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**AN ECONOMIC ANALYSIS OF GOVERNMENT  
EXPENDITURE ALLOCATIONS TO BLACK  
SCHOOLING IN SOUTH AFRICA**

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**ABSTRACT**

In this thesis an assessment is made of the contribution of economic theory to the debate on government expenditure allocations to schooling in developing countries. Publicly provided Black schooling in South Africa is taken as the case study and viewed in the light of historical perspectives, as well as human capital, rent-seeking, welfare, liberal and contractarian theory.

From an historical perspective, the willingness of Blacks to enrol at schools under National Party control, despite the poor quality of such schooling and lack of labour market incentives for them to do so, is paradoxical. It leads to the conclusion that under National Party administration the private benefit of Black schooling exceeded the private cost; a situation which is argued to have been influenced by rent-seeking.

The propositions that government expenditure on Black schooling is a profitable social investment, and that rent-seeking has influenced the allocations of government expenditure on Black and White education are then investigated. Empirical support is found for both propositions, but it is based on the use of controversial methods and measures.

The provision of education by the state can be justified on many economic grounds; the most popular being that this improves welfare by bringing about a better distribution of income or by redressing market failure. However, as there are major problems with this approach, it is concluded that neoclassical welfare theory fails to provide a persuasive justification for current levels of government expenditure on Black schooling.

The provision of Black schooling by the state can also be justified in terms of liberal objectives. Classical and reform liberalism and their respective conclusions are examined. Marxist views on the role played by the state in the provision of education are also considered, but not found to be appropriate.

Two contractarian assessments of the government's role in the provision of Black schooling are also provided in this thesis. They are based on the works of John Rawls (1971 and 1974) and James Buchanan (1986). The approach taken by James Buchanan is argued to be more appropriate to South African circumstances than Rawls's, and it is in the context of the former that problems with respect to public decisions on education and possible solutions to them are discussed.

The conclusion of the thesis is that economic theory offers only a limited explanation for government expenditure allocations to Black education in South Africa.

## TABLE OF CONTENTS

	PAGE NUMBER
Title Page	i
Abstract	ii
Table of Contents	iv
List of Tables	vii
List of Illustrations	x
Acknowledgements	xi

### INTRODUCTION

**CHAPTER 1 : Historical background : the paradox of Black school enrolment rates. 14**

Introduction

1. Deteriorating quality and increasing government control of Black schooling between 1948 and 1968, and the historical background to these changes.
2. Political and social erosion of the economic advantage of Black schooling in South Africa between 1948 and 1968.
3. The paradox of Black school enrolment rates.
4. Resolving the paradox and the appearance of large scale rent-seeking by Blacks in South Africa.

Conclusion

**CHAPTER 2 : Can it be established that government expenditure on Black schooling in South Africa is a profitable social investment? 51**

Introduction

1. The contribution of education to economic growth.
2. Factors which are relevant in calculating the social rate of return to investment in Black schooling.
3. Constructing age-earnings profiles per school level for Blacks in South Africa.
4. Constructing age-cost profiles per school level for Blacks in South Africa.
5. Estimating social internal rates of return (IRR) to investment in Black schooling in South Africa.

6. Estimating the social opportunity cost of government expenditure on Black schooling.
7. Comparing the social rate of return to investment in Black schooling with the social opportunity cost rate of government expenditure.

Conclusion

**CHAPTER 3 : Is government expenditure on Black and White education in South Africa influenced by rent-seeking? 104**

Introduction and the meaning of rent-seeking

1. The relation between bureaucratic interest and government expenditure on Black and White schooling.
2. Applying rent-seeking theory to political rivalry between Blacks and Whites in South Africa.
3. Evidence in support of a theory of rent-seeking by race with respect to the provision of education by the state in South Africa.
4. The inefficiency of political equilibrium in South Africa - a case of 'government failure'?

Conclusion

**CHAPTER 4 : Some problems associated with a welfare rationale for the provision of education by the state : the case of South Africa 153**

Introduction

1. The problem of comparing 'failures'.
2. Market failure, general equilibrium analysis and the social welfare function.
3. The problem of incorporating distributional motives into a welfare rationale.
4. A review of the de Lange Commission's position on redressing inequality and improving efficiency in South Africa through the provision of education.

Conclusion

<b>CHAPTER 5 :</b>	<b>Liberal and Marxist perspectives of the role played by the National Party government in the provision of Black education.</b>	<b>192</b>
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## Introduction

1. Two types of liberalism
2. Reform liberalism and the government response to Black school unrest.
3. The populist democratic viewpoint of reform liberals.
4. The rejection by reform liberals of current entitlements in South Africa.
5. The Marxist concept of state.
6. Marxist perspectives on the policy of the National Party on Black education.

## Conclusion

<b>CHAPTER 6 :</b>	<b>Contractarian perspectives of the role played by the National Party government in the provision of Black and White education.</b>	<b>243</b>
--------------------	--	------------

## Introduction

1. Rawls's (1971) concept of the social contract and its implications for the provision of Black schooling by the state in South Africa.
2. Actual unanimity as a basis for fairness: Buchanan's (1986) concept of the social contract.
3. Majority voting and the case of South Africa.
4. Some economic reasons for a tax-constitution in South Africa.

## Conclusion

<b>CONCLUSION</b>	<b>299</b>
<b>BIBLIOGRAPHY</b>	<b>307</b>

LIST OF TABLES

TABLE NUMBER		PAGE NUMBER
1.	The number of pupils who enrolled at schools in South Africa and the homelands	4
1.1	Government current, real and real per capita expenditure on Black education in South Africa from 1910 to 1974	17
1.2	The number and percentage of the Black population in South Africa in public primary and secondary schools from 1919 to 1973	28
1.3	Government expenditure on Black and White education in South Africa and the homelands between 1974 and 1987	35
1.4	Government spending as a percentage of GDE from 1970 to 1987	36
2.1	Median annual earnings in Rands of economically active Black males in South Africa in 1980	70
2.2	Median annual earnings in Rands of economically active Black females in South Africa in 1980	70
2.3	Median earnings in Rands of economically active Blacks males and femlaes combined in South Africa in 1980	71
2.4	Trotter's (1984) estimates of the costs per capita enrolment in Black primary and secondary schooling for 1980	73
2.5	Estimated numbers of pupils who dropped out or failed at schools controlled by the DET in 1980	76
2.6	The estimated direct expenditures borne by a Black pupil on his schooling (excluding school uniforms) in 1980, at 1979 prices	78
2.7	The estimated cost of the main constituents of the school uniform in 1988	79
2.8	The estimated cost of secondary school uniforms at 1980 and 1988 prices	80

2.9	The estimated minimum costs per pupil of 'effective' primary and secondary schooling for Black males and females in 1980 (to the nearest one Rand)	82
2.10	Marginal social rates of return to investment in the schooling of Black males in South Africa over 1980	84
2.11	Marginal social rates of return to investment in the schooling of Black females in South Africa over 1980	84
2.12	Marginal social rates of return to investment in the schooling of Black males and females in South Africa over 1980	85
2.13	Marginal social rates of return to investment in the primary schooling (as a whole) for Blacks in South Africa over 1980	85
2.14	Marginal social rates of return to investment in primary and secondary schooling (as a whole) for Blacks in South Africa over 1980	85
2.15	Estimating consumption and investment components of tax revenue and increased public debt for South Africa over 1980 in millions of Rands	90
2.16	DET expenditure in Rands on primary and secondary education, 1984 - 1986	102
2.17	The numbers of primary and secondary pupils in DET schools, 1984 - 1986	102
3.1	Selected job opportunities and the numbers of pupils enrolled for primary and secondary schooling in the Natal Education Department	112
3.2	Government expenditure on education as a percentage of GNP	114
3.3	Pupil and teacher numbers at schools administered by the DET between 1980 and 1988	116
3.4	Increases of real government expenditure on Black and White education in South Africa and the homelands, 1974-1987	130

3.5	The division of the vote as a percentage between the main political parties in the parliamentary elections for Whites in South Africa between 1966 and 1987	132
3.6	An index of White political pressure	133
3.7	Indicators of Black political pressure on the state in South Africa during the 1970s and 1980s	135
3.8	Government expenditure on Black and White education, and Black political pressure relative to White South Africa, 1974-1987	137
3.9	Current expenditure in Rands by the DET on teachers and other items in primary and secondary schooling, 1984-1986	146
3.10	Detention without trial under emergency legislation between 1985 and 1988	151
3.11	The average percentage growth of real GNP in South Africa from 1950 to 1987	152
5.1	Enrolments in technical and vocational education in 1953 and 1954	232
5.2	An international comparison of basic socio-economic indicators for 1980	240
6.1	Net migration from South Africa between 1970 and 1987	286
6.2	The budget deficits and the total budgets financing requirements in South Africa in millions of Rand from 1976 to 1988	291

LIST OF ILLUSTRATIONS

FIGURE NUMBER		PAGE NUMBER
2.1	The interdependent nature of social development	65
3.1	Monopoly rent	106
3.2	The creation of artificial rent by public provision of education	108
4.1	The Scitovsky (1941) paradox	171
6.1	Rawlsian indifference curves	259
6.2	Indifference curves relating tax shares to state expenditure on education	263
6.3	The costs of different decision-making rules	267
6.4	The paradox of voting	270
6.5	The median voter theorem	272
6.6	White and Black preferences for public education in South Africa	278
6.7	The net benefit of emigration	282
6.8	The marginal willingness of Black and White voters to pay for the provision of education by the state	283

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## INTRODUCTION

The selection of government expenditure allocations to Black schooling in South Africa as the focus for economic analysis in this thesis was influenced by several factors; the most important being my perception that too many people in South Africa presume without adequate foundation that a government policy of increasing the provision of Black education is unequivocally supported by economic analysis.<sup>1</sup> For this reason I set out to examine whether there is in fact a sound economic case for increasing such government expenditure (at a rate above that at which gross domestic product increases).<sup>2</sup> It will be shown that a neat and precise answer to this question is impossible, but I am led to the conclusion that the economic case for increases of state expenditure on (Black) schooling may not be as powerful as it is popularly believed to be. The related question concerning private expenditure on education is not addressed. That other conclusions with respect to the total supply of education may have been reached if it had been, does not detract from the results of this analysis of state expenditure.

This observation emphatically does not denigrate the social worth of Black schooling. Rather, it emphasises that one should not let the very obvious benefits of providing Black schooling blind one to the fact that there are also

substantial costs that will be incurred and associated with it. Furthermore, my analysis does not imply that an interdisciplinary approach to education is unnecessary. Many aspects not taken into account in this thesis are addressed in other fields; for example, tradition, culture and moral values are clearly of great importance, but do not fall within the traditional realm of economics, which has an independent and specific contribution to make.

Non-economists could argue further that this analysis is less convincing because it is not presented in the context of a (grand) theory of the state. The substitute theory used in this thesis is a theory of choices and their consequences made by self-interested voters, politicians and government bureaucrats, as explained in the public choice tradition. Such an approach is unashamedly economic in that human beings are seen to operate out of self-interest, whether this be in the market-place or in affairs of state. In the public choice tradition, when analysing people's choices it is presumed legitimate to use a market-type analysis.

A second factor attracting attention to this topic is the phenomenal growth of government expenditure on Black education during the 1970s and 1980s. In 1970 R58,4 million was spent on Black education by the governments of South Africa and the homelands, as against R384,6 million on White

education (Malherbe, 1977, p.734). By 1987 more was being spent on Black education, namely R3400,2 million, than was being spent on White education, namely R3320,7 million (SAIRR, 1987/88, pp.148-149). About 60 per cent of these amounts were allocated directly to departments responsible for the provision of schooling (SAIRR, 1987/8, pp.148-149). Hence, compared with a 40 per cent increase in real gross domestic product between 1970 and 1987 (SARB, Quarterly Bulletins), real government expenditure increased by about 690 per cent on Black education and about 17 per cent on White education. This increase of government expenditure on Black education also contrasts sharply with those which have taken place in other developing countries around the world, where education's share in central government budgets fell from 13 to 10 per cent between 1972 and 1985, and in many of the poorer ones where there were real declines in spending (World Development Report, 1988, p.133).

The total amount spent by the government on education in South Africa and the homelands in 1987 was R8 133 165 626 (SAIRR, 1987, p.150). As percentage shares of the central government budget and gross domestic product respectively, this amount is 17 and 5 per cent. The former percentage is significantly higher than those of the past; for example, in 1975 this figure was only 13 per cent. The second percentage (5 per cent of GDP) is lower than the average of 10,2 per cent for upper middle-income countries but higher

than the average of 4,5 per cent for industrial market economies (World Development Report, 1988, p.267).

The importance of Black schooling in an overall education context is indicated by the numbers of Black pupils relative to pupils of the other races who enrol for schooling in South Africa. In 1987 Black pupils made up 77 per cent of the total pupil population and 75 per cent of the total pupil and university student population in South Africa and the homelands (for pupil numbers, see Table 1). The number of students who enrolled at universities in South Africa and the homelands in 1987 was 258 371 (SAIRR, 1987/88, p.181), of which less than 28 per cent were Black (SAIRR, 1987/88,p.181). Among Black pupils, about 79 per cent were at primary school. (SAIRR, 1987/8, p.161).

Table 1

The number of pupils who enrolled at schools in South Africa and the homelands in 1987

<u>Race</u>	<u>Black</u>	<u>White</u>	<u>Coloured</u>	<u>Indian</u>	<u>Total</u>
Pupils	6 644 859	954 454	812 889	234 476	8 646 678
% of Total	77	11	9	3	100

Source: Research Institute for Education Planning, University of the Orange Free State, November, 1988.

It would appear that in South Africa a high percentage of Black children of school going age enrol for schooling. In 1985 there were about 4 384 842 Blacks in the age group 6 to 17 (S.A. Statistics, 1986). By way of comparison 4 194 441

pupils enrolled at schools in 1985, about 96 per cent of the number in the relevant age group (S.A. Statistics, 1986). In similar (upper middle-income) countries, the average percentage of the population aged 6 to 11 enrolled at primary schools in 1985 was 105 per cent, while the same percentage for the age group 12 to 17 enrolled at secondary schools was 57 per cent (World Development Report, 1988, p.281).

There are six chapters in this thesis. In the first three an analysis is made of the history as well as the costs and benefits of the provision of Black schooling by the state in South Africa. With this as a basis, the last three chapters are devoted to the primary objective of the thesis: to determine whether or not the economic case for increasing government expenditure on Black schooling at a rate exceeding that at which GDP increases is sound in the light of welfare, liberal, Marxist and contractarian perspectives. The internal efficiency of Black schooling and related aspects, such as the merits and demerits of decentralised control and alternative financial arrangements which can be made for it, are not discussed (other than in a brief note to the Conclusion).

Chapter 1 provides an outline of the salient features of the state's past provision of schooling to the Black population of South Africa. The state only became involved Black

schooling in 1841 when under British administration mission schools providing education to Blacks began receiving government subsidies. Aided by this support, a steady growth of mission initiatives in Black schooling took place, and in 1918 a number of state-run schools for Blacks were also opened; so that by 1919 about 169 000 or 3,17 per cent of the total Black population in South Africa were at school (Malherbe, 1977; p.709).

After the First World War (1914 - 1918) demand from the Blacks themselves, rather than encouragement by the mission establishment, became the main force underlying the growth of Black enrolment at schools. The rationale underlying this demand is unclear. For example, under the National Party's policy of apartheid instituted after 1948 one would have expected this demand to have decreased; instead it increased, an historical feature identified here as the 'paradox of Black school enrolment'. The explanation offered for this paradox is that Blacks were able to gain redistributive transfers of income in the form of government expenditure on their schooling (that is, Blacks were able to gain by rent-seeking) and thereby build up human capital at little extra direct cost to themselves. This explanation is based on evidence that Blacks perceived schooling to be a way whereby they could increase their capacity to generate political pressure (and hence gain political influence), and the fact that government expenditure on schooling provided a

means whereby redistributive transfers of income from Whites to Blacks could be effected.

In Chapter 2 the provision of Black schooling is assessed as an investment in human capital. For this purpose the costs and productivity benefits of Black schooling are described and compared. The costs typically incorporated in such analyses are direct private outlays on school fees and educational aids, forgone earnings and government expenditure on schooling. The benefits typically incorporated are the increased earnings derived as a result of this schooling in the factor input markets. These increased earnings are 'measurable' investment benefits and are sometimes distinguished from 'non-measurable' investment benefits (such as improved childcare and 'social responsibility') and consumption benefits. The latter are gained while undergoing schooling (in satisfying one's taste for knowledge) or as a result of it (such as in the use of one's leisure time).

As a way of comparing the costs and benefits of Black schooling, social rates of return to investment in such schooling are calculated. In principle these rates may be used to show what contribution expenditure on Black schooling makes to economic growth, but because of obstacles to measurement no such contribution is estimated in this thesis. The main problems with such calculations are that

the costs and benefits are extremely difficult to identify and measure. Besides the non-measurability of investment and consumption benefits, the costs of rent-seeking (that is, the soliciting of artificial transfers of income through the state) to which the provision of education by the state can give rise, are usually not considered.

The theory of rent-seeking and its application to South Africa is considered at some length in Chapter 3. It is shown that the rapid increases of government expenditure on Black schooling during the 1970s and 1980s can be explained in terms of rent-seeking models; in particular, by rent-seeking rivalry between Blacks and Whites.

The normative economic analysis of the costs and benefits of social programmes, such as providing schooling, is usually carried out in the context of neoclassical welfare theory. The most frequently cited reasons why the provision of schooling improves welfare are that this serves to redress market failure or bring about a better distribution of income. However, as shown in Chapter 4 there are serious limitations to such an approach, the most fundamental one being that in order to derive welfare conclusions it is necessary to translate these costs and benefits (which are experienced by different people) into comparable utility measures. This comparison raises difficulties because it

depends upon knowledge about the social welfare function and most economists are reluctant to assume such knowledge.

The provision of Black schooling by the state also can be considered from liberal and Marxist vantage points, as done in Chapter 5. Two types of liberalism are identified, reform and classical, each embodying a different definition of the freedom ideal: while classical liberals emphasise the negative aspects of freedom, that is, freedom from coercion, reform liberals emphasise the positive aspects, that is, freedom to do or become something. The importance reform liberals attach to 'positive freedom' is indicated by their willingness to forgo 'negative freedom' in favour of 'positive freedom'.

In line with their emphasis on negative freedom, classical liberals favour a minimal state, because restricted in this way it is less likely to become a source of coercion. A minimal state can be characterised as one which concentrates exclusively on the provision of pure public goods, which education is not. Therefore, government expenditure on it is not strictly consistent with classical liberal ideals. By way of contrast, the fact that education can facilitate equality of opportunity has made the provision of it to Blacks, as economically and politically the least advantaged group at the present time, very appealing to reform liberals.

There are though, also similarities between the views held by these two types of liberal. For example, both see the situation under the National Party government as having been to the detriment of all South Africans, in that under their policies individual freedoms have been denied and labour market efficiency has been undermined, thereby retarding economic growth.

Marxists do not share this consensus, that is, the liberal view that interference by the National Party government has undermined economic growth in South Africa. They observe that over the initial period of National Party rule such growth was high rather than low, and consider the situation in South Africa to be a natural outcome of capitalist development. However, the application of Marxist perspectives in this arena of state activity is controversial; there is evidence to suggest that ethnic interests have had a far greater direct influence over government policy on the provision of Black schooling in South Africa than have class interests.

In addition to welfare and liberal assessments of the actions of government, contractarian ones are now also popular amongst economists. In Chapter 6 two contractarian approaches are considered; those of John Rawls (1971 and 1974) and James Buchanan (1986). Rawls's approach entails

the construction of idealised principles of justice (as fairness) from behind a 'veil of ignorance'; circumstances under which he believes everyone would not only derive the same principles, but agree to be bound by them. The most notable critique of his approach is that provided by Robert Nozick (1974). In contrast to Rawls, Buchanan bases his analysis on the premise that objective fairness should be defined in terms of agreements between people in their real life situations. In line with this position he attaches more importance to whether agreements in real life are actually reached and how they are reached, than he does to the nature of the agreements themselves. Buchanan's can be considered the less speculative of the two approaches taken towards objective fairness, and for this reason it is characterised as positive theory in the economic literature (Mueller, 1976).

The analysis of fairness from contractarian perspectives, much like the analysis of welfare, produces inconclusive results when inter-personal utility comparisons are made. Using a Rawlsian approach to fairness (but excluding his stipulation of a well-ordered society) as well as the utility assumptions implicit in his principles, a case can be made for increasing government expenditure on Black schooling (Simkins, 1987). However, it is also shown that if Buchanan's approach is adopted, and some plausible assumptions are made about the probable utility gained by

Blacks and Whites in South Africa from schooling, a different conclusion is reached. What emerges is that consensus on the issue is unlikely, and that under the majority vote rule Whites in particular would be induced to prevent higher allocations of government expenditure on Black schooling (the median vote result). In order to resolve this problem a case can be made for constitutionally limiting the freedom of government to increase government expenditure; the rationale for this being to prevent, or at least restrict, costly interference in the processes of decision-making by specific groups in the South African population.

On the issue whether the economic justification for increasing government expenditure on Black schooling (at a rate exceeding that at which GDP increases) is persuasive, it is concluded that there are too many qualifications needed for that to be the case.

**NOTES**

1. A recent example of the type of thinking the writer has in mind is provided in the Standard Bank Economic Review of August, 1990, entitled "Education in South Africa : The key to sustainable long-term economic growth" (see Chapter 2 for further discussion). This type of thinking is also encouraged by some World Bank publications. For example, Psacharopoulos and Woodhall (1985, pp.313-320) lay great stress on the potential benefits of education, especially for 'African countries'. On the other hand, in the context of their 'lessons from international development experience' the possibility of over-investment in education is made to appear remote (Psacharopoulos and Woodhall, 1985, pp.55-58).
2. In this thesis the rate at which GDP increases is taken to be a 'neutral' one. Even if education did not increase in relative importance over time one would still expect there to be increases of government expenditure on it because as GDP increases so does a country's capacity to spend. Whenever the rationale for increasing government expenditure on Black education is referred to, the increase being considered is not the neutral increase described above, but that in excess of this.

