received	______
☐ Support Payments from relatives or others	______
☐ Pensions	______
☐ Rural Income	______
☐ Other (Explain)	
a	______
b	______

TABLE A3 BUDGET-EXPENDITURE

Now it would be helpful if you could give us some information about your household budget. Please tell me how much money is spent on each of the following items each month.

RANDS CENTS

1. Housing rent or payment ______

Tick type of occupancy: own ______
rent ______
other ______

2. Housing repair ______

3. Food ______

Tick type of store where major shopping is done: ______
supermarket ______
cafe ______
other ______

4. Clothing and footwear ______

5. Education ______

Uniforms R ______ /year
Books R ______ /year
Fees R ______ /year

6. Medical Care ______

7. Transport ______

8. Recreation/Leisure ______

What activities: ______

______

9. Fuel and Light ______

Kind of fuel R/Month

Cooking ______
Lighting ______
Heating ______

10. Furniture and household equipment ______

11. Cigarettes and tobacco ______

12. Laundry and cleansing ______

13. Personal care ______

14 Liquor ______

15. Insurance ______

16. Savings ______

17. Fines ______

18. Remittances to absent family ______

19. Other ______

APPENDIX B X^2 - TEST TO COMPARE SEVERAL SETS OF FREQUENCIES

The X^2 test can be used to compare several sets of frequencies simultaneously. Assume there are n sets of frequencies each having m different outcomes. These can be arranged in a contingency table.

CONTINGENCY TABLE GIVING FREQUENCY FOR EACH VARIABLE

	VARIABLES X_1	X_2	.....	X_n	ROW TOTALS
y_1	O_{11}	O_{12}	.....	O_{1n}	$\sum O_{1j}$
y_2	O_{21}	O_{22}	.....	O_{2n}	$\sum O_{2j}$
⋮	⋮	⋮		⋮	⋮
y_m	O_{m1}	O_{m2}	.....	O_{mn}	$\sum O_{mj}$
COLUMN TOTALS	$\sum_{i=1}^{m} O_{i1}$	$\sum_{i=1}^{m} O_{i2}$	.....	$\sum_{i=1}^{m} O_{in}$	GRAND TOTAL

where O_{ij} = the frequency of the ith outcome y_i of the jth variable X_j.

The question posed is whether there is a connection between each variable X_j and its frequency distribution between the m outcomes.

The null hypothesis (Ho) assumes there is no connection. Under Ho the expected frequency for each cell of the table can be calculated as:

$$\text{Expected frequency for each cell} = \frac{\text{row total x column total}}{\text{grand total}}$$

That is:

$$e_{ij} = \frac{\sum_{j=1}^{n} O_{ij} \times \sum_{i=1}^{m} O_{ij}}{\sum_{i=1}^{m} \sum_{j=1}^{n} O_{ij}}$$

The full set of mn expected frequencies is calculated. For each cell observed and expected frequencies are compared by squaring their difference and dividing through by the expected value for that cell, that is:

$$\frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

These are added for each cell to give a X^2 value with (m-1) (n-1) degrees of freedom

$$X^2_{(m-1)(n-1)} = \sum_{i=1}^{m} \sum_{j=1}^{n} \frac{(O_{ij}-e_{ij})^2}{e_{ij}}$$

The computed X^2 - value is compared with the theoretical X^2 - distribution, with the appropriate degrees of freedom. If the computed X^2-value exceeds the theoretical X^2 - distribution at the required level of significance, then the null hypothesis of no connection between the n variables and their m outcomes is rejected. In other words, if the observed frequencies are considerably different from the expected frequencies this suggests significant differences between the m sets of frequencies.

APPENDIX C APPORTIONING HEALTH EXPENDITURE BY PUBLIC AUTHORITIES BETWEEN GROUPS: 1982/3

	EXPENDITURE (R'000)				
	TOTAL	AFRICAN	ASIAN	COLOURED	WHITE
Provinces and reserves excluding TBV regions	1 528 713	753 214	37 772	186 549	551 179
Transkei, Bophutatswana and Venda	88 414	88 414	-	-	-
Dept of Health excluding mental health and infectious communicable and preventable diseases	128 754	88 261	4 191	13 339	22 963
Dept of Health - mental health	105 393	48 853	3 095	14 636	38 809
Dept of Health - infectious, communicable and preventable diseases	67 173	54 179	477	11 820	697
Local Authorities portion of expenditure subsidized by Dept of Health and Welfare	13 318	6 610	742	1 998	3 969
TOTAL	1 931 765	1 039 531	46 277	228 342	617 617
% distribution by group	100,0%	53,8%	2,4%	11,8%	32,0%
Annual per capita expenditure	R63,06	R46,42	R54,25	R84,10	R132,14

Sources: BENSO, Statistical Surveys of Black Development; Central Statistical Services, South African Statistics; Reports of the Auditor General on the State Revenue Accounts, the Provincial Accounts and the Reserve Accounts; Estimates of Expenditure to be defrayed from the State Revenue Account, the Provincial Accounts and the Reserve Accounts.