## CHAPTER ONE

### HISTORICAL BACKGROUND : THE PARADOX OF BLACK SCHOOL ENROLMENT RATES

#### Introduction

In this chapter some historical features of the role played by the state in the provision of formal schooling to the Black population of South Africa are outlined; with particular attention being given to the period of National Party rule. The first attempts to provide formal schooling to Blacks in South Africa were made by mission societies. The attitude of the state towards these attempts is covered in a note at the end of the chapter.<sup>1</sup> It is shown in this note that the state only began to play an active role in the provision of schooling to Blacks from 1841 onwards, in the form of financial contributions to mission schooling. The government's motivation for making these contributions would appear to have been linked to the fact that many White pupils received their schooling at mission establishments in addition to members of other race groups.

After the First World War (1914-1918) the formal schooling provided for Blacks in South Africa became 'demand-led'; it was provided to satisfy demand for it by the Blacks themselves. It was at this stage that the rate of growth in

enrolments at Black schools began to exceed the capacity of the schools available; a problem the government made little attempt to resolve.

With the favourable conditions for economic expansion which developed in South Africa during and after the Second World War the urban Black population increased rapidly (Houghton, 1969, p.117). As a result the over-crowding problem in Black schools was aggravated and there was an increase of Black political pressure on the state for reform.

In the face of this political pressure the National Party won the 1948 general election.<sup>2</sup> Initially, they attempted to deal with this pressure by undermining the growth and political cohesion of the urban Black population by the apartheid policy. Later, during the 1970s and 1980s, in the face of widespread Black unrest, the policy of apartheid crumbled.<sup>3</sup>

The unrest referred to began when school riots broke out in Soweto on 16 June, 1976. As a result of the unrest various policy and budgetary changes were made by the government. For example, an education policy based on more egalitarian principles was formulated. This change led to a rapid growth of government expenditure on Black schooling; a trend which has in part been responsible for an increase in the percentage of GNP accounted for by government expenditure.

The paradox of Black school enrolment rates during the era of National Party rule is that if the quality of Black schooling provided was poor and deteriorating and the economic benefit of this schooling in the labour market was undermined by state policy, one would have expected a decline in Black school enrolments to have taken place; but instead of this, a steady growth in such enrolments took place.

It will be shown that the quality of Black schooling, which was always below that provided to the Whites, deteriorated further. It will also be shown that political and social circumstances in South Africa limited the economic advantage which could be derived from this schooling. Yet in spite of these influences, enrolment by Blacks at schools grew by about 279 per cent between 1948 and 1970, as against about 224 per cent between 1926 and 1948 (Malherbe, 1977, pp.709-711).

**1. Deteriorating quality and increasing government control of Black schooling between 1948 and 1968, and the historical background to these changes**

There was a steady increase of government expenditure on Black education prior to the National Party's coming to power in 1948. In Table 1.1 (overleaf) it is shown that government expenditure on Black education increased from (a low base of) R44 000 in 1910 to R10 459 000 in 1948,

and that between 1919 and 1948 real government expenditure per pupil increased by about 560 per cent.

Table 1.1

Government current, real\* and real per capita expenditure on Black education in South Africa from 1910 to 1974

Year	Total Government Expenditure in Thousands of Rand		Real Expenditure in Rand	
	Current	Real	Per Capita	Per Pupil
1910	44	59	0,01	-
1911	167	214	0,05	-
1912	179	221	0,05	-
1913	200	244	0,06	-
1914	203	249	0,06	-
1915	205	240	0,06	-
1916	221	244	0,05	-
1917	238	239	0,05	-
1918	270	254	0,06	-
1919	300	255	0,06	1,5
1920	434	298	0,06	1,6
1921	509	385	0,08	2,0
1922	637	330	0,07	1,7
1923	755	707	0,14	3,5
1924	781	721	0,14	3,6
1925	869	805	0,15	3,8
1926	963	906	0,17	4,0
1927	1006	941	0,17	4,1
1928	1092	1021	0,18	4,2
1929	1180	1107	0,19	4,1
1930	1235	1186	0,20	4,2
1931	1235	1208	0,20	4,1
1932	1178	1230	0,20	4,2
1933	1183	1269	0,20	4,0
1934	1270	1344	0,21	4,1
1935	1382	1470	0,23	4,2
1936	1489	1579	0,24	4,4
1937	1684	1745	0,26	4,4
1938	1818	1818	0,26	4,2
1939	1857	1859	0,27	4,1
1940	2030	1964	0,28	4,2
1941	2354	2176	0,30	4,4
1942	2761	2354	0,32	4,6
1943	3396	2730	0,36	5,1
1944	4024	3125	0,41	5,6
1945	5724	4330	0,56	7,3
1946	7229	5391	0,69	8,3
1947	9353	6695	0,84	9,9
1948	10459	7078	0,87	9,7
1949	11250	7343	0,89	9,6
1950	11635	7304	0,87	9,7

Table 1.1 : Government current, real\* and real per capita expenditure on Black education in South Africa from 1910 to 1974

Year	Total Government Expenditure in Thousands of Rand		Real Expenditure in Rand	
	Current	Real	Per Capita	Per Pupil
1951	11843	6926	0,81	8,9
1952	13340	7176	0,81	8,7
1953	13766	7155	0,79	8,2
1954	16210	8275	0,89	8,7
1955	15879	8487	0,80	7,7
1956	17467	8487	0,80	7,6
1957	18225	8597	0,79	6,8
1958	18184	8292	0,74	6,1
1959	20223	9114	0,80	6,1
1960	19662	8723	0,72	5,6
1961	20249	8789	0,71	5,2
1962	20591	8818	0,69	5,0
1963	23613	10001	0,76	5,3
1964	24996	10320	0,76	5,2
1965	26834	10653	0,77	5,1
1966	29190	11180	0,78	4,9
1967	35109	12999	0,89	5,4
1968	38141	13844	0,92	5,4
1969	44768	15736	1,02	5,8
1970	58431	19734	1,24	6,7
1971	70679	22601	1,38	7,2
1972	79255	23193	1,38	7,0
1973	97412	26688	1,54	7,5
1974	146576	35970	2,03	9,6

Source: Malherbe, 1977, pp.733-746.

(\* As per Consumer Price Index, 1938 values)

It can be seen that the Union administration made more of a contribution towards the provision of Black schooling than the British colonial administration. There was a sharp increase of government expenditure on Black schooling in 1910 and a steady increase thereafter; the major recipients of this expenditure being the mission schools. In 1918 the Union administration also became directly involved in the provision of Black schooling when a number of provincial-run schools were established in Natal.

In 1922, with the passing of the Financial Relations Act the legislative framework within which government expenditures on Black schooling were to be made, was established. In terms of this act any expansion of expenditure on Black schooling over and above R680 000 had to be met by increasing the proportion of the South Africa Native Trust Fund used for this purpose.<sup>4</sup> This fund was financed by means of taxation on the Blacks themselves.

During the 1930s Blacks sought schooling in even greater numbers than they had over the 1920s. Enrolments increased by 65 per cent over the 1930s as against 54 per cent over the 1920s. One of the results of this increase in enrolments was that under the 1922 subsidy arrangements mission schools began to experience problems in providing adequate schooling for Blacks (Malherbe, 1977, pp.709-711). In 1935 an interdepartmental Committee on Native Education was convened to assess the situation. It recommended, *inter alia*, that a government grant of R7,50 per pupil be allocated to Black schooling. This formula would have immediately increased the amount available for Black schooling and provided for future growth. However, the formula was rejected, and instead, the proportion of the South Africa Native Trust Fund used for Black education was increased to two-fifths in 1936, three-fifths in

1937, two-thirds in 1940 and five-sixths in 1942. By 1943 all the proceeds of this fund were being used for Black education and no further expansion in the provision of schooling was possible on this basis (Malherbe, 1977, p.545; Hartshorne, 1986).

Thus it became clear that if the demand for Black schooling was indeed going to be accommodated by the state, the subsidy arrangements established in 1922 would have to be abandoned; the financing of Black education would have to be de-linked from the tax revenue which was raised from Blacks alone. The government decided to follow this course of action and in 1945 the Black Education Finance Act was passed, thereby opening the way for significant increases in government funding of Black schooling. The budget provision for Black education was increased from R4024000 in 1944 to R13 766 000 in 1953, about a 129 per cent increase in real terms (see Table 1.1). The ratio of Black to White per capita expenditure on education did not increase, but remained static between 1944 and 1953 at about 1 : 24 (Malherbe, 1977, pp.735-742; Christie and Collins, 1984).

Shortly after the National Party came to power in 1948 they added a 'control' element to the previous state policy of 'neglect' towards Black education.<sup>5</sup> The blue-

print for National Party policy was provided by the Eiselen Commission Report of 1951. More than at any time before this, the government articulated and encapsulated in its official policy edicts, the separate and subordinate role which Blacks, by virtue of their limited political influence, were forced to play in South Africa. Dr Verwoerd's speech before the Senate in 1954 on Black education, is probably the clearest general statement of National Party perceptions of the status of Blacks in South Africa over the 1950s:

It is the policy of my Department that (Bantu) education should have its roots entirely in the Native areas and in the Native environment and in the Native community. There Bantu education must be able to give itself complete expression, and there it will have to perform its real service. The Bantu must be guided to serve his own community in all respects. There is no place for him in the European community above the level of certain forms of labour. Within his own community, however, all doors are open. For that reason it is of no avail for him to receive a training which has as its aim absorption into the European community, while he cannot and will not be absorbed there. Up till now he has been subjected to a school system which drew him away from his own community and practically misled him by showing him the green pastures of the European but still did not allow him to graze there. This attitude is not only uneconomic because money is spent on education which has no specific aim but it is even dishonest to continue with it. The effect on the Bantu community we find in the much discussed frustration of educated Natives who can find no employment which is acceptable to them (Malherbe, 1977, p.546).

It is clear from Dr Verwoerd's speech that the National Party were concerned that the provision of Black schooling on a large-scale would lead to a serious 'absorption problem' in the South African economy. They appear to have been concerned that this problem would have negative consequences for Whites in South Africa. At the time two of the most notable of these consequences would appear to have been the generation of skilled competitive Black labour and the stimulation of economic and political aspirations among the Blacks to leadership positions in 'White' South Africa.

For these reasons the National Party set about minimising the 'absorption problem'; one of its first steps being to re-establish a fixed allocation formula for the financing of Black schooling. Thus in 1953 the Bantu Education Act was passed and growth in government expenditure on Black schooling over and above a fixed allocation of R13 million from the Consolidated Revenue Fund was limited to the amount of tax which could be raised from the Blacks alone.

However, with the growth in Black school enrolments, a system of funding based on a fixed allocation formula proved to be inadequate (as the United Party had found before the National Party came to power and hence instituted the Black Education Finance Act of 1945). In

an attempt to resolve this inadequacy limited additional 'loans' were made available for the provision of Black schooling from a Black Education Loan Account. However, even with these loans, the funds available did not keep up with the demand for them and government expenditure per pupil on Black schooling declined markedly over the following two decades; between 1947 and 1966 government expenditure per pupil on Black education fell from R9,90 to R4,90 (Table 1.3). After 1966 and as a result of substantial increases in the level of 'loans', this expenditure began to rise again. By 1972, three-fifths of the budgeted government expenditure on Black education was provided from the Bantu Education Loan Account; a situation which showed no signs of reversing. On 1 April, 1972, the government formally accepted that Black education could only effectively be funded from general tax revenues by writing off the Black Education Loan Account in terms of the Bantu Education Account Abolition Act. Thereafter, Black education was financed a normal way, that is, from general tax revenues (SAIRR, 1972, pp.344-346).

One of the consequences of the National Party's policy on the financing of Black schooling prior to 1970 was that the quality of Black schooling deteriorated (Malherbe, 1977); the pupil to teacher ratio increased

from 40 : 1 in 1953 to 50 : 1 in 1960 and to 59,4 : 1 in 1970 (Malherbe, 1977, p.255 and p.550).

Another step taken by the National Party government to minimise the 'absorption problem' was to wean control of Black schooling away from the mission societies. This was accomplished in various ways: by insisting that all teachers at government and government-aided schools be trained at state institutions and not at mission controlled ones, by cutting the subsidies paid to mission schools, upon which many had become dependent, and by refusing to register certain mission schools, such as those situated in areas allocated to Whites, in terms of the Group Areas Act of 1950 (Malherbe, 1977, p.550).

The policy of tightening control on Black schooling continued up until 1968, after which the administration of education for Blacks was gradually decentralised to regions and the national states, although there nevertheless remained close liaison and co-ordination between the different bodies (Report: Sanep-170, May 1985).

2. **Political and social erosion of the economic advantage of Black schooling in South Africa between 1948 and 1968**

If a Black had obtained or did obtain a schooling between 1948 and 1968, his prospect of earning a higher salary by virtue of this schooling, was restricted in various ways (see Bromberger, 1982). In the first place a battery of discriminatory laws restricted his upward job mobility, foremost amongst which was that providing for the reservation of certain skilled and semi-skilled jobs for White workers. The most consequential provisions were that Black workers could only be trained and employed as skilled building workers in the Black townships and nowhere else (the Native Building Workers Act of 1951) and the establishment of procedures for monitoring and enforcing job-reservation on a permanent basis (the Industrial Conciliation Act of 1956 and as amended in 1960). In addition to these restraints, the trading activities of Blacks were curtailed by the Urban Areas Act of 1950 (as amended and consolidated in 1957 and 1966), while their spatial mobility as labour was restricted by various influx control measures, such as the Native Laws Amendment Act of 1952.

In the second place, cultural prejudice ("baaskap") restricted the upward job mobility of Blacks. The

placement of Blacks in supervisory positions over Whites had become unnatural from a White perspective (if not also from a Black's) as a consequence of the prolonged domination of Black African by Western cultures in South Africa. This domination probably arose as a result of South Africa being in the midst of a capitalist led industrial revolution and the closer association of Western cultures with the capitalist pattern of development, particularly with respect to the technological requirements of competitive production.<sup>6</sup> A good example of the domination by Western cultures is found in Black schooling, where English is used as the main medium of instruction, even though it is not the mother tongue of the pupils.

### **3. The paradox of Black school enrolment rates**

In the previous two sections it has been shown that not only was the standard of schooling provided to Blacks (of a low standard and) deteriorating but the normal economic reward associated with this schooling was undermined by the institution and existence of a battery of discriminatory political and social practices. As a result there would appear to have been very little economic incentive for Blacks to seek schooling. Yet despite this apparent lack of incentive Blacks did enrol at schools, in large numbers and at an increasing rate.

For example, in comparison with the period between 1938 and 1948 when the numbers of pupils enrolled at Black schools increased by 69,8 per cent, over the periods between 1948 and 1958 and between 1958 and 1968 respectively, this number increased by 71,1 and 94 per cent (see Table 1.2). Clearly, the rate of growth in Black pupil enrolments continued to increase under National Party rule.<sup>6</sup>

#### **4. Resolving the Paradox and the appearance of large scale rent-seeking by Blacks in South Africa**

##### **4.1 Resolving the Paradox**

The phenomenon described above is only a paradox in so far as the private costs of Black schooling are not taken into account. When these costs are in fact taken into account the economic motive for their enrolments becomes less of a mystery. A resolution to the paradox is that the private costs of Black schooling were reduced to lower levels than the private returns (in the form of higher earnings in the labour market) even though the latter were depressed by government policies. The factor reducing these costs may well have been rent-seeking; a phenomenon discussed more fully in Chapter 3, which occurs when real resources are expended in pursuit of redistributive transfers of income.

Table 1.2

The number and percentage of the Black population in South Africa in public primary and secondary schools from 1919 to 1973

Year	Number of Pupils in Thousands	Percentage of the Black Population
1919	169	3,71
1920	183	3,94
1921	186	3,93
1922	189	3,90
1923	201	4,04
1924	196	3,85
1925	209	4,00
1926	224	4,19
1927	225	4,12
1928	242	4,31
1929	265	4,63
1930	282	4,81
1931	291	4,86
1932	293	4,79
1933	312	5,00
1934	321	5,05
1935	348	5,36
1936	356	5,38
1937	392	5,82
1938	427	6,22
1939	450	6,44
1940	465	6,54
1941	489	6,76
1942	512	6,96
1943	532	7,12
1944	559	7,35
1945	589	7,62
1946	642	8,17
1947	673	8,42
1948	725	8,91
1949	761	9,19
1950	748	8,88
1951	772	8,99
1952	820	9,29
1953	863	9,52
1954	942	10,13
1955	1008	9,73
1956	1097	10,32
1957	1237	11,36
1958	1241	11,12
1959	1296	11,33
1960	1396	11,56
1961	1477	11,89
1962	1547	12,12
1963	1635	12,46

Table 1.2 : The number and percentage of the Black population in South Africa in public primary and secondary schools from 1919 to 1973

Year	Number of Pupils in Thousands	Percentage of the Black Population
1964	1761	13,05
1965	1869	13,48
1966	2022	14,18
1967	2228	15,20
1968	2407	15,97
1969	2560	16,53
1970	2746	17,25
1971	2937	17,99
1972	3080	18,33
1973	3286	19,00

Source: Malherbe, 1977, pp.709-711.

The rent-seeking explanation for Black actions over this period presumes that individual Blacks correlate political influence with allocations of government expenditure on schooling and this expenditure with private economic benefits. Such an assumption is not unrealistic; just as individuals attempt to gain economic benefits in the market place, so they try to achieve gains through the political processes of state.

Education can serve as a means and an end in political-economic interchanges. It is a means in so far as it facilitates the attainment of political influence. There are various ways by which Black schooling facilitated the attainment of political influence: it served to consolidate a political identity amongst Blacks and it served to enhance their powers of

political persuasion (and thereby their effectiveness in lobbying for transfers of income). These aspects of schooling had in fact been recognised by Blacks long before the era of National Party rule. For example, over the period following the First World War a strong feeling was already evident (see Note 1) amongst Blacks that the main economic benefit of schooling was the improvement it brought about in ones political persuasiveness (rather than the improvement it brought in ones productivity).

In so far as an improvement in the provision of education by the state provided a way whereby transfers of income could be effected, it can also be considered an end in itself. The more of their schooling Blacks were able to get taxpayers to pay for (through rent-seeking), the smaller the benefit of such schooling required to offset their costs.

The connection between political pressure and government expenditure on Black schooling appears to have been at its strongest during the 1970s and 1980s. Some of the features and results of the unrest are described below.

#### 4.2 Political unrest in Black schools over the 1970s and 1980s

By 1975 about 75 per cent of all Black children of school-going age were at school, constituting about 21 per cent of the total Black population of South Africa (University of Natal, 1981, p. 83). On 16 June, 1976 the political tension which had been building up amongst these pupils became 'critical' in Soweto, Johannesburg, and a major wave of unrest followed. The discontent soon broadened from issues relating to schooling to encompass all aspects of the apartheid policy.

The unrest was far more protracted and vigorous than the ANC organised 'defiance' (of the Group Areas Act and Voters Representation Act) campaign of 1952, the PAC organised 'status' and 'positive action' campaigns (against the pass laws) of 1959 and 1960 and the labour unrest of 1973 and 1974. The 'positive action' campaign resulted in the Sharpeville crisis, where police fired upon demonstrators, killing 67 and wounding another 186. The Sharpeville crisis was followed by the first presidential declaration of a state of emergency in South Africa in terms of the Public Safety Act of 1953. The labour unrest of 1973 and 1974 consisted of a series of illegal strikes, mainly in Natal.

The incident in Soweto which set off the crises of 1976 and 1977 occurred when police opened fire on a street demonstration by Black pupils against the use of Afrikaans as a medium of instruction.<sup>7</sup> The duration, intensity and widespread occurrence of the unrest appears to have surprised all the main established political groups of the day, even the revolutionary groups (Hough, 1989, p.392). Although the intensity of unrest appeared to abate both in 1978 and 1982, it promptly resurged again in 1980 and 1984, respectively. School children played a prominent role in both of these resurgences (Hough, 1989).

#### 4.3 Some results of the unrest<sup>8</sup>

##### 4.3.1 The De Lange Commission (1981) and acceptance of the principle of equality in the provision of education

The ten years which followed the 1976 Black school riots were characterised by continuous unrest. By 1984 there were signs that in some regions the level of violence was escalating rather than decreasing - a phenomenon which culminated in a presidential declaration of a state of emergency in 36 magisterial districts on 20 July, 1985, and (in a further) 8 magisterial districts on 25 October,

1985. It was against the background of this (ongoing) unrest that in 1980 the Cabinet requested the Human Sciences Research Council to undertake an in-depth but urgent investigation into all aspects of the provision of education in South Africa. The investigation was carried out under the chairmanship of Prof. J.P. de Lange; the most consequential finding of which was that there were striking and undesirable inequalities in the provision of education between the different population groups. For this reason the Commission recommended that a new education system be set up and that the main aim of this system be to equalise the educational opportunities offered by the state to members of all races living in South Africa.

The government accepted the main recommendations in its Interim Memorandum of 1981 and in the White Paper on the Provision of Education in the R.S.A., 1983. However, it was a qualified acceptance; they were opposed to this equality being accomplished in one unified education system, and in particular, they were opposed to the integration of Black and White formal schooling. To this end they advocated that education at all levels be an 'own affair' rather than a 'general affair'. Nevertheless, a very substantial change in government policy

towards Black schooling was signalled by their acceptance of the principle that there should be equality between members of the different race groups in the provision of schooling in South Africa.

4.3.2 The increase of budget allocations to Black education

In response to the Black political unrest, there was a rapid rise in budget allocations to Black education . In 1975 an amount of R165,3 million was allocated to Black education in South Africa and the homelands (Table 1.3); twelve years later, in 1987, the budget allocation to Black education was R3400,2 million, a real increase of 339 percent (Table 1.3 overleaf).

Table 1.3

Government expenditure on Black and White education in South Africa and the homelands between 1974 and 1987

Year Begin 1 March	Estimated Government Expenditure on Black Education in South Africa and the Homelands				Estimated Government Expenditure on White Education in South Africa		
	(R100 000s)				(R100 0000s)		
	White	Current S.A.	Homelands	Total	Real Prices <sup>2</sup>	Current Prices	Real Prices <sup>2</sup>
1974	66,3		77,0 *	143,3	761,9	611,4	3250,6
1975	75,6		89,8	165,3	774,2	738,7	3459,8
1976	77,9		90,4 *	168,3	708,7	816,4	3437,9
1977	117,4		136,3 *	253,7	962,4	876,9	3326,4
1978	143,9		167,1 *	311,0	1062,6	999,6	3415,5
1979	183,2		212,7 *	395,9	1195,5	1115,2	3367,6
1980	243,1		282,2 *	525,3	1393,7	1360,9	3610,7
1981	377,5		438,3 *	815,8	1878,5	1688,4	3887,8
1982	490,0		507,5	997,5	2002,3	2056,3	4127,6
1983	561,3		633,0	1194,3	2133,0	2062,6	3683,8
1984	709,3		759,2	1468,5	2351,3	2465,2	3947,2
1985	917,5		1044,0	1961,5	2701,0	2973,7	4094,8
1986	1157,8		1323,6	2481,4	2881,0	3057,1	3549,4
1987	1487,8		1912,4	3400,2	3400,2	3320,7	3320,7

- Sources : 1. SAIRR Annual surveys 1974 - 1987/88. Many sources are use in these surveys including: budget estimates, the State Revenue Account and Ministerial replies to questions in parliament.
2. S.A. Statistics 1988, p.8.21 for Consumer Price Index. 1987=100
- \* Column 1 is multiplied by a factor of 1,161 because these figures are unavailable. This factor is derived from the average of those figures which were available.

The increased budget allocation to Black education in turn has contributed to the growth of government expenditure as a percentage of gross domestic expenditure (GDE). In Table 1.4 it may be seen that (for three year periods) between 1970 and 1987, the two periods with the highest average government spending as percentages of GDE were those between 1976 and 1978 and between 1985 and 1987. These were periods which included the onset of the Soweto School riots (16 June, 1976) and the violence which precipitated the declaration of the state of emergency (20 July, 1985).

Table 1.4

<u>Government spending as a percentage of GDE from 1970 to 1987</u>	
<u>Years (inclusive)</u>	<u>Average Government Spending as a percentage of Gross Domestic Expenditure</u>
1970 - 1972	21,8
1973 - 1975	21,0
1976 - 1978	24,6
1979 - 1981	22,3
1982 - 1984	24,0
1985 - 1987	25,4

Source: The South African Reserve Bank Quarterly Bulletins (1975 - 1988).

Another consequence of the increase in government expenditure on Black education has been the crowding out of government expenditure on White education. Between 1975 and 1987 Whites experienced a decline in real government

expenditure on their education of about 4 per cent (Table 1.3), even though the number of White pupils at ordinary provincial schools rose by about 13 per cent over this period from 840 644 to 952 477 (SAIRR, 1976, p.351; S.A. Yearbook, 1988-89, p.480).

#### 4.3.3 The pursuit of alternative defensive political strategies amongst Whites

As could have been expected, the increase in Black political unrest described above also had an impact on the popularity of 'defensive' strategies amongst Whites. For example, the National Party became more enthusiastic about the use of free market principles in areas where they were not inclined to favour their application in the past, such as in the provision of schooling, roads and health services. While this enthusiasm is to some extent part of an international trend, there may also be within the National Party a

hardheaded recognition that massive state intervention, so successful when used on behalf of Whites and of Afrikaners in particular, would shortly be demanded by blacks as well (Yudelman, 1987, p.255).

Yet another strategy which has become popular with the Whites is that espoused by more conservative political parties than the National Party. The strategy is one which calls for a substantial increase by Whites in the commitment of their resources for the purpose of 'producing' political pressure, and it often takes expression in extra-parliamentary actions of protest.<sup>9</sup>

The views of the leader of the Conservative Party in South Africa, Dr Andries Treurnicht, are well known to be 'hardline' on Black schooling. In 1976, as Deputy Minister of Bantu Education, he chose not to avoid confrontation and compromise on the issue of the Black right to decide on their medium of instruction.<sup>10</sup> His view is that in 'White' areas it is the White government's prerogative to decide what schooling should be provided to Blacks (SAIRR, 1976, p.59). The fact that such an approach would probably lead to further confrontations between members of the different races, appears to be appreciated by the party, but considered to be in the best interests of Whites in the long-run.

### Conclusion

Up until the First World War the provision of schooling to Blacks was perceived by the state to be unimportant, if not undesirable, and thus ignored. It was left to mission societies to provide formal schooling to Blacks. Over the Twentieth Century colonial political interests in South Africa finally gave way at the government level to domestic White political interests. This rearrangement had no significant impact on the balance of political power between Whites and Blacks; South Africa remained a White dominated country.

After the First World War the situation at Black schools began to change; the growth of Black schooling became demand-led and Black enrolments at schools increased rapidly. By the end of the Second World War, Black schooling and urbanisation had gained considerable momentum. The pressures associated with these increases caused considerable unease amongst Whites, and thereby contributed to the defeat of the United Party by the National Party in the general election of 1948. In terms of the National Party's apartheid policy, Black urbanisation was restricted and government control over Black schooling was extended.

By 1948 the demand-led growth of Black schooling was well established; thereby reflecting the fact that the private

benefit of such schooling exceeded the private costs, even though this benefit was depressed by government policy. It seems likely that the private cost of schooling was depressed by rent-seeking pressures (to be discussed more fully in Chapter 3). The fact that there existed a belief amongst Blacks that schooling increased a person's capacity to generate political pressure and that this capacity could be put to economic advantage when bargaining with employers and government, lends support to this theory (see Note 1).

Events during the 1970s and 1980s have also been consistent with education-political-economic linkages, in that the actions of Black school children put pressure on the government to reform. Aided by other factors, such as Third World indignation, Western philanthropic condemnation and socialist antagonism, the impact of this pressure was to undermine White dominance in the balance of political power in South Africa. In the face of this pressure it appears that the National Party considered the most feasible option open to them was to embark upon a reform programme, reducing discriminatory racial practices; a key component of which was to increase the provision of Black schooling.

**NOTES**

1. There is no evidence that any formal Black education took place prior to the arrival of the Dutch at the Cape, other than the communication of tribal custom (Thebela, 1986, p.73, and Loram, 1917, p.28). The communication of tribal custom was a process of adjustment to the narrow environment of the tribe through the imitation of elders (Loram, 1917, p.28). Custom involved, *inter alia*, the art of hunting, herding livestock, cultivating fields, housecrafts, mastery of the language of the tribe and memorising of genealogies.

With the arrival of the Dutch settlers at the Cape, formal schooling in reading, writing and the traditions of the Europeans also became possible for Black South Africans. In fact it would appear that the Netherlands East India Company intended to provide such schooling because one of the reasons they cited for founding a settlement at the Cape in 1652 was to bring Christianity and civilisation to the heathen (Loram, 1917, p.46). It is also possible that this intention was influenced by the requirements of the emerging capitalist economy for universal literacy and numeracy and the acceptance of capitalist ethics (Kallaway, 1984, pp.4-9).

However, despite these intentions the Company did not provide schooling for the native Blacks. The first school that they established was in fact primarily intended for their slave's children and this event took place in 1656. Initially, White and non-White children were taught together in this school, but over the ensuing 20 years a movement towards the separation of the White and non-White races at school took place (Loram, 1917, p.46-48). The (natural) trend towards segregation would appear to have been encouraged by the Netherlands East India Company, which ruled the Cape from 1652 to 1795. Their policy was to restrict the mixing of the different race groups at the Cape (Muller, 1981, p.42). In accordance with this policy a school was established in 1685 solely for the children of burghers and officials of the company. Hence, the Company set a major precedent for schooling in South Africa, namely, the separation of 'Whites' (i.e. authentic Whites and those Coloureds who were accepted by the White settlers as equals) from non-Whites in their schooling.

As the formal schooling of Blacks in the culture of the colonists only became possible with the latter's participation, their willingness to educate the Blacks was obviously important; but this willingness was not forthcoming. It has been claimed that

in South Africa, by roughly the year 1720 the contours of racial stratification had been laid down, and the presumption of racial inequality had taken firm root among whites (Welsh, 1987, p.193).

Over the Seventeenth and Eighteenth centuries, by and large the Dutch settlers came to believe that a proper relation between a White and a Black was a master to servant relationship and in this context they viewed Black schooling as unnecessary, if not undesirable (Molteno, 1984). In particular, they had become, as the British colonial secretary at the Cape, Lord Charles Somerset, observed shortly after the British resumed control over the Cape in 1815,

accustomed to consider the Hottentot as an inferior species, only preserved for their use (Malherbe, 1971, p.20).

For this reason, the Dutch settlers had adopted a militant disregard for the legal rights of the Hottentot, and were

extremely impatient of the restraint the British regulations put upon them (Malherbe, 1971, p.20).

A directly related issue sparked off the Slachter's Nek rebellion (1815-1816) amongst the Dutch settlers against the British colonial administration. While the rebellion was suppressed, the political cost of the exercise was high; the Dutch settlers were embittered and later cited the way the British handled the situation as one of the factors which led to the Great Trek (Muller, 1981).

It was against this background of the strong feelings generated among the White settlers on government policy towards Blacks, that the British colonial administration found it politically prudent to accommodate White sentiment, and like the previous Dutch administration, were disinclined to initiate the provision of Black schooling. The fact that such a policy also may have helped maintain British colonial supremacy over Blacks probably reinforced this disinclination.

By way of contrast to the attitudes of White settlers, by and large Blacks appeared to be relatively unperturbed by the lack of state support for their schooling. The communication of tribal custom would appear to have satisfied their cultural requirements

over the era of British colonial rule; therefore, they perceived no need for such schooling.

The one group which did develop an interest in the provision of schooling for the Blacks were the European churches and their associated mission societies. Their interest would appear to have been primarily stimulated by evangelical zeal, although they also may have had other intentions, such as the propagation of specific cultures (Kallaway, 1984, pp.4-9). The foundations for mission school education in South Africa were laid by the Calvinist church of the Netherlands during the Seventeenth and Eighteenth Centuries. The main thrust of their efforts was the advancement of White and Coloured schooling, although in 1737 a start was also made with the schooling of Blacks (Malherbe, 1977). However, the scope of mission schooling for Blacks remained very limited. It was only in the latter half of the Nineteenth and first half of the Twentieth Centuries that Black schooling became a major focus for mission initiatives in South Africa; the leading sponsors being the Methodist, Anglican, Roman Catholic and Lutheran churches (Hartshorne, 1986).

The role of the British colonial government in mission schooling was restricted to small grants in the Cape and Natal from 1841 onwards. These grants were made available on the condition that the schools did not restrict enrolment to members of a particular race, but admitted members of any race. The intention of the colonial administration in this respect, appears to have been to assist in schooling the poorer class of White; at the time, more than one-third of White pupils in the Cape attended mission and not state-run schools (Hartshorne, 1986; Malherbe, 1977). In 1855 subsidisation was extended by Sir George Grey to the provision of mission schooling solely for Blacks. As a result, the mission societies set about establishing schools for Blacks so conscientiously that in 1892 when Dr Thomas Muir became the superintendent-general, he observed that

mission schools for natives often owe their origin more to ecclesiastical rivalry than to educational zeal. Some of the missions are more zealous in starting schools and securing the government grants than in superintending the work of the native teachers and attending to the wants of the school generally (Malherbe, 1977, p.539).

Quite clearly at this early stage, the growth of Black schooling was 'supply-led', in that it was initiated by the actions of mission societies rather than by the actions of the Blacks themselves.

By the end of the First World War there were signs that the situation was changing. There appeared to be an increasing acceptance amongst the Black population that their continued survival in South Africa would be on terms dictated by the White dominated sectors of the economy; no doubt encouraged by the impact mining activities were having on the economy and by the imposition of further restrictions on their land rights in terms of the Glen Grey Act of 1894 and the Native Land Act of 1913. As a result of this acceptance, increasing numbers of Blacks were drawn into the modern economy, initially as migrants but also later as permanent urban dwellers. Furthermore, increasingly numbers of Blacks began to perceive education to be useful, if not essential; a perception mainly conditioned by a belief that it would increase their capacity to bring political pressure to bear on employers and government, rather than a belief that it would increase their productivity:-

white employees and clerks everywhere are being paid in accordance with the times, either as a consequence of strikes, threatened strikes, or other persuasion. This is all due to the fact that the European, being well educated, knows how to speak out his sufferings, plead his case intelligently in the press, organise to the point of perfection, enlist public opinion in his cause, and finally force the hands of Government. (From a paper presented by Jabavu, D.D.T. at the Natal Missionary Conference, Durban, July 1920. Reported in Molteno, 1984, p.76).

As a result of this change in attitude towards education, a 'demand-led' growth of Black schooling ensued and the numbers of Blacks enrolling at mission schools soon began to exceed the capacity of the facilities available (Davis, 1984, p.132); a situation which put the state under pressure to make bigger contributions towards the provision of Black schooling.

It is tempting to attach significance to the fact that after the First World War there was a surge in demand for Black schooling at the same time as this schooling

shed some of its evangelical component (Gaitskell, 1984) and a gold-led advance of the South African economy took place (Houghton, 1969, pp.10-15). However, this coincidence is misleading: the argument that the growth of the South African economy created a need for more educated labour than was available is not consistent with the labour market conditions which prevailed at that time. The wages offered to Blacks in the mining industries were certainly higher than those that could be earned in farm labour or subsistence agriculture, thus inducing migration from rural to urban areas, but these wages were not for skilled but for unskilled work. The option of employment in skilled or administrative supervisory positions was largely denied to Blacks because with backing from the government, Whites were given preferential access to these posts. Over this period there were some 200 000 to 300 000 'poor whites' and under the 'civilised labour policy' of the United National Party they were to be offered employment before non-white workers wherever possible (Houghton, 1969, p.15 and p.118).

In light of these labour market conditions, it is not plausible that the main reason why Blacks sought education was to improve their vocational skills.

2. The attitude of the National Party at the time towards Black schooling is outlined in their 1948 election manifesto:

Die onderwysplan moet streng Christelik-Nasionaal wees en moet rekening hou met die behoeftes en ontwikkelingspeil van die massa naturelle. Dit moet karakter bou en die naturel anker in sy volkseieendomlike. Die Staat moet deeglik toesig daarvoor hou. Die Staat moet val onder 'n aparte afdeling van die Department van Naturellesake. Die finansiering van naturelle-onderwys moet bereken word op die grondslag van sy kultuurpeil, sy ekonomiese drakrag en behoeftes en moet meer in verhouding tot sy bydrae tot die staatsinkomste wees as wat tans die geval is. Die naturel moet uiteindelijke self sorg vir die uitgawe en beheer van sy onderwys onder toesig van die blankes. (Kleynhans, 1987, p.336.)

3. Some idea of the scope of these legal changes is provided, *inter alia*, by legislative changes since 1976. Before 1976, by law, Blacks had no security of land tenure of any sort in 'White' South Africa; they were excluded from trading in all central business districts; their flow into 'White' urban areas was restricted; they were barred from many skilled jobs in industry; they were forced to accept citizenship of so-called independent homeland states if this was their place of origin even if living in 'White South Africa'; they were humiliated by petty apartheid legislative provisions and they were prohibited from normal trade union activity by virtue of not being allowed to join White trade unions. Today, legally, Blacks may own the houses they occupy in 'White' South Africa (the scope for which is still limited by the Group Areas Act); they are free to trade on an equal basis in the central business districts of South African cities; they are not restricted in their movement into 'White' urban areas; they are free to compete for any skilled jobs in industry; they are not obliged to accept citizenship of the independent homeland states if living in 'White' South Africa; they face a vastly diminished set of apartheid provisions and they may participate in normal trade union activity, including strikes.

Against this background Fleur de Villiers (1986), assistant editor of the Sunday Times, in her assessment "Hutt revisited: capitalism and apartheid, 1986" for the London Institute of Economic Affairs, concluded that:

Apartheid today is a handy catchphrase for radical Black organisations and Western politicians to describe Pretoria's refusal to transfer political power immediately to the Black majority. In its original and more precise sense it was a web of discriminatory social and economic laws and regulations .... devised to create and protect White (primarily Afrikaner) privilege and expanded by Verwoerd into an ... ideology of economic ethnic partition and self-determination. In that sense little today remains ... the guiding principle ... is not merely dead; it is in the last stages of decay. (p.24)

De Villiers (1986) asserts that the government follows a political reform strategy of allowing its own rules to be broken until eventually exemption becomes the rule and laws are scrapped - a rationalisation of reality. The fact that the Blacks were allowed business rights in the CBD's and that the government turned a blind eye to the movement of wealthier Blacks out of the townships into the central city areas, suggested to her that the Group Area's Act was about to be scrapped as well. Her view appears to have been borne out by subsequent events.

4. Following Malherbe's (1977) approach, all values in this thesis are in Rands. Where the original sum was in Pounds Sterling, it has been converted into Rands at an exchange rate of Two Rand to One Pound.
5. The outbreak of the Second World War co-incided with the onset of a period of particularly vigorous economic growth in South Africa. Based on the mineral wealth of the Witwatersrand, mining and manufacturing industry blossomed. However, development within South Africa was very unbalanced; in contrast to high economic growth at the Witwatersrand and the ports, little, if any, growth spilled over into the Black reserves. As a consequence, the influx of Blacks from rural to urban areas in search of work and better living conditions which had developed after the First World War, was further encouraged, and large numbers of Blacks moved into 'White' urban areas.

Within this increasing urban Black population a strong spirit of resistance to institutions which supported White dominance began to surface and African nationalism flourished. The historical foundations for African nationalism may be traced back to almost a century before the Second World War. Welsh observes that:

As early as 1851 Theophilus Shepstone could speak of the evident sympathy of colour that exists among the Black nations (Welsh, 1987, p.115).

In 1912, the immediate forerunner to the African National Congress (ANC), namely, the South Africa Native National Congress was formed, while the ANC itself came into being in 1937 (S.A. Year Book, 1986).

The course of developments in the urban areas alarmed many Whites and the 'accommodating' policies of the United Party government lost favour. In 1948 the National Party won the general election. The policies which they employed to undermine the capacity of the emergent Black urban group to produce political

pressure, cumulatively known as the apartheid policy, included the institution of coercive legislation which limited Black peoples access to "White" urban areas, and the creation of formal separate administrations for the different race groups in South Africa.

As far as the administration of education was concerned, eighteen separate systems were employed - five for Whites, one for Coloureds, one for Indians and eleven for Blacks. The principle of apartheid underlying such a large number of administrations was that of maintaining a separate cultural awareness and identity among the various population groups.

6. In his celebrated work, *Capitalism, Socialism and Democracy* Schumpeter (1950) describes capitalism as a "process of creative destruction" (p.83). The process to which he refers is one where large firms, by continuously adapting to new technological advances, compete for market positions against others; a process which does not lend itself to romantic or magical modes of thought. In order to be successful, costs and benefits must continuously be estimated and decisions made strictly on the basis of these estimates; for which a strictly rationalistic mode of thought is required.
7. There had been growing unrest in Soweto since two members of the Meadowlands Tswana School Board, Mr Letlape and Mr Peele, were dismissed early in February, 1976, for what was believed to be due to the School Board's refusal to use Afrikaans as the medium of instruction in their schools. By June dissatisfaction over the use of Afrikaans as a medium of instruction reached a point where confrontation between the government and the Black school pupils became inevitable, especially as the Deputy Minister of Bantu Education, Dr A Treurnicht, appeared to be most reluctant to compromise. Then:

On 16 June a march in protest against the use of Afrikaans as medium of instruction was initiated by pupils of Naledi and Thomas Mfolo High Schools. The marchers moved through Soweto, apparently with the object of holding a mass meeting at Orlando Stadium in order to voice their grievances. About 10 000 marchers converged on Orlando West High School. There was an incident where police tried to remove placards from one group of marchers, but on the whole the march proceeded peacefully until the children were

confronted by the police as they gathered in front of the school. Tension was already running high, and when the police fired tear-gas canisters into the crowd, the children retaliated by throwing stones at the police. The police opened fire, apparently first firing warning shots, and then into the crowd of advancing children, killing at least one - thirteen-year-old Hector Petersen.

After the first shootings, fierce rioting broke out and spread throughout Soweto. There were several deaths, including those of two White men, Dr M Edelstein and Mr N Esterhuizen, who were beaten to death. Police reinforcements were brought into Soweto and army troops were placed on standby as the violence escalated and buildings and vehicles were burnt.

All schools were closed at the order of Mr C Botha, Minister of Bantu Administration and Development. (SAIRR, 1976, p.57).

In the report of the Commission of Inquiry into the Riots at Soweto and Elsewhere from June 16, 1976, to February 28, 1977 (the Cillie Commission) it was found that a combination of factors led to their outbreak:

The application of the policy on the medium of instruction, which gave rise to misunderstanding and dissatisfaction among the people of Soweto; the scholars' planned and organised resistance to the policy on the medium of instruction; the ineffectual official handling of the resistance; and the inability of departmental officials and police to foresee the imminent rioting and to take counter-measures. (Quoted from the Cillie Commission, 1980, in SAIRR, 1980, p.501).

9. In view of the economic need for a return on their resource use, this commitment may well serve to erode White support for the National Party's policy of curtailing the expansion of government expenditure on the education of Whites in order to bring about parity between the races in such spending and their policy of privatisation.
10. See Note 7.

## CHAPTER TWO

### CAN IT BE ESTABLISHED THAT GOVERNMENT EXPENDITURE ON BLACK SCHOOLING IN SOUTH AFRICA IS A PROFITABLE SOCIAL INVESTMENT?

#### Introduction

In their overview of 'lessons from World Bank experience' Psacharoulos and Woodhall (1980) conclude that the answer to the question of whether it is worth investing in education is "a resounding positive" (p.315), especially in Africa (p.313).

The first lesson from the Bank's experience of investment in education and research on the contribution of education to development is that education investment is productive, and that it does contribute directly to the growth and employment goals of developing countries. It also contributes indirectly by improving levels of health and life expecting and by reducing fertility (p.314).

In the August, 1990, 'Standard Bank Economic Review', the Group Managing Director, Standard Bank Investment Corporation, Dr. Strauss, makes a similar connection between investment in education and economic success. He concludes, *inter alia*, that the challenge of finding sufficient material resources in South Africa for the provision of education "can be postponed no longer". His view, which also appears to be shared by many

academics in South Africa, can be phrased more specifically; that a substantial increase of investment in the schooling of Blacks in particular, is a prerequisite to economic growth in South Africa.

In this chapter rate of return analysis is used to see if a persuasive economic case can in fact be made along these lines.<sup>1</sup> For this purpose rates of return to government expenditure on Black schooling are derived as internal rates of return from information on the measurable social costs and benefits of Black schooling in South Africa in 1980.<sup>2</sup>

The social (productivity) benefit of expenditure on Black schooling is estimated from differences between the pre-tax earnings of people the same age but with different levels of education, as reflected in 1980 census data; with a greater difference in pre-tax earnings reflecting a greater social benefit.