APPENDIX D METHOD FOR ESTIMATING NUMBER OF HOSPITAL VISITS PER HOUSEHOLD

Tariff structures charged in October 1982 by Cape and Natal provincial hospitals were obtained from the relevant authorities.

In the Cape, fees varied according to whether the hospital was classified as a teaching or non-teaching hospital. Fees for day hospitals were the same as for non-teaching hopsitals, so for the purposes of this study the latter were used. Day hospitals were started in 1969 and are generally situated in the poorer socio-economic areas. Given their easier access to the areas surveyed, it seems likely that households in the sample would usually have preferred their services rather than undertaken the trip to the bigger provincial hospitals. Tariffs for both teaching and non-teaching hospitals are shown in Table D1. Services were provided free to social pensioners, outpatients aged 60 years and over and persons with no family income.

TABLE D1

OUTPATIENT TARIFFS CHARGED IN CAPE TEACHING AND NON-TEACHING PROVINCIAL HOSPITALS: OCTOBER 1982

GROSS MONTHLY FAMILY INCOME	OUTPATIENT FEES PER DAILY ATTENDANCE	
	TEACHING HOSPITALS	NON TEACHING HOSPITALS
R	R	R
0 - 50	0,50	0,50
50 - 100	2,00	2,00
100 - 200	5,00	4,00
200 - 300	10,00	8,00
300 - 400	12,00	9,00
400 - 500	13,00	10,00
500 - 600	14,00	11,00
Above 600	15,00	12,00

Although there was no fee differential between the types of provincial hospitals in Natal, the tariff structure was more detailed. This can be seen from Table D2 where fees are shown to vary by income, marital status and number of dependent children. For social pensioners, income was to be deducted from gross monthly income to obtain relevant rates. For persons over the age of seventy, irrespective of income, no fees were charged for outpatients.

Given these fee structures for Cape and Natal hospitals, together with gross monthly income, household size and monthly expenditure on medical care, it was possible to estimate the number of outpatient visits per month if it was assumed that no medical care expenditure was spent on private health care or hospitalization. Given the low monthly expenditures on health care on average, it seems unlikely that this assumption would have been too unreasonable. Further assumptions made were:-

(a) all pensioners were assumed to seek medical care three times a year;

(b) households which did not respond to the question relating to their monthly medical expenditures were assigned the average number of visits for their particular race group. Only 24 households (or 3,6%) fell into this category. These should be distinguished from those households reporting a zero health expenditure.

Once the number of hospital visits per household were estimated, the procedure for allocation of health expenditure outlined in section 4.4.2 was applied to each household to provide an indication of household benefits from state spending on health.