Over time a productivity benefit has come to be associated with education for two reasons: one being that education stimulates technological advances and complements investment in material (or physical) capital, and hence enhances the productivity of material capital, and the other being that education increases the productivity of labour. The latter is achieved,

*inter alia*, (directly) by improving the work-related knowledge and skills of workers, (and indirectly) by improving the standards of their health, encouraging favourable attitudes amongst them towards modernisation, 'liberating' attitudes amongst them towards the status of women and reducing their desire for large families (Fagerlind and Saha, 1983, pp.36-57 ; Psacharopoulos and Woodhall, 1985). Of the two theories, human capital theory has become the most pervasive over time because it is more easily verified, even though the process by which this is done is highly contentious.<sup>3</sup>

The social cost of providing Black schooling is estimated by summing 'direct' expenditures made on this schooling by the government, parents, and other private sources. Indirect expenditure, in the form of forgone earnings, is disregarded on the grounds that there are high levels of un- and under- employment amongst Black youths and unskilled labour (Bromberger, 1978).

On the basis of these costs and benefits an estimate of the social rate of return to investment in Black schooling in 1980 is derived - probably an inflated one, because no adjustment is made to benefits for the effect of ability and other factors on earnings, and a very conservative approach is taken in estimating the costs of education.<sup>4</sup> It will also be shown that this

rate is higher than an estimated social opportunity cost rate on government expenditure for 1980. However, because severe empirical problems there are limits to what can be inferred on the basis of this comparison.

#### 1. The contribution of education to economic growth

Psacharopoulos (1973) distinguishes two ways of incorporating investment in education into growth accounting calculations, namely, a 'Schultz' way and a 'Denison' way (also see Cohn, 1979, pp.149-156; Hosking, 1983). Following Schultz's (1961) approach, investment in education is incorporated into growth accounting calculations as a component of capital (human capital), whereas in Denison's (1974) approach it is incorporated as a component of labour. The 'Schultz' approach will be used to show that increases of investment in schooling contribute to economic growth if there is a positive social rate of return to such investment.<sup>5</sup> His way of identifying the contribution of education to economic growth relies on the concept of an aggregate production function, and is described in the model below.<sup>6</sup> In this model let: Y be National output, K capital, L 'raw' uneducated labour, D land, MP the marginal product (of that which is indicated), t time,  $dK/dt$

investment,  $g$  a growth symbol (of that which is indicated) and output be a function of capital, labour and land in the aggregate production function,

$$Y = f(K, L, D, t).$$

It follows that,

$$dY/dt = (dK/dt).MP_K + (dL/dt).MP_L + (dD/dt).MP_D$$

and when

$$dD/dt = 0,$$

this becomes,

$$dY/dt = (dK/dt).MP_K + (dL/dt).MP_L.$$

Dividing through by  $Y$  and making the appropriate substitutions, we obtain the basic aggregate growth equation,

$$g_Y = (K.g_K/Y).MP_K + (L.g_L/Y).MP_L \quad \dots\dots\dots(2.1)$$

Following Schultz's method, we divide capital in this function into material capital ( $M$ ) and human capital ( $H$ ), and rewrite the 'Schultz' growth equation as follows:

$$g_Y = (M.g_M/Y).MP_M + (H.g_H/Y).MP_H + (L.g_L/Y).MP_L \quad (2.2)$$

If in Equation 2.2 the assumptions

$$r_H = MP_H/H$$

and

$$r_M = MP_M/M$$

are made (competitive markets) where  $r$  stands for the relevant social rate of return, the equation becomes:

$$g_Y = (M^2 \cdot g_M / Y) \cdot r_M + (H^2 \cdot g_H / Y) \cdot r_H + (L \cdot g_L / Y) \cdot MP_L \quad (2.3)$$

The contribution made by education to growth in Equation 2.3 is,

$$(H^2 \cdot g_H / Y) \cdot r_H.$$

This component of Equation 2.3 can also be disaggregated in order to measure the contribution to growth by type and level of schooling. It follows that if the rate of return to expenditure on Black schooling can be shown to be positive, it can also be shown (see Equation 2.3) that an increase of government expenditure on Black schooling will make a positive and measurable contribution to economic growth.<sup>7</sup> Therefore, in order to verify that government expenditure on Black schooling does indeed contribute to economic growth, one (merely) needs to demonstrate that the rate of return on this expenditure is indeed positive.

It should also be noted that while this demonstration shows that investment in education makes a contribution to economic growth, it does not show that this investment will increase

economic growth. The latter only pertains if an additional requirement is also met; that the marginal social rate of return to investment in education exceeds the social opportunity cost rate (i.e. the social discount rate).<sup>8</sup>

Proving that the social rate of return to investment in education is positive is, not as easy a task: the calculation of rates of return to education on the basis of human capital theory has long been a source of controversy. The controversy is centred over whether the productivity benefit from education can indeed be measured. In terms of human capital theory, the difference in earnings between individuals of similar ages but with different levels and types of education provides a basis for measuring the productivity benefit to labour from education. The problem is that differences in the earnings of workers are the consequence of many factors and these factors are highly inter-related. As a result it is difficult to determine whether it is a productivity improvement through education or through something else (such as ability or family background) which gives rise to these differences (see Section 2 below); an uncertainty which gives rise to an

identification problem in estimating the net impact of education on earnings.

A related problem is that the earnings differences which are attributed to an improvement in the productivity of labour, may not have much to do with productivity at all. Instead, they may arise as a result of institutional practices, such as those of hiring labour on the basis of the credentials an employee presents in the first instance to the employer. The reason why this practice proves to be a serious problem in the context of human capital theory, is because it is almost impossible to determine whether a worker with less education experiences relatively slower earnings progress than a worker with more education because there are real differences in productivity, or because institutional practice arbitrarily favours the latter (McNabb and Psacharopoulos, 1981).<sup>9</sup> This difficulty is also encountered in research done in South Africa on the link between education and the earnings of workers. For example, McCartan's (1986) findings in the Eastern Cape identify both education (differences in skill) and recruitment practices as significant causes of differences in earnings.<sup>10</sup>

However, despite these difficulties human capital theory has not faded into insignificance. The reasons for its continued popularity would appear to be two-fold. Firstly, the identification problem referred to above has not deterred researchers from attempting to resolve the problem (see Section 2.1 below). Even after allowing for various factors, the net impact of education on earnings and hence (in competitive markets) on economic growth is consistently found to be positive. Psacharopoulos (1980), in a comprehensive international survey of empirical work done in developing countries on net returns to investment in education, found that the average social rates of return to primary, secondary and higher schooling respectively, were about 27, 16 and 13 per cent. It has also been found that substantial improvements in output result from the provision of education to self-employed farmers in the informal sector of developing countries, where hiring practices would not be of any significance (World Development Report, 1980, pp.46-53; Psacharopoulos and Woodhall, 1983, pp.46-50). Similar findings to those reported by Psacharopoulos (1980) have also been made for the case of South Africa. For example, Joubert (1978) and Smuts and Terblanche (1974) calculate positive

private rates of return to White, Coloured and Indian education, while Louw (1979) does the same for Black education (see Hosking, 1983, for a more detailed review of these analyses). Trotter (1984) has also shown that in 1980 the social rates of return to Black, White, Coloured and Indian education in the Durban metropolitan area were positive.

A second reason why credentialist theory has not rendered human capital theory insignificant, is that at an analytical level some forms of the credentialist hypothesis are compatible with human capital theory rather than in conflict with it (Taubman and Wales, 1974; Psacharopoulos and Woodhall, 1985, pp.44-46). The argument here is that the employer uses education as a screening device to quickly provide necessary information on the employee which he would otherwise incur costs in determining.

On the basis of these two reasons, it appears that the status of human capital theory is not as tenuous as was suggested by Blaug (1976) in the mid-1970s.

2. Factors which are relevant in calculating the social rate of return to investment in Black schooling

2.1 The alpha coefficient adjustment

In order to estimate the social rate of return to investment in Black schooling in South Africa over a given time period, ideally one should have data for a comprehensive national sample of Black individuals which accurately reflect the following:

- (a) the level and type of schooling these individuals have enrolled for and completed,
- (b) the cost they and others, such as the government, have incurred in obtaining and providing this schooling,
- (c) their pre-tax earnings from employment and
- (d) all factors, other than the level and type of schooling achievement, which also may have influenced their earnings.

These factors include the following:

- (i) other education related variables, such as pre-primary schooling, general and specific in-service training and the quality of schooling,

- (ii) employment related variables, such as previous work experience, imperfections in the labour market, anticipated future scarcity patterns in the labour market, employers attitudes to schooling, non-pecuniary rewards of employment, unemployment rates per type of educated labour and the migratory requirements of employment, and
- (iii) the 'credentials' of the individual, such as his or her mental and physical ability, health, physical appearance, age, family background (socio-economic status), marital status, life expectancy, sex, ethnic group, personality traits (e.g. disposition, attitude towards risk) and religious preference (Taubman and Wales, 1974, pp.1-24; Psacharopoulos and Woodhall, 1985, pp.41-44).

As a result of these factors being difficult to measure and being simultaneously related both to earnings and the acquisition of formal schooling,

the truth of the matter is that no one really knows what proportion of the observed education-income relationship is strictly due to education (Cohn, 1979, p.47).

However, this uncertainty has not stopped a great number of economists from attempting to estimate the proportion; attempts which for the most part,

are based on a single equation model in which the earnings variable is regressed on some of the education related quantitative variables as well as 'other' quantitative variables. For this purpose the (implausible) assumption is usually made that all the variables are additive and hence that there is no interaction between them.

A popular earnings function approach is that devised by Jacob Mincer (1974). The popularity of his approach may be ascribed to the fact that it explicitly links the schooling parameter in the earnings function with the rate of return to investment in schooling. His approach does not shed light on the exact proportion of the education-income relationship strictly due to education.<sup>11</sup> Mincer (1974) also distinguishes the impact on earnings of formal schooling from that of general and specific in-service training (for further discussion see Psacharopoulos, 1981, pp.324-325; Hosking, 1983). The theoretical contribution of general and specific training to earnings was first expounded by Gary Becker (1964).

The main weakness with Mincer's (1974) approach is that the only cost he explicitly incorporates is forgone earnings (Psacharopoulos, 1981, p.325).

For this reason his approach is normally only followed in order to estimate private rates of return to education and there is a downward bias to all rates calculated in this way if forgone earnings are not appropriate, e.g. for primary schooling.

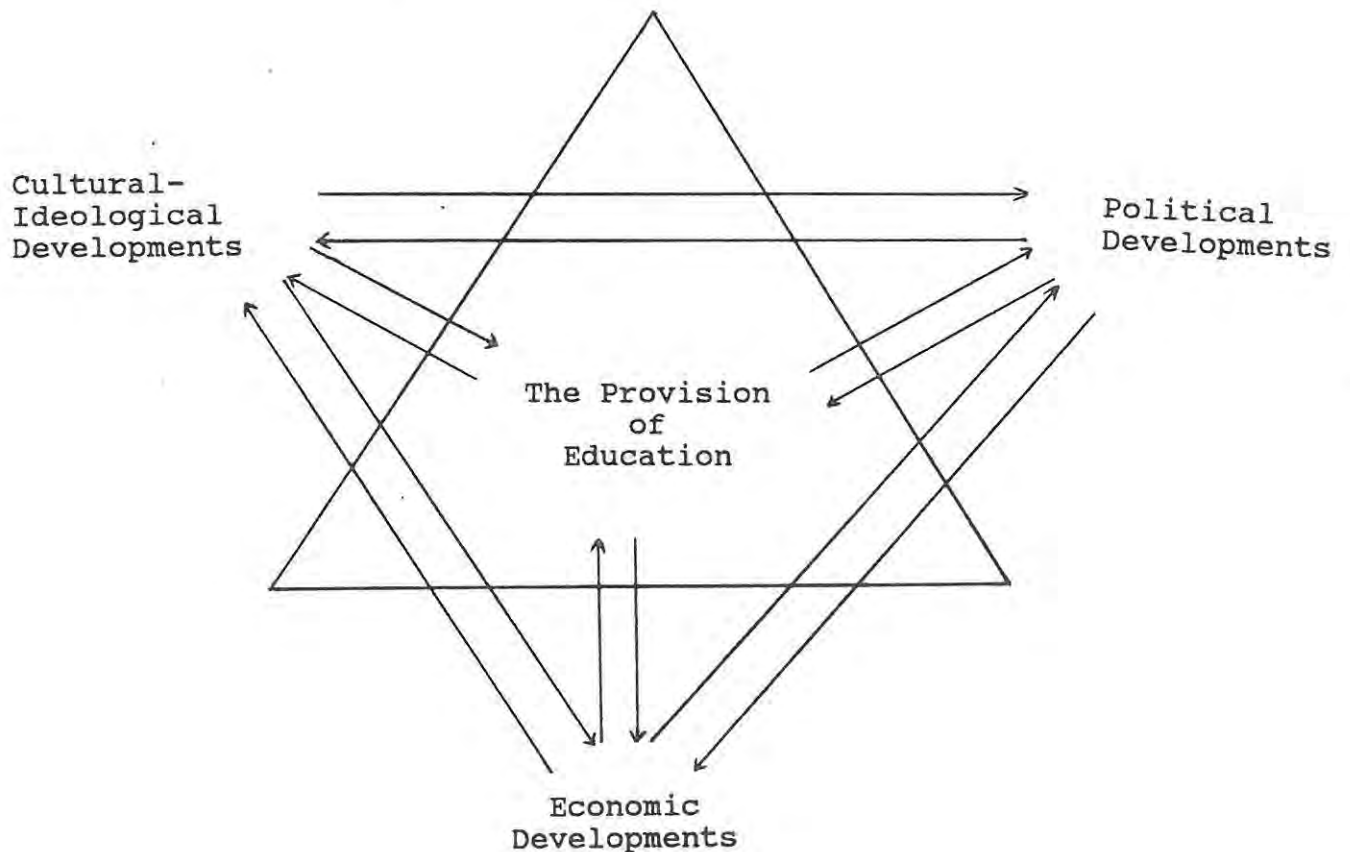
The most well known attempt to estimate rates of return to investment in education in South Africa by the earnings function method is that of Joubert's (1978). Using a log-linear specification and census data, he showed, *inter alia*, that in 1960 and 1970, private rates of return to investment in the formal schooling of Whites, Coloureds and Indians were positive. In his model the dependent variable is the log of a person's income (as a proxy for his earnings) and the independent variables are; levels of schooling, age (as a proxy for experience), sex, place of residence, citizenship, home language, religion, metropolitan area, occupational status, type of employer, industrial category and occupation.

Notwithstanding the advantages of earnings function models, they fall far short of what is required to estimate what proportion of the observed education-income relationship is strictly due to education.

The provision of education takes place within the context of complex social dynamics; it simultaneously influences and is influenced by a range of other developments within society. In Figure 2.1 below, where the arrows indicate the presence of functional relationships, an idea of the interdependence between educational, cultural, political and economic developments within society is conveyed.<sup>12</sup>

Figure 2.1

The interdependent nature of social changes



Source: Fagerlind and Saha, 1983, pp.47-50

In view of the high degree of interdependence between all facets of social life (see Figure 2.1 above) not only is it clear that an extremely complex simultaneous equation model would be required in order adequately to describe the relationship between earnings and schooling, but also it seems unlikely that the specific effect of education on earnings would be identifiable within such a model. For these reasons it has become common practice amongst researchers simply to make an educated guess (on the basis of past research conducted into earnings functions) of the observed earnings differences between people which are thought to be strictly due to education.<sup>13</sup> This guess takes the form of a 20 to 40 per cent downward adjustment of the observed education-earnings relationship and is often termed the alpha co-efficient adjustment. Alternatively, high and low guesses of the significance of education are made and utilised to estimate the earnings benefit which may be derived from education (Cohn, 1979, p.47). In this study the guess made of the productivity benefit of education errs on the high side in that no alpha adjustment procedure is followed.

## 2.2 The internal rate of return equation

In this investigation the social rate of return to investment in Black schooling is estimated as the internal rate of return ( $r_s$ ) in Equation 2.4 below:

$$\sum_{t=1}^{n=70} [(Y_{st} - C_{st})(1 + r_s)^{-t}] = 0 \quad \dots\dots\dots (2.4)$$

where:  $t$  is years and the Black individual is assumed to have a life expectancy of 70 years;  $Y_{st}$  is the Black individual's annual earnings due to schooling alone;  $C_{st}$  is the total cost (not including forgone earnings) of the Black individual's schooling per year; and  $r_s$  is the internal rate of return to Black schooling. This rate is normally calculated incrementally, that is, as a 'marginal' rate of return (for example, on an extra year or a few years of schooling), but sometimes weighted averages of these marginal rates are also calculated. For the purpose of efficiency comparisons marginal rates should be used.<sup>14</sup>

## 2.3 The data

Time series data on  $Y_{st}$  and  $C_{st}$  were not readily available for this investigation, and indeed are not available for most other similar types of

investigation. Therefore, in order to estimate  $r_s$  it was necessary to use cross-sectional data on  $Y_{st}$  and  $C_{st}$ : the former being estimated on the basis of a 5 per cent sample of the economically active Black population drawn by the Central Statistical Services (CSS) from the 1980 census; and the latter being estimated mainly from information released by the Department of Education and Training, as reported in the annual surveys of the Institute of Race Relations. This data contained the estimated incomes per annum of variously educated and aged economically active individuals in South Africa (but not the independent homelands) for 1980. In 1985 a further census was held, but data on the income and education of the Black population were not collected.

When cross-sectional data are used to estimate the internal rate of return to Black schooling, the assumption is made that for similarly educated Black individuals, younger people's earnings will differ by the same proportions as those for older people after the number of years difference in age has elapsed. This assumption automatically undermines the reliability of the estimates, because in practice labour market conditions are constantly changing. It is also assumed that a

person's choice between leisure and work is unaffected by his schooling, and hence that differences between the annual incomes of people correspond to differences between their hourly wages. (For a discussion of this point see Cohn, 1979, pp.48-49.)

In the following sections benefit and cost life profiles for Blacks in South Africa, with different levels of schooling, are estimated. Equation 2.4 is then used to estimate various  $r_s$ . Finally, these rates are compared with the social opportunity cost of government expenditure on Black schooling in South Africa.

### **3. Constructing age-earnings profiles per school level for Blacks in South Africa**

From information on the annual incomes, ages and levels of schooling of those included in the 5 per cent CSS sample (already referred to), it was possible to estimate the median (but not the mean) annual earnings per age and per education 'category of person' (cohort) by assuming that the overwhelming bulk of the income of Blacks was earned in the labour market and not elsewhere. These median annual earnings are shown in Tables

2.1, 2.2 and 2.3 respectively, for Black males, females, and males and females combined.

Table 2.1

Median annual earnings in Rands of economically active Black males in South Africa in 1980

Education Category

Age Category	None	Sub A- Std 1	Stds 2 - 4	Std 5	Stds 6 - 7	Stds 8 - 10
0 - 14	512,23	518,52	525,64	500	1409,09	-
15 - 19	645,15	673,90	760,53	881,49	1078,27	1179,33
20 - 24	992,01	1000,98	1153,36	1245,55	1366,48	1588,46
25 - 29	1127,84	1153,99	1333,48	1496,75	1682,80	2021,41
30 - 34	1134,25	1225,01	1402,25	1536,95	1748,41	2296,66
35 - 39	1124,50	1343,93	1445,92	1621,53	1856,53	2394,06
40 - 44	1151,83	1332,52	1474,75	1679,40	1942,04	2499,33
45 - 49	1085,72	1329,11	1559,46	1700,55	1936,40	2513,45
50 - 54	1098,44	1473,94	1593,46	1630,18	1869,30	2787,32
55 - 59	1067,21	1320,68	1466,56	1721,20	1803,85	2810,90
60 -	901,88	1202,22	1361,16	1413,49	1852,35	2309,64

Source: A 5% sample of the 1980 census data drawn by Central Statistical Services.

Table 2.2

Median annual earnings in Rands of economically active Black females in South Africa in 1980

Education Category

Age Category	None	Sub A - Std 1	Stds 2 - 4	Std 5	Stds 6 - 7	Stds 8 - 10
0 - 14	512,46	518,52	509,01	500,00	666,67	-
15 - 19	509,10	508,12	533,87	561,33	600,37	693 20
20 - 24	532,55	539,01	597,50	657,17	776,66	1071,99
25 - 29	564,62	570,07	608,70	724,69	880,01	1415,61
30 - 34	575,95	619,05	636,64	779,74	904,79	1660,35
35 - 39	555,12	604,10	669,01	739,56	937,53	1687,91
40 - 44	579,27	646,95	649,57	745,96	948,63	1764.49
45 - 49	567,62	629,46	708,24	736,00	946,20	1883,64
50 - 54	591,61	643,40	678,65	771,51	1019,20	2015,98
55 - 59	600,15	728,16	669,23	1005,29	997,77	2133,59
60 -	594,93	735,96	671,15	907,08	897,38	2007,35

Source: A 5% sample of the 1980 census data drawn by Central Statistical Services.

Table 2.3

Median annual earnings in Rands of economically active Black males and females combined in South Africa in 1980

Age Stds Category	Education Category					
	Sub A - None	Stds 1	Stds 2 - 4	Std 5	Stds 6 - 7	Stds 8 - 10
0 - 14	512,31	518,52	517,54	500,00	1147,06	-
15 - 19	596,08	619,69	676,10	750,64	865,19	963,67
20 - 24	858,42	866,67	986,97	1055,92	1149,13	1377,97
25 - 29	973,48	999,53	1134,30	1238,87	1324,11	1789,25
30 - 34	990,64	1072,10	1179,91	1271,68	1428,50	2067,90
35 - 39	974,70	1160,53	1223,75	1301,10	1495,48	2132,63
40 - 44	1003,99	1141,25	1224,41	1312,50	1557,37	2222,27
45 - 49	945,07	1137,17	1291,85	1359,72	1566,94	2295,13
50 - 54	969,31	1288,36	1330,78	1302,56	1580,31	2537,71
55 - 59	953,01	1180,54	1242,31	1484,24	1545,63	2610,61
60 -	836,57	1110,00	1182,88	1271,14	1587,27	2232,08

Source: A 5% sample of the 1980 census data drawn by Central Statistical Services.

Tables 2.1, 2.2 and 2.3 were compiled on the basis of the numbers of people contained in particular income groups per education category. There were in fact 37 income bands in the 1980 census - proceeding in 100s up to R1200, then 300s, etc. In the data supplied for this study, the Central Statistical Services collapsed these bands into intervals of R1000 up to the level of R10000, intervals of R2500 up to the level of R15000 and one interval for those individuals with incomes in excess of R15000. The most serious consequence of this change would be that the median earnings shown in Tables 2.1, 2.2 and 2.3 may be biased upwards at

the lower end of the income scale. Using these bands as a basis for estimation, the lowest median annual earning possible for any group in 1980 was automatically set at R500, which, if the distribution of incomes within the R0 - R1000 band was positively skewed, would be too high.<sup>15</sup>

A further problem with these figures is that they make no allowance for those Blacks who, having received their education, ceased to be economically active. The inclusion of such people may well have served to diminish differences in the median incomes between education cohorts.

#### **4. Constructing age-cost profiles per school level for Blacks in South Africa**

The main costs incurred in schooling Blacks in South Africa may be grouped into three categories. These are government expenditure, direct outlays by the individual or his guardians or other private sources on his behalf and the earnings forgone by the individual while undergoing his schooling. Trotter (1984) has estimated these costs, per capita enrolment for 1980, to be as shown in Table 2.4 (below).

Table 2.4

Trotter's (1984) estimates of the costs per capita enrolment in Black primary and secondary schooling for 1980 (in Rands)

The age of the individual	7	8	9	10	11	12	13	14
Government expenditure	121	121	121	121	121	121	121	121
Direct individual expenditure	29	29	29	29	29	29	29	29
Forgone earnings	0	0	0	0	0	0	0	0
Total Costs	R150	R150	R150	R150	R150	R150	R150	R150

The age of the individual	15	16	17	18	19	20
Government expenditure	121	239	239	239	239	239
Direct individual expenditure	29	61	61	61	61	61
Forgone earnings	0	182	182	151	151	151
Total Costs	R150	R482	R482	R451	R451	R451

Sources: In order to estimate government expenditure on Black secondary schooling, Trotter (1984) used the SAIRR (1982, p.465) and Van Niekerk (1983, p.186). In order to estimate direct individual expenditure, Trotter (1984, p.70) appears to have used his judgement. In order to estimate forgone earnings, he used age-earnings profiles constructed for Blacks in the Durban metropolitan area (Trotter, 1984, p.46). However, his method of estimation is inadequate, because the figures he used are not forgone earnings, but simply averages for the relevant age-education cohort. These averages are depressed by the fact that a significant component of the age group are at school and not working.

In Table 2.4 it may be seen that Trotter (1984) estimates the cost of primary schooling over 9 years instead of the normal 7. His reason for following this unconventional approach is that in

1980 the median age for a pupil in standard 5 was 15, and not 13, as a pupil who had begun school at the age of 7 and passed every year should be. As a result his estimates of the costs of primary schooling are probably higher than they should be. A more consistent approach would have been to use median age data from the Sub A level, that is, to use 9 as the age Sub A was begun. In Table 2.4 it may also be seen that Trotter (1984) makes no provision for forgone earnings during primary schooling (from the age of 7 to 15). He appears to believe that prior to the age of 15 the forgone earnings of South African Blacks are negligibly small (also see Note 19 on this point).

Trotter's (1984) estimates are not used in this study because they do not relate to the whole of South Africa but merely to the Durban metropolitan area, there is insufficient data to support his estimates of direct costs and he makes no allowance for pupils who failed or dropped out of school. However, although his estimates are not used in this investigation his method of estimating government expenditure (cost) per capita enrolment is used. This cost is derived by using data released by the Department of Education and

Training, under the assumption that this data is representative in the broader context of South Africa, and Van Niekerk's (1983) estimate of the secondary to primary per pupil government cost ratio in 1980 of R120.56: R61,33; about 2 : 1. It would appear that since 1980 this ratio has increased.<sup>16</sup>

There were 1 522 291 Blacks who enrolled at institutions under the control of the DET in 1980 (University of Natal, 1981, p.88). Of these, 1 307 017 were at primary schools, 211 905 at secondary schools and 3 369 at institutions providing special, vocational or teacher training (University of Natal, 1981, p.88). An initial estimate of the costs incurred by the DET in providing education to these pupils and students was R240,37 million (SAIRR, 1980, p.459). Revised estimates have been higher (SAIRR, 1981, p.333; SAIRR, 1982, p.463). Of the initial estimate, about R174 million can be linked to the provision of primary and secondary schooling (SAIRR, 1980, p.459).

On the basis of this information and assuming Van Niekerk's (1981) secondary to primary per pupil cost ratio of 2 : 1, the approximate government

'per pupil enrolled' cost of secondary and primary schooling would be  $2x$  and  $x$  respectively, in the following equation:

$$1\ 307\ 017 (x) + 211\ 905 (2x) = R174000000 \dots (2.5)$$

Thus,  $x = R100$

and  $2x = R200$ .

These estimates are lower than those of Trotter's (see Table 2.4). However, many of the pupils who enrolled did not successfully complete the year of schooling - some pupils failed or dropped out. These pupils should be excluded in a rate of return analysis because they were not effectively educated. In Table 2.5 estimates of the numbers of pupils who dropped out or failed are shown.

Table 2.5

Estimated numbers of pupils who dropped out or failed at schools controlled by the DET in 1980

Level of Schooling	Numbers of pupils who dropped out	Numbers of pupils who failed
Illiterate (Without Sub A)	33 083	
Semi-Literate (Sub A - Std 2)	59 444	
Literate (Std 3 - Std 5)	<u>49 836</u>	
Total for Primary schooling	<u>142 363</u>	379 035
Junior Secondary (Std 6 - Std 8)	30 219	
Senior Secondary (Std 9 - Std 10)	<u>13 323</u>	
Total for Secondary Schooling	<u>43 542</u>	96 873
Total for All Schooling	<u>185 905</u>	<u>475 908</u>

Sources: The Research Institute for Education Planning (1981) and the SAIRR (1982, pp.474-476). Failure rates of 29% and 45% respectively, are used to estimate the numbers of pupils who failed at primary and secondary school levels (SAIRR, 1982, p.474).

After the pupils who dropped out or failed are taken into account, it is clear from Table 2.5 that the number of pupils who were effectively educated in 1980 was considerably less than the number that enrolled. In fact, if those who failed plus two-thirds of those who dropped out (rather than all of them, so as to allow for some overlap of the same individuals) are subtracted from enrolment totals, it would appear that only about 828 328 primary pupils and 84 553 secondary pupils were effectively educated by the DET in 1980.<sup>17</sup> When Equation 2.5 is modified (as it is in Equation 2.6 below) with these estimates, the per pupil costs of primary (x) and secondary (2x) schooling are increased:

$$833073(x) + 86004 (2x) = R174000000 \quad \dots\dots\dots (2.6)$$

Thus,  $x = R173$

and  $2x = R346$ .

It is also important to note that while these costs include current as well as capital outlays on schooling by the government, they do not include any imputed costs for tax exemptions enjoyed by schools, or for depreciation on equipment, or for implicit rent (interest) on the stock of capital goods (equipment, buildings and property) built up from past outlays on education by the government

and other sources. (For a discussion on these costs, see Cohn, 1979, pp.74-79.) If these costs were included in our estimates the costs per pupil would have been higher.<sup>18</sup>

Another type of cost incurred in the provision of schooling to Blacks is that of the direct private expenditures, namely, those made by or on behalf of the pupils by their parents or others for improving school facilities, stationery, textbooks, prescribed books, school fees and school uniforms. In Tables 2.6 and 2.7 estimates of some of these costs are provided (excluding those incurred in order to improve school facilities, because of a lack of data, and excluding school fees, because in many cases these fees were mainly for the other listed items).

Table 2.6

The estimated direct expenditures borne by a Black pupil on his schooling (excluding school uniforms) in 1980, at 1979 prices\*

<u>Item</u>	<u>Primary School</u>	<u>Secondary School</u>
Stationery	R 3,50	R 12,80
Textbooks	R 6,60	R 18,00
Prescribed books	R 5,60	R 14,40
<u>Total</u>	<u>R15,70</u>	<u>R 45,20</u>

Source: SAIRR (1980, p.466)

\* These estimates (which were made by the DET) would appear to be minimum estimates. The amount payable in school fees (which often, but not always, includes the cost of these three items) in the Soweto area in the year 1980 ranged between R40,00 and R75,00 (SAIRR, 1980, p.466).

At 1980 prices these totals would have been approximately R17,98 for primary schooling and R51,75 for secondary schooling. To these totals the cost of school uniforms should also be added, although not all schools required uniforms to be worn (and for this reason a case exists for ignoring the cost of uniforms at the primary school level). The estimated costs (at Pep Stores in East London) of the main constituents of the school uniform are shown in Table 2.7.

Table 2.7

The estimated cost of the main constituents of the school uniform in 1988

<u>Item</u>	<u>Cost*</u>
Blazer	R38,00
Average of Grey Flannels (R19,00) and Dress (R22,00)	R20,50
Shoes	<u>R20,00</u>
Total	<u>R78,50</u>

Source: Pep Stores, East London, July 1988.

\* Excluding GST (because social and not private costs are being estimated)

Using Table 2.7 and the conservative assumption that in total, only 2 grey flannels (or dresses), 2 pairs of shoes and 1 blazer are used at the secondary level, the cost of school uniforms would be as shown in Table 2.8.

Table 2.8The estimated costs of secondary school uniforms at 1980 and 1988 prices

Standards	Item Bought	Total Cost at 1988 price	Total cost at 1980 price
6	1 of each item	R78,50	R28,51
7		-	
8	1 Flannel or Dress and 1 shoes	R41,50	R15,07
9		-	
10		-	

Source: Table 2.7 and the SARB Quarterly Bulletin (June 1988) for the Clothing and Footwear Consumer Price Index.

The direct costs of schooling incurred by the individual in 1980 are therefore estimated to be not less than R17,98 per year for primary schooling and the sum of R51,75 per year for secondary schooling plus R28,51 in standard 6 and R15,07 in standard 8 (Tables 2.6 and 2.8). Some of this expenditure will have been wasted because the pupil on whom the expenditure was made dropped out or failed to pass the year of school, or did not join or stay in the ranks of the economically active population. If this waste was to be taken into account (and for this investigation it is not) an upward adjustment to these costs would be required.

Aside from the direct costs of schooling, an allowance for the forgone earnings of the pupil

(and others, such as mothers, who do not work in order to help informally with the schooling of their children) can also be made in a study of this nature. However, the case for making an allowance for the forgone earnings of pupils is not a very strong one because over the 1970s and 1980s the market for young and unskilled Black labour in South Africa has been characterised by substantial (and growing) structural unemployment and underemployment problems (Bromberger, 1978). As a result, it does not seem likely that in a social sense there would have been any significant earnings loss caused by Black children attending school in 1980, whether this be at the primary or secondary level.<sup>19</sup> Therefore, a strong case exists for disregarding forgone earnings as a cost of Black schooling and estimating the 'overall' per pupil (educated) social costs of primary and secondary schooling in 1980 on the basis of direct outlays by the parents of the pupil and the government alone (as shown in Table 2.9).

Table 2.9

The estimated minimum costs per pupil of 'effective' primary and secondary schooling for Black males and females in 1980 (to the nearest one Rand )

<u>Age of Pupil</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>
Government expenditure	173	173	173	173	173	173
Direct private expenditure	16	16	16	16	16	16
<u>Forgone earnings</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Total Costs</u>	<u>R189</u>	<u>R189</u>	<u>R189</u>	<u>R189</u>	<u>R189</u>	<u>R189</u>

<u>Age of Pupil</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>
Government expenditure	173	346	346	346	346	346
Direct private expenditure	16	74	45	60	45	45
<u>Forgone earnings</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Total Costs</u>	<u>R189</u>	<u>R420</u>	<u>R391</u>	<u>R406</u>	<u>R391</u>	<u>R391</u>

Sources: 1. Tables 2.5 to 2.8.  
2. For the mean age of pupils by standard in 1980, S.A. Statistics (1986).

##### 5. Estimating social internal rates of return (IRR) to investment in Black schooling in South Africa

There are various social IRR's to expenditure on Black schooling which may be calculated (using Equation 2.4) from the benefit and cost data compiled in Tables 2.1, 2.2, 2.3 and 2.9. In Tables 2.10, 2.11 and 2.12 the rates shown are calculated by comparing the incomes of people with a few years of difference in schooling, while in Tables 2.13 and 2.14 respectively, the rates shown are calculated by comparing the incomes of people

with primary and secondary schooling with those who have none; a 'base line' approach.

In all cases, the calculations involved were done with the aid of the Interactive Financial Planning System (IFPS) computer package. An unfortunate complication which arose in these calculations was that of the multiple roots problem. The problem arose because there was more than one change of sign in many of the net benefit profiles per education cohort, and by Descartes' 'Rule of Signs' the number of positive (and hence financially feasible) solutions to Equation 2.4 equals the number of changes in sign of the net benefit flow (Pearce and Nash, 1981, p.49).

There are several 'solutions' to this problem; one of the most popular of which is to modify the net-benefit flow so that only one change of sign remains. This modification is done by choosing an appropriate discount rate and discounting the 'problem' negative net benefits which occur after the initial sequence of negatives back within this sequence. The internal rate of return which is calculated (as defined in Equation 2.4) using this modified net benefit flow, is called the modified internal rate of return.<sup>20</sup> In Tables 2.10 to 2.14

below (when the multiple roots problem arose) the discount rate chosen to discount the 'problem' negative benefits corresponded to the lowest positive rate of return 'solution' to Equation 2.4.21

Table 2.10

Marginal social rates of return to investment in the schooling of Black males in South Africa over 1980

<u>Years of Schooling</u>	<u>The Modified Internal Rate of Return (%)</u>
Sub A - Standard 1	8
Standard 2 - Standard 4	16
Standard 5	63
Standard 6 - Standard 7	16
Standard 8 - Standard 10	24

Source: Tables 2.1 - 2.3 and 2.9 - 2.10.

Table 2.11

Marginal social rates of return to investment in the schooling of Black females in South Africa over 1980

<u>Years of Schooling</u>	<u>The Modified Internal Rate of Return (%)</u>
Sub A - Standard 1	5
Standard 2 - Standard 4	4
Standard 5	24
Standard 6 - Standard 7	10
Standard 8 - Standard 10	28

Source: Tables 2.1 - 2.3 and 2.9 - 2.10.

Table 2.12

Marginal social rates of return to investment in the schooling of Black males and females in South Africa over 1980

<u>Years of schooling</u>	<u>The Modified Internal Rate of Return (%)</u>
Sub A - Standard 1	8
Standard 2 - Standard 4	12
Standard 5	40
Standard 6 - Standard 7	11
Standard 8 - Standard 10	25

Source: Tables 2.1 - 2.3 and 2.9 - 2.10

Table 2.13

Marginal social rates of return to investment in the primary schooling (as a whole) for Blacks in South Africa over 1980

<u>Sex</u>	<u>The Modified Internal Rate of Return (%)</u>
Female	8
Male	14
Male and Female	11

Source : Tables 2.1 - 2.3 and 2.9 - 2.10

Table 2.14

Marginal social rates of return to investment in primary and secondary schooling (as a whole) for Blacks in South Africa over 1980

<u>Sex</u>	<u>The Modified Internal Rate of Return (%)</u>
Female	14
Male	18
Male and Female	16

Source : Tables 2.1 - 2.3 and 2.9 - 2.10

The social IRR's shown in Tables 2.10 to 2.14 can be considered 'inflated' for two reasons. The

first is that the difference in earnings between people of the same age but different education cohorts yields an overestimate of the impact of education on earnings, in that some of the impact thereby attributed to differences in education, is in fact due to other factors which vary with both education and earnings, such as ability and family wealth. However, due to an identification problem (rather than one of multicollinearity) this impact is almost unascertainable - there being a host of other expenditures on human capital, such as on health and 'educational experiences', which (with respect to their impact on the earnings of workers) are virtually impossible to distinguish in practice from formal primary and secondary schooling. As a result, there is little to be gained by making arbitrary downward adjustments to differences in earnings on this account, in the hope that by some remote chance (in an overall sense) these adjustments may be accurate. The second reason why these rates should be considered inflated is that a very conservative approach to the costing of Black schooling has been adopted in this study.

Perhaps the most curious aspect of the results themselves is that they do not confirm Trotter's (1984) finding that the IRR to Black schooling in

the Durban area is less for secondary schooling than it is for primary schooling. In Tables 2.13 and 2.14 it can be seen that the internal rate of return to Black schooling for both males and females increases when the impact of secondary schooling is taken into account. In this sense the results are also out of line with the average international results reported by Psacharopoulos (1973 and 1980). The explanation for this 'statistical' phenomenon could be that the C S S income data is summarised in brackets which are too wide at the lower end of the scale, thereby disguising small but important differences between the earnings of Blacks with no schooling and Blacks with primary schooling.

Another curious aspect of the results is the exceptionally high social rate of return to investment in the standard 5 year of primary schooling. An explanation for this phenomenon could be that standard 5 is regarded as an important credential by employers, and hence also that the screening hypothesis is applicable with respect to Black schooling.

The finding that Black males enjoy higher social rates of return to investment in schooling is as

one would expect; the earnings profile of females being more interrupted than those of males (e.g. for child care). It is also possible that the difference reflects some degree of 'pure' discrimination in the labour market between Black male and female workers.

**6. Estimating the social opportunity cost of government expenditure on Black schooling**

When public debt or tax-payers money is used to finance government expenditure on Black schooling, other expenditures (be they for consumption or investment) are forgone. The social opportunity cost of government expenditure on Black schooling (as a rate of return) is the weighted average of the social rates of return on (or associated with) these expenditures forgone.

The estimation of this social opportunity rate is not an easy task. One problem encountered is that it is not possible to determine exactly from where the funds are raised to finance the provision of Black schooling. The funds used for this purpose are not drawn from specific but general sources; tax-payers at large and public debt. Therefore, the opportunity cost rate of these funds can only

be estimated by considering what tax-payers forgo and the cost of public dept. Another problem encountered is that it is very difficult to distinguish between the investment and consumption components in the funds tax-payers forgo and in public dept, unless strong and unrealistic assumptions are made in this connection. Finally, having (arbitrarily) distinguished the consumption and investment components, one is faced with the problem of determining social opportunity cost rates on these components on the basis of information generated in imperfect capital markets. An example of how the social opportunity cost of government expenditure on Black schooling in 1980 could be estimated is provided below.

In terms of the method of division employed in Table 2.15; 55 per cent of the finance for DET and other government expenditures came from income which otherwise would have been used for consumption and 45 per cent came from income which otherwise would have been used for investment. The prime overdraft rate is used below as a measure of the rate at which present consumption could have been traded for future consumption, that is, it is used to calculate the cost of consumption. In 1980 this rate was 9.5 per cent (SARB, 1981). The

average yield on new issues of government stock (which consists mainly of stock with a maturation period in excess of ten years) is used below as a measure of the opportunity cost of investment rate. This rate was selected because it reflects the actual cost to the government of financing the budget deficit. The main weakness of this choice is that the average rate of return on private investments (although more risky) tends to be higher and would be expected to increase further with increased government borrowing (to finance, *inter alia*, greater expenditure on the provision of Black schooling). In 1980 this rate was 11,76 per cent (SARB, 1981).

Table 2.15

Estimating consumption and investment components of tax revenue and increased public debt for South Africa over 1980 in millions of Rands

Nature of Finance	Total		Consumption*	Investment*
	R	R	R	R
Indirect Taxes - GST	1 654	1 529		125
- Other	4 212	3 894		318
Income Taxes - Companies	5 004			5 004
Personal	2 518	2 328		190
Budget Deficit		583		583
<u>Total</u>	<u>13 971</u>	<u>7 751</u>		<u>6 220</u>

Source: SARB Quarterly Bulletin, September, 1981.

\* In 1980 the total expenditure on all items by the government in South Africa was R13 971 million (the Exchequer Account, SARB, September, 1981). Of this financing requirement, an amount of R13 388 million was raised in taxes, while R583 million was raised by increasing public debt (SARB, September 1981). In Table 2.15 it is assumed that Company Tax and the increase in public debt were met from investment sources, while

taxes on individuals were met from both consumption and investment sources, as per the average propensity to consume from personal disposable income. The average propensity to consume from personal disposable income is calculated from National Accounts data for 1980, using Equation 2.7 (SARB, September, 1981).

$$\begin{aligned} \text{Ave. Propensity to Consume} &= 1 - \frac{\text{Personal Saving}}{\text{Personal Disposable Income}} \dots (2.7) \\ &= 1 - \frac{R\ 2\ 531\ 000\ 000}{R33\ 482\ 000\ 000} \\ &= 0,924 \end{aligned}$$

The estimated opportunity cost of the funds used to provide Black schooling in 1980 would (in terms of these rates and Table 2.15) be the weighted average of these two rates, as shown below:

$$\frac{7\ 751}{13\ 971} (9,5\%) + \frac{6\ 220}{13\ 971} (11,76\%) = 10,51\% \dots (2.8)$$

In order to make any useful 'long term' comparisons with trends in the rates of return to Black schooling, this figure (10,51 per cent) should ideally also be adjusted for the influences of the business cycle and for inflation.

In order to adjust for inflation it has to be remembered that because the above estimated rates of return to schooling are based on cross-sectional data they are real rates, but that because the social opportunity cost rate is based on financial market rates it is a nominal rate. For this reason in order to compare these rates, ideally, the rate

of inflation in 1980 (13,8 per cent as calculated from the CPI) has to be deducted from the social opportunity cost of government expenditure rate of 10,51 per cent (SA Statistics, 1988, p.8.21). If this deduction is made we are left with what may be called the real opportunity cost of government expenditure rate; and in terms of Equation 2.8, this rate is negative 3,3 per cent. There is no obvious adjustment indicated for the influence of the business cycle; the economy having been in the middle of a protracted upward phase of the business cycle during 1980.

**7. Comparing the social rate of return to investment in Black schooling with the social opportunity cost rate of government expenditure**

At face value, a comparison of the social IRR's on Black schooling provided by the state with the social opportunity cost of government expenditure rate, would suggest that government expenditure on Black schooling was a (very) profitable social investment in 1980. However, as it is not possible to specify limits of accuracy to these estimates, such a conclusion is not warranted; the estimates should be considered as (nothing more than) 'informed qualified guesses'.

### Conclusion

In this chapter it has been shown (largely on the basis of summarised 1980 census data) that a human capital rationale for increasing government expenditure on Black schooling can be established, but that the empirical problems encountered in doing so are almost overwhelming. In the light of these problems it is concluded that if used at all, the rationale should be used in a highly qualified way.