TABLE D 2

OUTPATIENT TARIFFS CHARGED IN NATAL PROVINCIAL HOSPITALS

GROSS MONTHLY INCOME OF FAMILY UNIT	SINGLE NO DEPENDENT CHILDREN	SINGLE WITH FULLY DEPENDENT CHILDREN:- 1	2	3	4	5	6	7 OR MORE
		MARRIED WITH FULLY DEPENDENT CHILDREN:- NIL	1	2	3	4	5	6 OR MORE
R	R	R	R	R	R	R	R	R
Nil	Free	Free	Free	Free	Free	Free	Free	Free
1 - 25	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
26 - 50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
51 - 75	1.80	1.50	1.50	1.50	1.50	1.50	1.50	1.50
76 - 100	2.20	1.50	1.50	1.50	1.50	1.50	1.50	1.50
101 - 125	2.60	1.80	1.50	1.50	1.50	1.50	1.50	1.50
126 - 150	3.00	2.20	1.80	1.50	1.50	1.50	1.50	1.50
151 - 175	3.40	2.60	2.20	1.80	1.50	1.50	1.50	1.50
176 - 200	3.80	3.00	2.60	2.20	1.80	1.50	1.50	1.50
201 - 225	4.20	3.40	3.00	2.60	2.20	1.80	1.50	1.50
226 - 250	4.60	3.80	3.40	3.00	2.60	2.20	1.80	1.50
251 - 275	5.00	4.20	3.80	3.40	3.00	2.60	2.20	1.80
276 - 300	5.40	4.60	4.20	3.80	3.40	3.00	2.60	2.20
301 - 325	5.80	5.00	4.60	4.20	3.80	3.40	3.00	2.60
326 - 350	6.10	5.40	5.00	4.60	4.20	3.80	3.40	3.00
351 - 375	6.50	5.80	5.40	5.00	4.60	4.20	3.80	3.40
376 - 400	6.90	5.80	5.80	5.40	5.00	4.60	4.20	3.80
401 - 425	7.20	5.80	5.80	5.80	5.40	5.00	4.60	4.20
426 - 450	7.60	6.10	5.80	5.80	5.80	5.40	5.00	4.60
451 - 475	8.00	6.50	6.10	5.80	5.80	5.80	5.40	5.00
476 - 500	8.40	6.90	6.50	6.10	5.80	5.80	5.80	5.40
501 - 525	8.80	7.20	6.90	6.50	6.10	5.80	5.80	5.80
526 - 550	9.20	7.60	7.20	6.90	6.50	6.10	5.80	5.80
551 - 575	9.60	8.00	7.60	7.20	6.90	6.50	6.10	5.80
576 - 600	9.60	8.40	8.00	7.60	7.20	6.90	6.50	6.10
601 - 625	10.00	8.80	8.40	8.00	7.60	7.20	6.90	6.50
626 - 650	-	8.80	8.80	8.40	8.00	7.60	7.20	6.90
651 - 675	-	9.20	8.80	8.80	8.00	7.60	7.20	6.90
676 - 700	-	9.20	9.20	8.80	8.40	8.00	7.60	7.20
701 - 725	-	9.60	9.20	9.20	8.80	8.40	8.00	7.60
726 - 750	-	9.60	9.60	9.20	8.80	8.80	8.40	8.00
751 - 775	-	10.00	9.60	9.60	9.20	8.80	8.80	8.40
776 - 800	-	-	10.00	9.60	9.20	9.20	8.80	8.80
801 - 825	-	-	10.00	10.00	9.60	9.20	9.20	8.80
826 - 850	-	-	-	10.00	9.60	9.60	9.20	9.20
851 - 875	-	-	-	-	10.00	9.60	9.60	9.20
876 - 900	-	-	-	-	10.00	10.00	9.60	9.60
901 - 925	-	-	-	-	-	10.00	10.00	9.60
926 - 950	-	-	-	-	-	10.00	10.00	10.00
951 - 975	-	-	-	-	-	-	10.00	10.00
976 - 1000	-	-	-	-	-	-	10.00	10.00
1001 - 1025	-	-	-	-	-	-	10.00	10.00
1026 - 1050	-	-	-	-	-	-	-	10.00
1051 - 1075	-	-	-	-	-	-	-	10.00

APPENDIX E ANALYSIS OF VARIANCE AS A METHOD FOR COMPARING GROUP MEANS

Analysis of variance can be used to test whether the means of two or more random samples are signficantly different when the populations from which they are drawn are normally distributed with equal variance. Although it is unlikely that either assumption will be strictly met in survey data, the tests are sufficiently robust to withstand both some degree of non-normality (e.g. skewness) and also unequal variances.

The steps taken in testing for signficant differences between the group means of n samples is outlined below. Each sample is assumed to have m observations.

(1) Estimate the population variance from the variance between the sample means (MSB in Table E1).

(2) Estimate the population variance from the variance within the samples (MSW in Table E1).

(3) The F-ratio is calculated by dividing the variance between sample means by the variance within sample, that is:

$$\text{F-ratio} = \frac{\text{variance between sample means}}{\text{variance within samples}} = \frac{MSB}{MSW}$$

(4) A high F-ratio suggests that the variation between samples is greater than the variation within samples. More formally, if the calculated F-ratio exceeds that presented in the F-tables at the required level of significance and degrees of freedom, then the null hypothesis (Ho) of equal population means is rejected in favour of the alternate hypothesis (H_1) that group means are signficantly different.

The above steps are set out in Table E1.

TABLE E1

ANALYSIS OF VARIANCE TABLE

Source of Variation	Sum of Squares	DF	Mean Square	F-ratio
Between Means	$SSB = n\sum_{j=1}^{m}(\bar{X}_j - \bar{X})^2$	m-1	$MSB = \frac{SSB}{m-1}$	$\frac{MSB}{MSW}$
Within Samples (error or unexplained)	$SSW = \sum_{i=1}^{n}\sum_{j=1}^{m}(X_{ij} - \bar{X})^2$	m(n-1)	$MSW = \frac{SSW}{m(n-1)}$	
TOTAL	SST = SSB + SSW	mn-1		

where X_{ij} = value of ith observation of sample j

X_j = mean of sample j

X = grand mean of n samples

SSB = sum of squares explained by differences between groups

SSW = sum of squares of error within groups

SST = total sum of squares

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