Another conclusion which can be drawn on the basis of the above investigation is that a change in the interpretation and uses made of the concept of a social rate of return on education is warranted. In the light of the identification and data problems encountered in this study, it would seem to be more sensible to regard the social IRR to investment in Black schooling in South Africa (or indeed to any other education provided) not so much as a precise rate of return, but as an index of this return. As an index its significance would not lie in its absolute value, but in changes to its absolute value over time. There are two main advantages of regarding the social IRR on education formally as an index, rather than as an actual rate of return. Firstly, as an index there would be no need to make

arbitrary adjustments for unknown influences on education and earnings which are bravely, but probably wrongly, assumed to remain constant over time, such as is done with an alpha coefficient adjustment. Secondly, as an index, the temptation to make spurious direct comparisons with other rates of return, such as with the rate of return on investment in physical capital or with the social opportunity cost rate of government expenditure, would formally be removed.

In the light of the almost overwhelming empirical problems encountered in estimating the rate of return to Black schooling the only direct comparison which would appear to be informative is that with itself (or at the most, with rates of return to other schooling expenditure in South Africa) over time. In order to make this comparison there would only be a need for consistency in the methods of estimation used.<sup>22</sup> However, there is also a sacrifice to be made as a result of this change. As indexes it is not legitimate to make use of these rates to justify government expenditure on education on the grounds that it is a socially profitable investment.

The problems of measurement and interpretation identified in this chapter in connection with estimating the social rate of return to government expenditure on

Black schooling are by no means exhaustive. There are also other problems; a particularly important one of which is that the costs incurred in attempts to influence government expenditure allocations to Black schooling (that is, the costs of generating political pressure) are not incorporated into the above estimates. The reason why no attempt is made in the above investigation to incorporate these costs (in Tables 2.10 to 2.14) is that they are extremely difficult to estimate. In other attempts to estimate the social costs of providing Black schooling (such as Trotter's, 1984) the main reason for not incorporating these costs would appear that they were not considered relevant. However, simply because these costs are difficult to estimate does not mean that they should be considered irrelevant. In Chapter 3 it will be shown that it is plausible that they are relevant - as an aspect of rent-seeking.

Notes

1. Prior to the latter half of the Twentieth Century, when an outburst of interest in the topic occurred (led by writers such as Theodore Schultz and Gary Becker), there had been some reluctance amongst economists to evaluate expenditures incurred in educating a man or a woman in an investment context. The reason for this reluctance seems to have stemmed from the belief that the equation of expenditures on a man's or a woman's productive capability (on human capital) with those on machines used in production (on physical capital) 'degraded' human beings. Heinrich von Thunen, writing in 1875, phrased the problem as follows:

An inner reluctance appears to prevent writers (and also others) from considering the question of what a man costs, and what capital is contained in him. A human being appears to be too sublime, and we fear to commit a degradation if we apply to him such a method of an analysis. (In Cohn, 1979, p.18).

Von Thunen attacked this reluctance as confused thinking and argued that such confusion, rather than benefiting man, was to his disadvantage. He felt it was to man's disadvantage in so far as it facilitated a neglect of human capital relative to physical capital, which, with respect to things like the effects of war had serious consequences.

The reluctance to regard human beings as capital becomes especially pernicious in the wars of mankind; for here one preserves physical capital, but not human beings, and one will sacrifice in a battle a hundred human beings in the prime of their lives without thought in order to save one gun.

But with the hundred persons, a capital at least twenty times as large is lost as would result from the loss of one cannon. (In Cohn, 1979, p.18.)

It is also worth remembering that the practice of valuing human capital, be it degrading or otherwise, goes back a long time, at least to early

biblical times. A favourite quote of economists in this connection is that from Leviticus XXVI; 3-6:

When a man shall clearly utter a vow of persons unto the Lord according to thy valuation, then thy valuation shall be for the male from twenty years old ... unto sixty years old, ... fifty shekels of silver .... And if it be a female, then thy valuation shall be thirty shekels. And if it be from five years old...unto twenty years old, then thy valuation shall be for the male twenty shekels and for the female ten shekels.(Leviticus, XXVI: 3-6, in Cohn, 1979, p.19)

In this passage human capital is valued according to age and gender on the presumption that males have greater labour market value than females and that persons aged twenty to sixty have the greatest value (Cohn, 1979, p.13).

The concept of human capital has also interested many classical writers in the field of economics, such as Adam Smith and Alfred Marshall. While Adam Smith did not go as far as attempting to estimate the cost of human capital, he did include it in his definition of 'fixed capital'. By contrast, Alfred Marshall excluded human capital from his definition of capital, preferring to call it 'personal wealth' (Cohn, 1979, p.19).

There are two approaches to valuing human capital which have been popular with economists over the last two centuries, namely, the cost of production approach and the capitalised earnings approach. In terms of the cost of production approach, the value of a man or a woman equals the value of material resources expended on his or her production, including expenditure on things as diverse as pre-natal care and education; and according to Ernst Engel (writing in 1883) who first used this procedure, a man is 'fully produced' by the age of 27 (Cohn, 1978, p.14). The main weakness of the approach is that these costs are not linked to the market value of a person's labour.

The first rigorous formulation of the capitalised earnings approach was presented by William Farr in 1853. In terms of this approach sunken costs (those spent in the past) are disregarded and only a person's current and discounted expected future

market-valued costs incurred in providing labour and market-valued benefits derived therefrom are taken into account. The overwhelming majority of present day economists follow a capitalised earnings approach, and it will also be followed in this chapter.

2. It should be borne in mind that problems are encountered when internal rates of return are used as decision criteria. These problems include the multiple roots problem (see later) and the potential for contradictions with the results of other present value decision criteria, such as the net present value and benefit-cost rules (see Pearce and Nash, 1981, p.49). A problem underlying the use of all types of present value decision criteria is that knowledge about the social discount rate is very limited.
3. In recent times there have also been attempts to investigate the positive effect of investment in human capital on the return to investment in material capital. For example, World Bank studies show that if investment in material aids to traditional farmers is complemented with investment in elementary schooling, the rate of return on the material investment is increased (Psacharopoulos and Woodhall, 1985, pp.46-50).
4. A social rate of return to schooling is defined in terms of a stream of net benefits arising from this schooling. Unlike the private rate of return, the social rate is neither influenced by who receives this benefit, nor by the incidence of the cost burden of the schooling. The private rate of return is defined in terms of the benefit enjoyed and costs borne by the individual who acquired the schooling.
5. There are various ways of estimating the social rate of return on investment in education (see Psacharopoulos, 1981). In this chapter it is estimated by calculating the rate at which all the benefits of education to society are discounted to the same present value as all the costs ; the discount rate which zero-sums the cost-plus-benefit equation. In this equation (see Equation 2.4 later in this chapter) the benefits are estimated from the differences in the earnings of people the same age but with different kinds or levels of education. The costs are estimated from direct

outlays by the individual and the government on education. In this study earnings forgone during the period of education are not included as a cost. Where the costs borne and benefits gained by the government are excluded from the calculations, the rate of return thereby defined is a private one. The private rate of return on investment in education is usually higher than the corresponding social rate because the costs borne by government in subsidisation usually outweigh the benefits which can be measured, namely the extra taxes collected from those with more education and hence higher earnings (Trotter, 1989, pp.242-243).

6. The concept of an aggregate production function has itself attracted considerable criticism (see Blaug, 1972, pp.97-98). It can be argued that (in a mathematical context) the concept of an aggregate production function is of no practical use unless some rule can be developed for aggregating production functions across different industries and firms. Besides this and other measurement problems, there are also problems in interpreting what the differences between these aggregates over time actually imply. For example, an increase in measured national output can be affected through changes in accounting efficiency and procedure, or the substitution of quantity for quality. Furthermore, differences between these aggregates do not necessarily correspond to differences in welfare. For these reasons, the interpretation of increases in measured national output over time as 'economic growth' may not be strictly correct.
7. No attempt is made in this thesis to estimate the exact contribution of Black schooling to economic growth in South Africa. In view of the overwhelming empirical problems involved in estimating the social rate of return to Black schooling, such an estimate would seem to be almost worthless.

There have been numerous attempts to estimate this contribution in other countries. These studies do not lead one to 'helpful' conclusions. The results are not strictly comparable because of differences in the methods of estimation used and they do not establish that education generally can be said to make an important contribution to economic growth (see results, Psacharopoulos and Woodhall, 1985, p.17). For example, the contribution in some developed countries is high (25 per cent in Canada and 15 per cent in the USA) but in others it is low (2 per cent in the Federal Republic of Germany and

3,3 per cent in Japan). Similarly, in developing countries there are great differences (23,2 per cent in Ghana versus 0,8 per cent in Mexico).

8. The drawback to this test is that both the social rate of return and the social opportunity cost rate of return with which it must be compared, are derived from a series of approximations for which the margin of error is unknown.
9. The problem of equating wages with the value of the marginal product of labour is particularly serious in countries where the government sector is relatively large, because in this case differences in the earnings of people by level of education are heavily influenced by bureaucratic wage scales. The actions and policies followed by labour unions can also complicate the above equation. For example, it can be argued in the case of South Africa, that Cosatu's living wage campaign depressed the labour income return on Black education by being more effective in forcing up the wages of less educated Black workers.
10. In light of this indeterminacy it is understandable how, by the mid-1970s, Blaug (1976), a leading exponent of the economic value of education, could have speculated that the credentialist hypothesis would be the Achilles heel of human capital theory.
11. A short-cut approximation of this rate may be made by dividing the difference between the mean earnings of labour cohorts with different levels of education (the benefit of schooling) by the product of the difference in number of years schooling between these cohorts and the mean earnings of the labour cohort with less education (the cost of schooling). See Psacharopoulos (1981, pp.325-326).
12. In Figure 2.1 it is worth noting that the culture and ideology (or ethics) of society substantially influence what is taught, while what is taught, substantially influences what culture and ethics are adopted by succeeding generations of that society (Bowles, 1971). Similarly, the political and economic activities of a society influence the nature of education which is provided, while are themselves influenced by what education is provided.

Although not apparent from Figure 2.1, this entire interdependent system, in addition, influences and is influenced by the interdependent systems established in other societies. Exchange and

competition between societies will also often induce changes in them. In the context of South Africa this relation is of particular significance because of the co-existence of a Black education system with a White education system. It can be argued that there have developed strong 'dependency' characteristics between the two systems; with White education serving as an important frame of reference for Black education, and the resources allocated by the state to each education system being dependent on the relative political influence of the domestic Black and White population groups within South Africa (see Chapters 1 and 3).

13. In Welch's (1975) survey of research on the impact of socio-economic status and ability on earnings differences associated with education, median research results suggest that ability accounts for about 10% of the earnings differences and socio-economic status for about 12% of the earnings differences. However, as there is considerable variation in the results of research cited by Welch (1975), very little confidence can be attached to these median research figures.
14. In order to use the marginal concept in this context it is necessary to assume that the average rate and the marginal rate are equal, because in Equation 2.4 average estimates have to be used. Clearly, if the average rate was decreasing or increasing we would not be able to make this assumption.
15. A popular way of alleviating the saw-tooth pattern of the age-earnings profile is to employ a smoothing-out procedure. This procedure entails using a 'smoothed' earnings difference variable ( $Y_{st}$ ), where this is estimated from a regression of an unadjusted earnings variable on age and square of age variables (Psacharopoulos, 1981, p.323). The disadvantage of the approach is that one cannot know whether such a manipulation makes the result more or less accurate. For this reason, despite the large income band problem, a smoothing-out procedure is not applied in this study.

It also can be argued that if the distribution of incomes is positively skewed, the use of median rather than mean annual income data introduces a downward bias into the age-earnings profiles, shown in Tables 2.1, 2.2 and 2.3 (see Cohn, 1979, p.47). If this bias is greater within higher income cohorts, differences between the mean incomes per

age-education cohort would tend to be greater than those calculated using the above median income data.

16. In Tables 2.16 and 2.17 the expenditure and numbers of pupils per level for schools which fall under the DET's responsibility are shown for 1984, 1985, 1986.

Table 2.16

DET expenditure in Rands on primary and secondary education, 1984 - 1986

YEAR	1984/5 R	1985/6 R	1986/7 R
Primary Schooling	280 933 889 401 268 644	518 609 169	
Secondary Schooling	152 647 602 207 359 520	329 625 378	
<u>Source:</u>	Information supplied by the D E T , dated 24 February 1988.		

Table 2.17

The numbers of primary and secondary pupils in the DET schools, 1984 - 1986

YEAR	1984 R	1985 R	1986 F
Primary Schooling	1 423 179	143 238	1 457 463
Secondary Schooling	301 452	324 945	347 879
<u>Source:</u>	Information supplied by the D E T, dated 24 February, 1988		

Based on these figures, the government secondary to primary per pupil cost ratios in 1984, 1985 and 1986 were 1:2,6; 1:2,3 and 1:2,7 respectively.

17. The allowance of an 'overlap' of one third of those pupils who dropped out also having failed, is arbitrary. It is not possible to determine the exact proportion of the 'overlap' from the sources of data used in Table 2.5. According to World Bank (1980, p.30) data on wastage rates (repetitions and drop-outs), in some developing countries, for every 10 people primary schooling is provided to, only 1 successfully completes the year. Under these circumstances, if the per 'pupil enrolled' cost is R100, the per 'pupil successfully educated' cost is R1000.

18. The significance of these omissions may be less than one would expect because it has been found in some studies (see Psacharopoulos and Woodhall, 1985, p.36) that the rate of return estimates to schooling are 'relatively insensitive' to different assumptions made about some aspects of these costs. It is also debatable whether tax relief for education ('fiscal exoneration') is a transfer or a cost (see Psacharopoulos and Woodhall, 1985, p.139).
19. Psacharopoulos and Woodhall (1985) argue that it is incorrect to ignore forgone earnings in developing countries, even where there is high unemployment, because:  
 even young children may contribute to family income by working in the fields, carrying water, or looking after babies, and thus free adults for more productive work (p.23).  
 The argument is not persuasive with respect to Black schooling in South Africa because it is based on an assumption which is not plausible; that the opportunity for more productive work is readily available and this work would not be done (by someone else) if the children stayed at home instead of going to school. It is more plausible that having the children at school instead of at home would increase (rather than decrease) adult free time to pursue 'more productive' work opportunities.
20. When this procedure was followed using the above data, the 'problem' was found to be a minor one, because variations of the chosen discount rate do not greatly change the results.
21. In effect this amounts to choosing the lowest positive internal rate of return solution to Equation 2.4.
22. Ideally, for each statistic used to calculate the social rate of return index, a standard deviation should also be calculated. By making this calculation one would be able to generate some idea of a 'minimum confidence interval' applicable to the social rate of return index. On the basis of the data available for this investigation it was not possible to generate such an interval.

### CHAPTER THREE

#### IS GOVERNMENT EXPENDITURE ON BLACK AND WHITE EDUCATION IN SOUTH AFRICA INFLUENCED BY RENT-SEEKING?

##### Introduction and the meaning of rent-seeking

There has been a substantial increase of government expenditure on education in South Africa since 1980. Between 1980 and 1987 government expenditure on Black education in South Africa and the homelands, increased from R525,3 million to R3400,2 million (SAIRR, 1981 to 1987/8). By way of comparison, over the same period government expenditure on White education increased from about R1360,9 million to R3320,7 million (SAIRR, 1981 to 1987/8). Real government expenditure on Black education increased by 144 per cent between 1980 and 1987, but on White education it decreased by 8 per cent.

In the light of the increase of government expenditure on Black schooling since 1980 one would have expected the rate of return on investment in Black schooling to have been much higher than the rate of return to investment in White schooling in 1980. In this case (notwithstanding the problems of estimating such rates) one could have argued that the rapid increase of government expenditure on such schooling was stimulated by a demand for human capital.

However, the rate of return to investment in Black schooling in 1980 is not much higher than the rate for White schooling.

Trotter (1984), using 1980 census data, estimated that in the Durban metropolitan area the weighted average social rate of return to expenditure on the schooling of Black males was about 14 per cent. He also estimated that the weighted average social rates for White, Coloured and Indian males respectively, were 13, 16 and 14 per cent.

The difference between Trotter's estimates of the rates of return to investment in Black and White schooling is only 1 per cent; a difference so small that in view of the scope for error in his method of estimation (see Chapter 2) it can be ignored. For this reason the increases of government expenditure on Black schooling (but not on White schooling) which have taken place over the 1970s and 1980s are not adequately accounted for by demand for human capital and other factors which lead to these increases can be expected to be of more importance. In this chapter two other such factors (and the costs associated with them) are investigated, namely, rent-seeking by education bureaucrats and rent-seeking by Blacks and Whites.

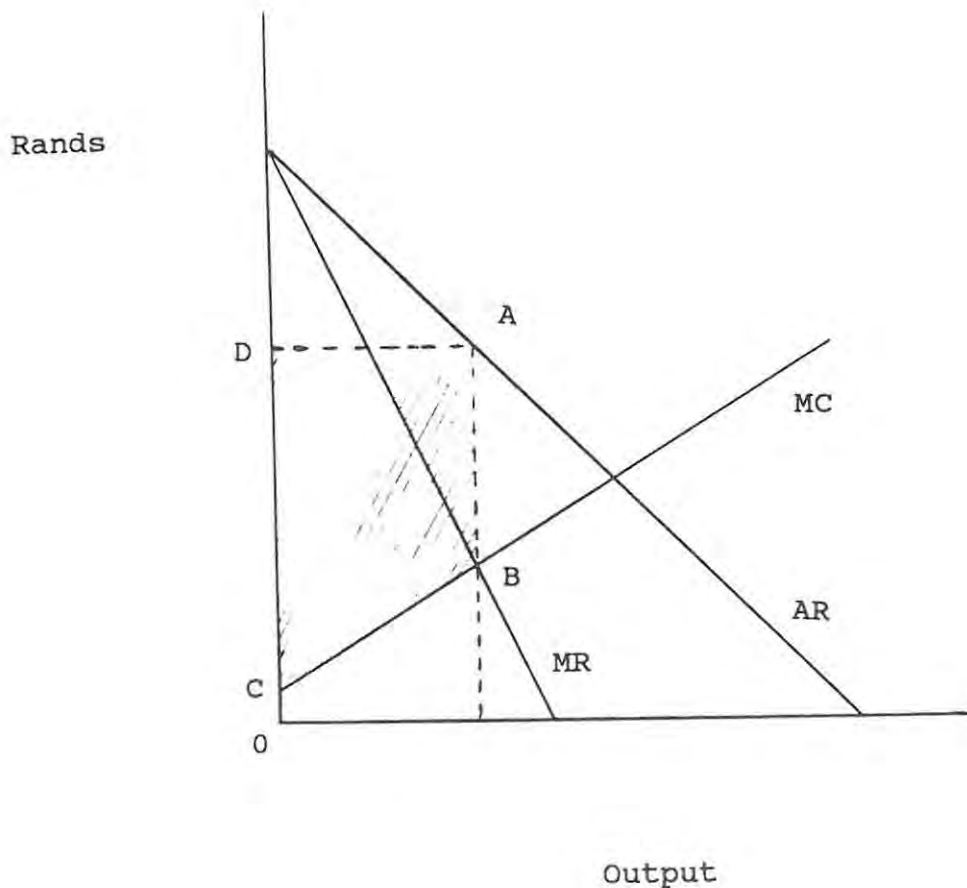
Rent-seeking takes place when people use scarce resources for the purpose of capturing artificially created transfers,

that is, when they campaign for a redistribution of income from others to themselves (Tollison, 1982, p.578). In this connection the type of rents most frequently referred to are monopoly rents, but there are also other types of rent that can be artificially created and sought as transfers.

In his survey of rent-seeking theory Tollison (1982) frequently refers to the case of monopoly. This case is described in Figure 3.1 (below). The shaded area, namely, ABCD, is monopoly rent.

Figure 3.1

Monopoly rent



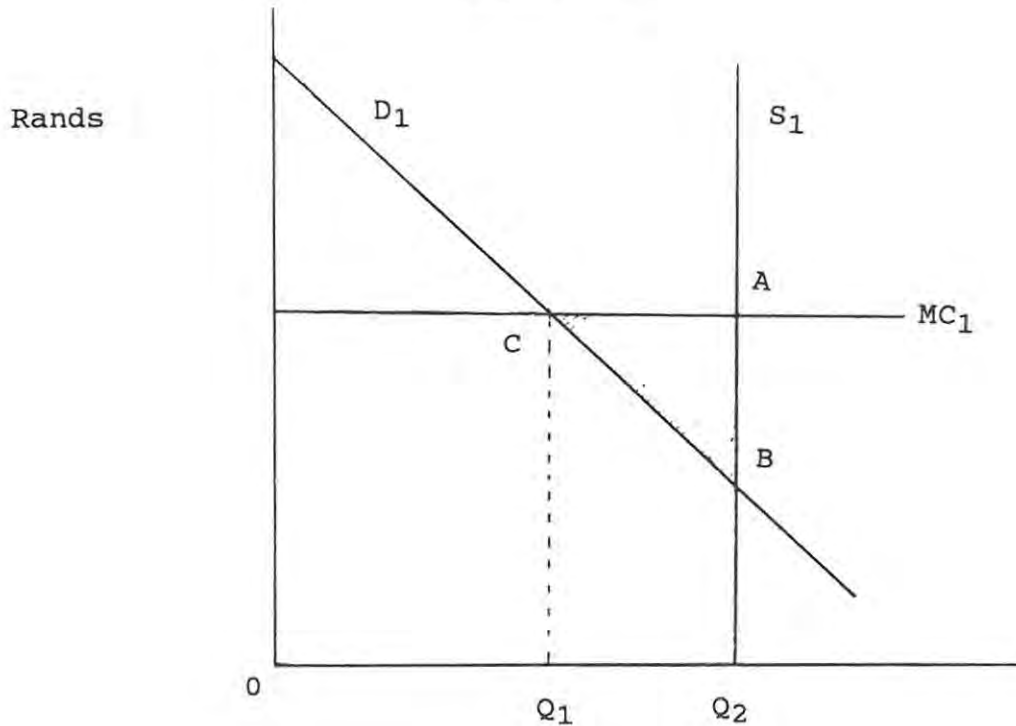
A monopoly situation can be brought about in various ways. One of these ways is by government imposition; it is affected, *inter alia*, through licencing and franchise arrangements. By imposing these arrangements on market participants the government makes it possible for the holder of the franchise to make monopoly rent. For this reason the government can be argued to have artificially created rent. What is called rent-seeking takes place when people expend (and thus socially waste) resources competing (by lobbying the government for the monopoly right) to be the benefactor of this rent.

Tollison (1982, p.577) uses the example of a king who restricts the production of playing cards in his kingdom, to show how monopoly rents can artificially be created, and the expenditure of 'real resources' by firms to capture the king's favour and secure the monopoly right to produce playing cards, to show what is meant by rent-seeking. From a welfare point of view the expenditure of 'real resources' on attempts to win the king's favour has the effect of dissipating the monopoly rent; the producer surplus (area ABCD in Figure 3.1) is cancelled out by the social costs incurred in competing for the monopoly right. Therefore, from this perspective, rent-seeking can be considered a socially wasteful activity - rents are not transferred as a result of it (say in the form of profits) but dissipated.

Rent-seeking can also artificially be created through the provision of education by the state (see Figure 3.2).

Figure 3.2

The creation of artificial rent by public provision of education



Provision of Education by the State

In Figure 3.2 the following are shown: a marginal willingness to pay tax for education curve ( $D_1$ ), a marginal cost of supplying education curve ( $MC_1$ ) and a politically determined supply curve ( $S_1$ ). The  $D_1$  curve shows how much tax-payers are willing to pay for increases in the provision of education by the state, while the  $MC_1$  curve shows how much such increases cost the tax-payer. The  $S_1$  curve shows how much education is provided by the state. This provision

is influenced by political pressure on the government, *inter alia*, to increase the allocation of expenditure on education.

If such political pressure on the government leads to  $OQ_2$  education being provided, tax-payers are forced to pay more tax than they would willingly have done; the difference being the vertical distance between the  $D_1$  and  $MC_1$  curves in Figure 3.2, that is, the shaded area ABC. Thus the shaded area ABC is a coerced transfer from taxpayers to those people who are commissioned (directly and indirectly) to provide the education (such as teachers, professional advisors, book suppliers and building contractors) and those people who receive it; the people on whose behalf political pressure is brought to bear on the state to increase expenditure on education. From a welfare perspective this transfer is dissipated to the extent that those people who seek the transfer, to this end spend 'real resources' generating political pressure on the state (in the same way as the monopoly rent is dissipated with respect to the example covered in Figure 3.1).<sup>1</sup>

In connection with the first mentioned rent-seekers, those commissioned to provide the education, two bureaucracies will be considered, namely, the Black school bureaucracy and the White school bureaucracy. In connection with the second mentioned rent-seekers, the recipients of education, aspects

of political rivalry between members of the main race groups in South Africa will be considered.

In a model describing such rent-seeking, Whites and Blacks are characterised as people who find it advantageous to expend resources collectively (by race group) in order to 'produce' political pressure, the purpose of which is to influence the state to make redistributive transfers of income. A significant and readily observable component of such transfers is argued to be government expenditure on Black schooling. By making these transfers the private cost of Black schooling is reduced and hence the private rates of return on this schooling increased. The existence of a positive relationship between political pressure brought to bear on the state by Blacks relative to Whites and government expenditure on Black schooling relative to White is used as evidence that this type of rent-seeking is plausible. As part of this demonstration, an attempt is made to develop various indices for political pressure.

**1. The relation between bureaucratic interest and government expenditure on Black and White schooling**

Tollison (1982) argues that three factors lead one to suspect rent-seeking amongst politicians and civil servants. These factors are: that rents are contrived through the actions of governments, that a portion of

this rent finds its way into politicians' and civil servants' pockets, and that politicians expend scarce resources competing for positions in government.

The concept of 'contrived' rent through the provision of education by the state already has been explained (see Figures 3.1 and 3.2). Attention is now focused on why and how civil servants responsible for providing education are able to secure some of the rent (area ABC in Figure 3.2), especially those providing Black and White schooling.

Inefficiencies within government bureaucracies are evident in many countries (Niskanen, 1968; Tullock, 1976). There are many reasons why civil services tend to become inefficient over time. The main reason is that government bureaucrats are not subject to the disciplines of the market in the specification and monitoring of efficient individual and organisational performance (Cullis and Jones, 1987, p.56). As a result organisational slack develops.<sup>2</sup> For example, standards are set for public service, such as the provision of education, which are too high in the context of the associated costs and benefits.

As would be expected in terms of the above argument the standard of education provided by the civil service to

White pupils has improved over time. In Table 3.1 below, the growth of professional job opportunities between 1959 and 1989 in the Natal Education Department is shown.

Table 3.1

Selected job opportunities and the numbers of pupils enrolled for primary and secondary schooling in the Natal Education Department

YEAR	Numbers of Professional Posts in HQ Staff	Number of teaching posts in Schools	Number of Pupils P.Primary S.Secondary
1959	33	-	75 000
1969	48	4 897	80 652 P. 52 573 S. 28 079
1979	62	6 939	102 292 P. 64 724 S. 37 568
1989	84	6 525* (6 125)	98 966 P. 55 001 S. 43 965

Source: Information obtained from the Natal Education Department, 6 October, 1989.

\* The number of teachers has been reduced. The teaching posts for 1989 included persons not included previously. For comparative purposes approximately 400 should be subtracted, as shown in parentheses.

It can be seen in Table 3.1 that there were 2 273 pupils for every single professional post at headquarters in the Natal Education Department in 1959, but in 1969, 1979 and 1989 respectively, this ratio dropped to 1 680:1, 1 650:1 and 1 178:1. Similarly, the ratio of teaching posts to professional staff posts at headquarters dropped between 1969 to 1989 from 102:1 to 73:1. The pupil to teacher ratio also fell between

1969 and 1989 from 16,5:1 to 16,2:1. In other words, there has been a tendency both for the number of professional posts in headquarters staff and for the number of teaching posts to increase faster than the number of pupils being educated.<sup>3</sup>

The difference between the standard set by the state bureaucracy and what is actually provided is often termed a 'backlog' and used as a criterion for expansion in its own right. In the context of education the term 'backlog' is often used to describe a difference between the standard of education provided to Whites and that provided to Blacks. The belief that the backlog should be redressed is founded on the premise that there should be equality in the provision of education between the races.<sup>4</sup>

What is interesting about this belief is that the provision of White schooling by the state is usually used as a benchmark, the ideal to be emulated. It is in fact very difficult to make a case for using this benchmark. For example, because of the problems in the method of estimation (see Chapter 2) it is difficult to develop a case on the basis of a comparison of social rates of return. Similarly, it is difficult to develop a case on the basis of international comparisons. In this context it should be noted that

South Africa already spends a high proportion of its GNP on education (see Table 3.2 below).

Table 3.2

Government expenditure on education as a percentage of GNP

Average for developing countries <sup>1</sup> (1974)	3,9%
Average for developed countries <sup>2</sup> (1974)	5,7%
South Africa <sup>2</sup> (est. ave. for the 1980s)	6,0%

Sources : 1. Psacharopoulos (1980, p.6).  
2. Trotter (1990, p.249).

In Table 3.2 the average expenditures on education as percentages of GNP are shown for developing and developed countries in 1974 and for South Africa over the 1980s. It may be seen that over the 1980s on average South Africa spent a higher proportion of its GNP on education than either developing or developed countries did in 1974. The impact of raising government expenditure per capita on Black schooling up to that of White schooling would almost certainly push South Africa's proportion even higher.

Comparisons of government expenditure on education show that South Africa is above the international 'average'. If one considers international averages for developing countries as suitable guidelines for public expenditure, one is not led to the conclusion that government expenditure on education should be increased, but reduced. This conclusion is not

affected by the argument that the money available should be divided amongst pupils according to factors other than race (e.g. merit).

Another important reason why civil services tend towards inefficiency over time is that there is a 'built-in motive' for bureaucratic expansion. This motive arises out of the correlation which exists between an employee's remuneration, perks and prestige, and the size of the staff he supervises. The effect of this correlation is to encourage employees (within bureaucracies) to expand the number of staff who fall under their supervision, whether such expansion is efficient or not. In regard to the provision of education, this incentive is reinforced by the increased job opportunities and security that existing educators are able to enjoy in an expanding system.

It may be added that once created, bureaucracy is often difficult to scale down because they make up a large and powerful political pressure group and legislation can make it difficult to dismiss civil servants. Some authors feel that this power is also evident in South Africa (Lipton, 1985, pp.323-325). For these reasons a 'ratchet-like' process characterises demand for their services. When political and economic circumstances are favourable, the civil service expands.<sup>5</sup> On the

other hand, when circumstances are unfavourable, it does not contract. In recent years political circumstances have been favourable for expansion, especially in Black schooling. Some idea of the increase in job opportunities within the DET is provided in Table 3.3 below.

Table 3.3

Pupil and teacher numbers at schools administered by the DET between 1980 and 1988

Year	No of primary and secondary pupils	No of full time teachers
1980	3 532 219	74 166
1988	4 990 372	124 017

Sources: DET Annual Reports, 1983, pp.148-151 ;1989, pp.277-278

Between 1980 and 1988 the number of teachers at DET institutions increased by 67 per cent, while the number of pupils increased by 41 per cent (Table 3.3). Thus over the period following the de Lange Commission's emphasis of the need to redress backlogs, the rate of increase in teachers employed on a full time basis in primary and secondary schools by the Department of Education and Training (DET) outstripped the rate of increase in pupils.<sup>6</sup>

The evidence presented above is consistent with, but does not prove, that rent-seeking by education

bureaucrats for increases of government expenditure on Black and White schooling takes place. However, this type of rent-seeking may be less of a problem than other types of rent-seeking in South Africa. It may be less of a problem in that its negative impact on efficiency is in principle more readily redressed (through the ballot box), and the costs associated with it (the costs of generating political pressure) are much smaller than those resulting from rent-seeking by the recipients of education; in particular, the costs of political pressure generated by the main race groups in South Africa. A model in which such pressure is incorporated is presented below.

## **2. Applying rent-seeking theory to political rivalry between Blacks and Whites in South Africa**

### **2.1 Economic aspects of political preferences**

Politics can be defined either 'narrowly' as a struggle for power between people of different interests aimed at influencing government actions, or 'broadly' as a struggle for power (influence) between people in various domains. Bowles (1985) identifies three such domains (structures) within which power can be exercised; the government, family and capitalist

structures.<sup>7</sup> In the analysis below a 'narrow' definition is used.

Political activity, that is, competition for power between people, may take place in any of these domains, and there will be some interaction between activities in these domains. The economic analysis of such activity is concerned with the resource flows which are associated with the pursuit and utilisation of power, i.e., political influence.

The relevance of the 'group' rather than the individual with respect to the pursuit of political influence arises out of the existence of economies of scale in the production of political pressure. These economies make it advantageous for people, who have similar political interests to operate as a group and pool their resources in the production of political pressure. There is, however, an economic constraint on this production. Rationally, a group would only produce political pressure up to the point where the marginal benefit of producing political pressure equals the marginal cost.

The political pressure, on a government, that a group can muster is a function of the number of people making up the group and the resources (i.e. human and physical

capital) that these people are willing to use to generate this pressure. The intellectual leadership of a group may be viewed as one such resource. Its importance lies in the fact that the ethical foundations for the pursuit of group interests are laid by these individuals.<sup>8</sup>

## 2.2 Towards a model : Features and assumptions about the way individuals develop political preferences in South Africa

- (a) Race has been and still is one of the most significant determinants of the constitution of political pressure groups in South Africa. The role played by White political influence relative to Black in the provision of education by the state has already been outlined (in Chapter 1). Within each of these two groups, homogeneity of political preference is assumed in order to simplify the analysis which follows.
  
- (b) It is assumed that the utility benefit derived by the members of these groups is appropriately indicated by their own full real income, and not that of the other group's members, as would be the case with Hochman and Rogers (1969) style utility functions (which are discussed in Chapter 4). The concept of full real income is broader than market income because it also

depends on the time spent on leisure and other non-market activities:

Full real income =  $f$  (market income, time spent on leisure, time spent on other non-market activities)

- (c) Black schooling served as the main source of Black political pressure in South Africa during the 1970s and 1980s (see Chapter 1). The Black school disturbances began in earnest in 1976 and continued up until 1986. By comparison, the major waves of labour union unrest of the early 1970s and late 1980s barely lasted one year and only in the 1970s was a major direct role played by the government controlling the unrest.
- (d) A paradox of parliamentary representation and political influence exists in South Africa. The National Party has dominated the government of South Africa over the last 40 years. At the time of writing, the only serious challenge to the National Party came from a party more conservative than themselves (see Table 3.5 below). Yet despite this situation government policy has increasingly effected a redistribution of expenditure from Whites to Blacks in South Africa (Bromberger, 1982). For this reason it appears that Black political influence relative to White has been increasing. This increase has been particularly apparent over the last fifteen years.<sup>9</sup> Thus the

paradox which has emerged is that Black political influence has been increasing (especially over the 1970s and 1980s) at a time when political representation in the House of Assembly traditionally sympathetic to their interests has remained static, if not declined.

- (e) There is little evidence (unfortunately) in the behaviour of most members of the Black and White groups that they anticipate that their own production of political pressure will initiate similar actions by members of the other race group. As a result, it appears that most of the members of both race groups believe that the resources they themselves allocate to the production of political pressure will not influence the allocation made by members of the other group.

### 2.3 Political pressure group functions in South Africa

There are many means by which a group may bring political pressure to bear on the state. In this analysis, the ways of the two biggest race groups in South Africa, namely the Whites and Blacks, will be considered.

A very appropriate model for such considerations is that of Gary Becker (1985) and this will be used

here.<sup>10</sup> Becker's (1985) model can be considered to be in the public choice tradition; he uses economic tools to unravel problems which have traditionally fallen in the domain of political science. In contrast to what is conventionally believed, voters, politicians and members of the various government bureaucracies are all held to be (basically) self-interested; they are assumed to have the same motives as customers and businessmen operating within the private sector of the economy.<sup>11</sup>

For as long as the parliamentary means for bringing about political pressure has been in existence in South Africa, it has been dominated by Whites. They have done this in the 'normal way'; through party campaigning and the cultivation of bureaucrats and politicians in key civil service posts. The most significant of the extra-parliamentary ways that the Whites have used to generate political pressure are emigration, the threat of disinvestment and to a lesser (although increasing) extent, violence.

By way of contrast, at the time of writing Blacks were only able to bring about parliamentary pressure through their influence over Whites, Coloureds and Indians within the tricameral system who were sympathetic to their interests. Understandably therefore, Blacks have

been more prominent than Whites in their use of extra-parliamentary means for bringing about political pressure, namely, through civil disobedience, disruption of the economy (for example, by labour union actions), solicitation of international support against existing government power structures and selective acts of violence.

However, the mere existence of 'mechanisms' for creating political pressure is of little significance on its own. The actual political pressure the Blacks and Whites in South Africa can in fact muster depends upon the resources they are willing to use for this purpose and the size of their groups.<sup>12</sup>

#### 2.4 Political influence functions in South Africa

The object of producing political pressure is to gain political influence. With this influence a group can effect increases in the full real income of its members. The scope for these increases is reflected in changes to  $Q_i$ , as defined in Equation 3.5 below.

$$Q_i = R_i + E_i - C_i \quad \dots\dots\dots (3.5)$$

In Equation 3.5 the full real income of group  $i$  brought about by producing political pressure is indicated by  $Q_i$ . This income, which can be positive or negative, is the sum of the redistributive transfer of full real

income secured from the other group,  $R_i$ , the efficiency benefit to society (brought about as a result of an increase in the provision of education) which accrues to the group,  $E_i$ , and the deadweight cost which is borne by the group,  $C_i$ . The latter are those costs which result from the distorting effect of political influence on the efficiency with which productive resources are utilised in the market. The net efficiency effect to group  $i$  of political pressure is therefore  $(E_i - C_i)$ .

The political influence acquired by one group depends on how much political pressure it is able to muster relative to the other group, as shown in Function 3.6.

$$Q_i = g_i(P_i; P_j), \quad i \neq j \quad \dots\dots\dots (3.6)$$

In this function,  $g_i$  defines the political influence which the political pressure of one group,  $i$ , relative to that of another group,  $j$ , has on  $Q_i$ . *A priori*, for both Whites (W) and Blacks (B):

$$\partial Q_W / \partial P_W ; \partial Q_B / \partial P_B > 0$$

and

$$\partial Q_W / \partial P_B ; \partial Q_B / \partial P_W < 0$$

In the above model rent-seeking takes place when people attempt to increase their full real income by bringing political pressure to bear on the state to effect a pure redistributational transfer,  $R_i$ . The net efficiency

effect ( $E_i - C_i$ ) to group  $i$  of seeking redistributive transfers (rent-seeking) through gains in political influence is negative if the deadweight costs,  $C_i$ , exceed the efficiency benefits,  $E_i$ . The overall net efficiency impact (on both groups) is non-positive where the tax payment made by one group plus any deadweight costs experienced (by both groups) is not offset by the efficiency benefit experienced by the other group as a result of the subsidy enjoyed by it.<sup>13</sup> Under these circumstances the Black group's gain in political influence is necessarily at the White group's expense (and vice versa) and the Black group's gain is smaller than the White group's loss.

It is quite clear, in terms of Function 3.6 what the two essential ingredients of the struggle for political influence in South Africa are; the relative production of political pressure by Blacks and Whites,  $P_B$  and  $P_W$ , and the constitutional arrangements which regulate the efficiency (the parameters of the  $g$ -functions) with which political pressure may be translated into political influence. For this reason, the production of political pressure aimed at changing the constitutional arrangements in South Africa is of just as much influence on the state's education policy as would be political pressure aimed specifically at

reforming the latter, such as a protest march by school children.

It is also clear in terms of these factors why Black schooling has served as a focal point for the production of Black political pressure; feature (c) of the South African situation listed above. Black schooling assists both in the development of individuals who are receptive to the politics of becoming 'just as well off as the White', and in bringing together such individuals. In this way Black schooling facilitates an improvement in the capacity of the group and hence the individual to bring political pressure to bear on the state. If  $P_w$  remains unchanged, this improvement in capacity will be utilised to increase  $Q_B$  (Function 3.6).

## 2.5 Political equilibrium in South Africa

Political equilibrium in South Africa may be defined to exist where neither Whites nor Blacks can increase their full real income through further political activity. This situation occurs where the per capita full real income of each group, after political activity has been taken into account, is maximised. The total full real income of the group, namely  $Y_i$ , is defined as follows:

$$Y_i = X_i + Q_i - a_i n_i \quad \dots\dots\dots (3.8)$$

In this equation  $X_i$  is group  $i$ 's initial full real income (that is, full real income prior to political action). Political equilibrium is achieved when each political group's marginal full real income derived from producing political pressure equals the marginal cost of this.<sup>14</sup> By virtue of the law of diminishing returns, the marginal income derived from producing political pressure must eventually decrease, while the marginal cost must eventually increase. Hence, equilibrium is assured.

The paradox of parliamentary representation and political influence in South Africa (feature (d) of the South African situation) is very easily resolved in terms of such a model; the increased use by Blacks of non-parliamentary political pressure enabled them to increase their political influence without official representation in government. This increase of influence has been translated, *inter alia*, into an increase of government expenditure on Black schooling.

3. Evidence in support of a theory of rent-seeking by race with respect to the provision of education by the state in South Africa

3.1 The model to be estimated

In terms of the above model Whites and Blacks participate in political activities for the purpose of thereby securing economic benefits through the state. The following political influence functions are formulated in ways which are consistent with this theory (see Function 3.6).

$$Q_B = g_B(P_B/P_W) \quad \dots\dots\dots (3.10)$$

$$Q_W = g_W(P_B/P_W) \quad \dots\dots\dots (3.11)$$

In terms of the above political influence functions 'political' income gains by Blacks through the state depend on Black political pressure relative to White, while 'political' income gains to Whites through the state depend on White political pressure relative to Black. This dependence can be expected to operate with a lag because budgets are drawn up over the year prior to their application. In the light of the above theory and this lag the following specifications of political influence functions in South Africa would seem to be appropriate:

$$Q_{Bt} = c_0 + c_1(P_B/P_W)_{t-1} \quad \dots\dots\dots (3.12)$$

$$Q_{Wt} = d_0 + d_1(P_B/P_W)_{t-1}, \quad \dots\dots\dots (3.13)$$

where  $Q_{Bt}$  and  $Q_{Wt}$  indicate the income gained by Blacks and Whites respectively through the state,  $t$  indicates the year,  $P_B$  and  $P_W$  indicate Black and White political pressure respectively and  $c_0$ ,  $c_1$ ,  $d_0$  and  $d_1$  are parameters. *A priori*,

$$c_1 > 0$$

and

$$d_1 > 0.$$

### 3.2 Measurement of the variables

As could be expected, none of the variables in Equations 3.12 and 3.13 are easily measured.<sup>15</sup> In the calculations below,  $Q_{Bt}$  and  $Q_{Wt}$  are measured by proxy. These proxies are annual government expenditure on Black and White education respectively.

The reason why expenditure on education is selected as proxy variable is so that the theory that such expenditures are the results of rent-seeking can be tested. Such proxies are far from ideal; these expenditures are not entirely of a redistributive nature and it is difficult to connect specific tax payments to specific government expenditures. Hence, a

precise determination of the redistributive component of such expenditures is almost impossible.

Estimates of government expenditure between 1974 and 1987 on Black education ( $Q_{Bt}$ ) and on White education ( $Q_{Wt}$ ) are shown in Table 3.4 below. The reason why aggregate and not per capita figures are used is that (in the rent-seeking model outlined) the analysis is made by group rather than by individual.

Table 3.4

Increases of real government expenditure on Black and White education in South Africa and the homelands, 1974 - 1987

Year	Real Government Expenditure on White Education		Real Government Expenditure on Black Education	
	R ( $Q_W$ ) (millions)	Percentage Increase over Previous Year %	R ( $Q_B$ ) (millions)	Percentage Increase over Previous Year %
1974	3250,6	-	761,9	-
1975	3459,8	6,4	774,2	1,6
1976	3437,9	-0,6	708,7	8,5
1977	3326,4	-3,2	962,4	35,8
1978	3415,5	2,7	1062,6	10,4
1979	3367,6	-1,4	1195,5	12,5
1980	3610,7	7,2	1393,7	16,6
1981	3887,8	7,7	1878,5	34,8
1982	4127,6	6,2	2002,3	6,6
1983	3683,8	-10,8	2133,0	6,5
1984	3947,2	7,2	2351,3	10,2
1985	4094,8	3,7	2701,0	14,9
1986	3549,4	-13,3	2881,0	6,7
1987	3320,7	-6,4	3400,2	18,0

Source: Table 1.4  
CPI: 1987 = 100

As can be seen in Table 3.4, with the exception of 1975 and 1976, in all the years between 1975 and 1987 there

has been a significantly higher rate of increase of government expenditure on Black education than there has on White education.

It is not easy to determine the resources ( $a_i$ ) Whites and Blacks allocate to bring political pressure to bear on the state because they do not reveal their allocations in ways which can be measured. For this reason both  $P_W$  and  $P_B$  are measured by proxies which are not ideal. The case of the Whites is considered first.

The main way Whites in South Africa bring political pressure to bear on the state through the exercise of their vote. It is hypothesised here that a vote for 'conservative' parties in South Africa is not merely an expression of dissatisfaction with existing government, but also an indication of a desire by the White voter to commit additional resources to the production of political pressure on behalf of his group.<sup>16</sup>

On the other hand, while a White vote for 'reformist' parties in South Africa is also taken to be an expression of dissatisfaction with existing government, the difference is that it is also taken to indicate a desire by the voter to decrease his commitment of resources to the redistributive struggle. In Equation 3.14, an index of 'White' political pressure in South

Africa is developed on the basis of these two hypotheses:

$$P_W = 100 \left( 1 + \frac{\text{Conservative Vote share} - \text{Reformist Vote share}}{\text{Government Vote Share}} \right) \dots\dots\dots (3.14)$$

In the context of 3.14 above, if the conservative vote share increased, or the reformist vote share decreased or the government vote share decreased, an increase in 'White' political pressure would be indicated. The index is estimated from Table 3.5.

Table 3.5

The division of the vote as a percentage between the main political parties in the parliamentary elections for Whites in South Africa between 1966 and 1987

Party	Year					
	1966	1970	1974	1977	1981	1987
The Government Vote, i.e. National Party	58,0	54,5	55,1	64,4	56,7	52,3
The Conservative vote, i.e. the Herstigte Nasionale Party & the The Conservative Party	0	3,6	3,9	3,2	13,9	29,6
The Reformist Vote, i.e. the United Party, Progressive Federal Party and New Republic Party	40,2	40,7	37,6	28,6	26,2	16,0
The Independents and other Parties and spoilt papers	1,8	1,2	3,4	3,8	3,2	2,1
Total	100,0	100,0	100,0	100,0	100,0	100,0

Source: Official Yearbook of the Republic of South Africa (1987-1988, p. 166)

It is evident that there has been considerable growth in support among Whites for political parties more conservative than the National Party.<sup>16</sup> For example, after remaining at between 3 and 4 per cent during the 1970s, the conservative vote share has increased to just under 30 per cent in the late 1980s. If linear trends between elections are assumed, an index for  $P_W$ , as shown in Table 3.6 would follow.

Table 3.6  
An index of White political pressure

Year	Conservative Vote	Reformist Vote	Column(2) minus Column (3)	Government Vote	Column(2) divided by Column (5)	$P_W^*$
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1970	3,6	40,7	-37,1	54,5	-0,68	32,00
1971	-	-	-	-	-	33,75
1972	-	-	-	-	-	35,50
1973	-	-	-	-	-	37,25
1974	3,9	37,6	-33,7	55,1	-0,61	39,00
1975	-	-	-	-	-	46,33
1976	-	-	-	-	-	53,67
1977	3,2	28,6	-25,4	64,4	-0,39	61,00
1978	-	-	-	-	-	5,25
1979	-	-	-	-	-	69,50
1980	-	-	-	-	-	73,75
1981	13,9	26,2	-12,3	56,7	-0,22	78,00
1982	-	-	-	-	-	86,00
1983	-	-	-	-	-	94,00
1984	-	-	-	-	-	102,00
1985	-	-	-	-	-	110,00
1986	-	-	-	-	-	118,00
1987	29,6	16,0	13,6	52,3	0,26	126,00

Source: Table 3.5. Note that over the period between elections linear trends are assumed to prevail.

\* See Equation 3.14.

As can be seen in Table 3.6, there has been a substantial increase in White political pressure in South Africa. Between 1970 and 1987 there would appear to have been about a four-fold increase of such pressure (Table 3.6).

At the time of writing, in contrast to Whites, Blacks were not permitted a vote on the make up of central government in South Africa. As a result they have been more prominent in the use other ways of bringing about political pressure on the government. These ways include street demonstrations, sympathetic boycott and strike actions, and violent attacks on the political and economic infrastructure of South Africa. An idea of the trends in such activities is provided in Table 3.7 (overleaf).

It can be seen in Table 3.7 that there are both cyclical and increasing trends in the political pressure which has been brought to bear on the state in South Africa by Blacks. The number of incidents of terrorism increased from 4 in 1976 to 232 in 1987, the number of work days lost increased from 316 in 1971 to 5 825 133 in 1987 and the number of detentions without trial under security legislation increased from 20 in 1974 to 616 in 1987.

Table 3.7

Indicators of Black political pressure on the state in South Africa during the 1970s and 1980s

Year	Incidents of Terrorism per annum	Black work days lost due to industrial dispute or work stoppages per annum	Detention without trial under security legislation per annum (PB)
1971	-	316	-
1972	-	13 774	-
1973	-	229 137	-
1974	-	90 336	20
1975	-	18 720	23
1976	4	22 325	411
1977	20	15 099	740
1978	13	10 531	261
1979	12	17 647	334
1980	19	163 579	1243
1981	55	232 405	974
1982	39	365 359	210
1983	55	124 592	203
1984	58	403 275	577
1985	136	641 286	2436
1986	230	1 306 979	4132
1987	232	5 825 133	616

Sources: The SAIRR (1983-1988), S.A. Statistics Quarterly Bulletins (1971-1988), Financial Mail August 26, 1988) and Human Rights Commission (1989)

Of the three indicators, the one that would appear to be the most broadly representative is that relating to detentions without trial under security legislation. The Acts of security legislation referred to are the General Laws Amendment Act (Number 37) of 1963, the Criminal Procedures Act (Number 96) of 1965, the General Laws Amendment Act (Number 62) of 1966, the Terrorism Act (Number 83) of 1967, the Internal Security Act (Number 79) of 1976, the Internal Security

Act (Number 74) of 1982 and the Internal Security Amendment Act (Number 66) of 1986. In all of these Acts there are provisions for detention without trial.<sup>17</sup> Although the sources of information on detentions without trial used in Table 3.7 mostly did not indicate the racial classification of the detainees, the fact that the detentions have mainly been used to control Black political unrest, would suggest that they may justifiably be used as a measure of Black political pressure ( $P_B$ ) in South Africa. It will also be seen that this measure is a better indicator of unrest relating to the Black school riots of 1976 and 1977 than the others provided in Table 3.7. One of the major problems with the indicator is that it depends on the state having a consistent policy on detentions, one that is linearly related to Black political pressure, and this consistency cannot be established.

### 3.3 Estimating the model

The model described by Equations 3.12 and 3.13 is estimated from the data contained in Table 3.8 below.

Table 3.8

Government expenditure on Black and White education, and  
Black political pressure relative to White in South Africa,  
1974 - 1987

Year	Q <sub>W</sub>	Q <sub>B</sub>	P <sub>B</sub>	P <sub>W</sub>	P <sub>B</sub> /P <sub>W</sub>	(P <sub>B</sub> /P <sub>W</sub> ) <sub>t-1</sub>
1974	3250,6	761,9	20	39,00	0,51	-
1975	3459,8	774,2	23	46,33	0,50	0,51
1976	3437,9	708,7	411	53,67	7,66	0,50
1977	3326,4	762,4	740	61,00	12,13	7,66
1978	3415,5	1062,6	261	65,25	4,00	12,13
1979	3367,6	1195,5	334	69,50	4,81	4,00
1980	3610,7	1393,7	1243	73,75	16,85	4,81
1981	3887,8	1878,5	974	78,00	12,49	16,85
1982	4127,6	2002,3	210	86,00	2,44	12,49
1983	3683,8	2133,0	203	94,00	2,16	2,44
1984	3947,2	2351,3	577	102,00	5,66	2,16
1985	4094,8	2701,0	2436	110,00	22,15	5,66
1986	3549,4	2881,0	4132	118,00	35,02	22,15
1987	3320,7	3400,2	616	126,00	4,89	35,02

Source: Tables 3.4, 3.5 and 3.7

The results of regressions carried out in terms of Equations 3.12 and 3.13 respectively, are as follows:

$$Q_B = 1227,7 + 57,6(P_B/P_W)_{t-1} \quad r^2 = 0,43$$

se (697,6) (20) df = 11

t 1,8 2,9 ..... (3.12)

$$Q_W = 3674,9 - 4,3(P_B/P_W)_{t-1} \quad r^2 = 0,02$$

se (299,4) (8,6) df = 11

t 12,3 -0,5 ..... (3.13)

In the light of the small number of observations, the use of proxy variables for political pressures, the

difficulties in obtaining consistent data on government expenditure on Black education and the limitations of a single equation model, it is not surprising that the  $t$  and  $r^2$  statistics are so low. Nevertheless, at the 5 per cent level of significance it may be seen that real government expenditure on Black education is positively correlated with Black political pressure relative to White (Equation 3.12). Furthermore, as would be expected, real government expenditure on White education is negatively correlated with Black political pressure relative to White (Equation 3.13), although the latter correlation is not statistically significant at the 5 per cent level.

In the light of these results it would appear that some empirical support does indeed exist for the theory that political rivalry between Blacks and Whites in South Africa has rent-seeking characteristics. This support is based on the premises that over the period from 1974 to 1987 increases of government expenditure on Black education have mainly been affected through redistributive transfers, and that these transfers have been influenced by Black political pressure on the state relative to White. The evidence presented above also points to a substantial increase in both Black and White political pressure on the state over the 1970s and 1980s.

4. **The inefficiency of political equilibrium in South Africa - a case of 'government failure'?**

The increase in Black and White political pressure in South Africa identified above can be argued to have negative consequences. The main one is that efficiency can be impaired and hence economic growth slowed.<sup>19</sup> Two reasons are provided below why efficiency is likely to be impaired.

A 'direct' reason is that resources are committed to the production of political pressure and therefore automatically lost to production in the market economy. The pressure itself also has some negative consequences. As a result of group political pressure activities a social environment is created in which investment is discouraged.

An 'indirect' reason arises as a consequence of what may be called 'political necessity'. A government is forced by the imperative of staying in power to reward its supporters. As the commitment of resources by Blacks and Whites in pursuit of this power increases, so too will their demands for a return on this commitment in the form of 'rewards' from government. A substantial portion of this reward takes the form of

income transfers (Burton, 1984, pp.95-97). However, such transfers are not costless. There are implementation costs associated with them. Initially they tend to discourage economic activity from where they are taken because it is no longer as profitable to operate there. In the longer term, they tend to encourage investment by those people negatively affected in schemes to evade or avoid paying the transfer. These schemes in turn lead to further government regulation, to close loopholes, etc. In both the evasion and the closing of loopholes (associated with the transfers), valuable resources, such as entrepreneurial ability and accountants' and lawyers' time, are wasted (Burton, 1984, p.98).

The inefficiencies described above can be considered to be part of the costs of rent-seeking. As one of the objectives of such rent-seeking is to gain increases of government expenditure in Black schooling, it is legitimate to attribute part of this cost to the provision of this schooling by the state. In principle these costs (if their proportions could in fact be determined) should be added to those considered in cost-benefit analyses of education, such as the one provided in Chapter 2.

Probably the most disappointing aspect of the decrease in efficiency resulting from rent-seeking in South Africa is that it has not reduced the incentive for Blacks and Whites to produce political pressure. As a result of increasing deadweight costs, the marginal full real income return to Blacks and Whites on political pressure should have declined.

However, as shown in Table 3.8 Blacks and Whites have continued to produce high (if not increasing) levels of political pressure, well after one would have imagined that increasing deadweight costs would have reduced the marginal full real income returns on this production. For this reason it seems likely that a difference has arisen between the actual costs and benefits of political activities in South Africa and those that are perceived by South Africans (and upon which the political equilibrium described above is based). In other words, it can be argued that in South Africa there exists an inefficient political 'equilibrium', or alternatively, a political 'disequilibrium'.<sup>20</sup>

A plausible economic explanation for how an inefficient political equilibrium could have arisen is that Blacks and Whites fail to anticipate the incentive that their own political pressure group activities generates for members of the other group to engage in similar

activities (i.e. feature (e) of the South African situation outlined earlier).

### Conclusion

In Chapter 2 the social costs and benefits of Black schooling were outlined and compared. It was shown that a human capital explanation for the increases in government expenditure on Black schooling which have taken place is plausible but difficult to verify. In this chapter (Chapter 3) it has been shown that a rent-seeking explanation for such increases is also plausible. However, (even more so than with the human capital explanation) severe empirical problems are encountered in establishing this plausibility.

There have been two types of rent-seeking outlined in this chapter, namely, rent-seeking by education bureaucrats and rent-seeking by Blacks and Whites. The main incentive for school bureaucrats to rent-seek is the increased job opportunities opened up for them as a result of increasing or high government expenditure allocations to education. These job opportunities can be argued to be rewards for political pressure.

Rent-seeking by race group in South Africa has been described in the context of a model of economic rivalry between Blacks and Whites. In terms of this model it would

appear that the greater is the level of government influence in the economy the greater is the incentive for individuals to compete for its influence. The way political influence is won is through the production of political pressure and this production involves individuals in the expenditure of resources. Such expenditure is typically made by a group of people acting together because of economies of scale in generating political pressure.

Those people making up political groups have an incentive to allocate resources for the purpose of producing political pressure (in order to increase their political influence) up to the point where their marginal returns equal their marginal costs. When all political groups are in this situation (there is no tendency to change) a 'political' equilibrium may be said to have come into existence.

Empirical support for a theory of rent-seeking with respect to government expenditure in South Africa is not easy to generate because data from different sources on the relevant variables are often inconsistent and the trends of the variables themselves have to be measured by proxy. Nevertheless an attempt has been made in this chapter to empiricise the theory. In this regard it has been shown that a theory of rent-seeking in South Africa does enjoy some empirical support (where government expenditure on

Black education is used as a measure of reward for political pressure) between 1974 and 1987.

On the basis of these findings it is concluded that an inefficient excess of resources may be being allocated to the competition for political influence in South Africa, and that Whites and Blacks may be failing to anticipate reactions by the other group to their own production of political pressure. In the light of these findings it seems plausible that the rates of return calculated in Chapter 2 are overstated. In those calculations no account is taken of the costs associated with the generation of political pressure, even though these costs may have been substantial.<sup>21</sup> This omission provides yet another reason why policy on educational expenditure by government cannot (and should not) be made on the basis of rate of return criteria alone.

Notes

1. However, it should also be noted that there are significant differences between the situations described in Figures 3.1 and 3.2. In Figure 3.1 the transfer is from consumers to the monopolist, but in Figure 3.2 the transfer is from the tax-payer (as supplier) to two groups: those people who are hired to provide the education and to those people who consume it. Although the tax-payer, as supplier, also has a demand for education (for example, for his own children's education and for externalities) he cannot regulate supply according to this demand, because 'his' supply is not only influenced by his preferences, but also those of others (through the political processes).
2. A sign of organisational slack is the toleration of low levels of productivity (and hence high costs per unit output) within bureaucracies. Generally speaking, when government intervention in the market leads to costs rising because there is less competitive pressure to keep them minimised, X-inefficiency is promoted (Peacock, 1979, pp.52-67). This type of inefficiency can also develop in the market economy. For example, it develops when government sponsorship of a private firm leads to the development of organisational slack within the firm and hence to a rising cost structure (Peacock, 1979, pp.52-67).
3. Obviously there has been an increase in the level of sophistication in the teaching of Whites since the 1950s, and this increase has probably benefited pupils. However, what should not be forgotten is that such sophistication also has benefited the education bureaucracy and imposed a greater burden on taxpayers. The rationale for the existing level of sophistication is already far from clear. Consider, for example, the relatively low pupil to teacher ratio in White schools. It is a well known fact that the low ratio adds substantially to the cost of providing White schooling relative to Black. However, what is far less well understood is the educational benefit derived as a result of this ratio. In the World Development Report (1980) it is observed that increasing the class size from 15 to 35 and 35 to 40 respectively, only reduces achievement in tests by 4 and 1 per cent, while increases above 40 pupils do not have any further detrimental impact on achievement. These results do not tell the whole story, of course, because 'achievement' in tests does not reflect other important differences, such as in the communication of 'hidden curriculum' items (i.e. the transfer of teacher attitudes).

4. This type of thinking is clearly evident in the 1981 de Lange Commission Report (see Chapter 4 for further details) and in reasons cited in the popular press for widespread strike actions by teachers at Black schools during 1990.
5. Take the year ended 30 June, 1989, as an example. Over this year the workforce of the central government and the provincial administrations increased by 11 217 to stand at 748 569 (Daily Dispatch, 12 October, 1989). A similar pattern of bureaucratic expansion has also been evident in various self-governing states in South Africa (Daily Dispatch, 12 October, 1989). It is also alleged that high ranking civil servants in South Africa earn more than their private sector counterparts - estimated to be about R20 000 more per annum in 1987 (Daily Dispatch, 8 August, 1987). The cost of central government and provincial administrations rose by a 'massive' R747 billion (that is, 25 per cent) to a total of R3 738 billion for the year ended 30 June, 1989 (Daily Dispatch, 12 October, 1989). What happened over 1989 was that South Africa became burdened by a bureaucracy that grew bigger and was expensive.
6. Another sign of the qualitative improvement in the provision of Black schooling (to redress backlogs) has been the considerable growth of expenditure by the DET in administration and professional support services. In Table 3.9 the levels of current expenditure of the DET are broken down into teachers salaries and other current expenditure for the period from 1984 to 1986.

Table 3.9

Current expenditure in Rands by the DET on teachers and on other items in primary and secondary schooling, 1984 - 1986

YEAR	1984/5	1985/6	1986/7
Teachers' Salaries	370 725 761	511 890 749	684 919 120
Other Expenditure	62 855 730	96 737 415	163 315 427
Total	433 581 491	608 628 164	848 234 547

Source: Information supplied by DET, dated 24 February, 1988.

From Table 3.9 it may be seen that as a percentage of total current costs, the expenditure on 'other items' grew from 14,5 per cent in 1984/5 to 15,9 per cent in 1985/6 and to 19,3 per cent in 1986/7.

7. Presumably religious and cultural structures are not considered by Bowles (1985) as arenas in which political activity takes place in order to avoid unnecessary complications. There is, however, no good reason to exclude these structures as arenas in which political activity takes place, least of all in South Africa.

The scope for the struggle referred to arises because the individual's interests and preferences are not independent of the processes of politics. In particular, an individual's political preferences are influenced by whom he perceives he is in society and who he would like to become (Bowles, 1985).

8. For example classical liberals provide higher income earners in society with an ethical basis for attempting to maintain their advantage (as will be shown in Chapter 5). Conversely, Marxists and reform liberals provide lower income earners in society with an ethical basis for attempting to gain transfers from higher income earners (as will also be shown in Chapter 5).

One of the first economists formally to recognise the important role played by the intellectual leadership of the political group was Joseph Schumpeter (1950). In his celebrated work, Capitalism, Socialism and Democracy, he concluded that because of the way political preferences were formed, capitalism was doomed. He argued that by providing leisure and freedom of opportunity to intellectuals and other leadership elements to excite Marxist ideological opposition to the capitalist system amongst the workers and others, it would give way to socialism.

The fact that Schumpeter (1950, pp. 134-162) has proved to be wrong up to this point in time is probably more a reflection that intellectuals in the West are not universally hostile to the capitalist system, than it is a reflection that their leadership role is insignificant.

9. An indication of this redistribution is provided by a drop in the ratio of White to Black schooling expenditure between 1974 and 1987 of about 4,27: 1 to 0,98:1 (see Table 3.4).
10. It should be noted that in order to apply Becker's (1985) model to the case of South Africa it is necessary to adapt his model. Thus, although his model is the main reference used in this analysis some extensions are made to his model. Becker (1985) acknowledges using Bentley's (1935) work as his main reference.

11. In this context, voters, politicians and members of government bureaucracies are argued to behave in ways which are different to those typically assumed by political scientists. For example, because the correlation between the voter's vote and his own well-being is in most cases very small, it is likely that the voter will be poorly informed about the votes he casts (Tullock, 1967, pp.100-114). By the same token, where a political action (such as the casting of a vote) substantially affects an individual's well-being, he would be expected to pursue such action vigorously.

In the context of the theory of public choice, politicians (members of the legislative and executive levels of government) are expected to behave in ways which their supporters (voters) will reward (say by re-election) rather than should reward (say because it is 'just').

The proponents of the public choice tradition do not rely on a 'grand' theory of state. In terms of their approach it is neither meaningful nor necessary to fit the actions of state into a grand theory. From their point of view these actions are comfortably and convincingly explained in straight-forward terms; the ways the relevant individuals (voters, politicians and bureaucrats) go about advancing their own interests. The ways education bureaucrats go about doing this have already been discussed.

12. This political pressure function can be described mathematically, as shown below.

$$P_i = f(a_i ; n_i) \quad \dots\dots\dots (3.1)$$

In this function:  $P_i$  is the political pressure produced by group  $i$ , where this group can either be Black (B) or White (W);  $n_i$  is the number of members of group  $i$ ; and  $a_i$  is the average amount of resources (assets and forgone earnings) each member of group  $i$  is prepared to spend on the generation of political pressure, including that he spends on controlling 'free-riding' within the group. In this context a 'free rider' is a person who may stand to benefit by, but who opposes, or does not actively commit himself to group doctrine. The total value of resources expended by the group on political pressure ( $m_i$ ) is defined in Equation 3.2.

$$m_i = a_i \cdot n_i \quad \dots\dots\dots (3.2)$$

The function (3.1) is rationally defined where the marginal product of additional resources expended by the group on the production of political pressure is greater than zero, i.e.,

$$\partial P_i / \partial m_i > 0$$

The total impact on this marginal product of an increase in the group's membership may be mathematically defined, (see Becker, 1985) as done in Equations 3.3 and 3.4 below.

$$\frac{d(\partial P_i / \partial m_i)}{dn_i} = \frac{\partial(\partial P_i / \partial m_i)}{\partial m_i} \cdot dm_i / dn_i + \frac{\partial(\partial P_i / \partial m_i)}{\partial n_i} \cdot dn_i / dn_i \quad \dots (3.3)$$

Therefore, since

$$dm_i / dn_i = a_i,$$

$$\frac{d(\partial P_i / \partial m_i)}{dn_i} = a_i \cdot \frac{\partial(\partial P_i / \partial m_i)}{\partial m_i} + \frac{\partial(\partial P_i / \partial m_i)}{\partial n_i} \quad \dots (3.4)$$

In Equation 3.4, there are increasing returns to scale in producing political pressure where,

$$\frac{\partial(\partial P_i / \partial m_i)}{\partial m_i} > 0$$

but decreasing returns to scale where,

$$\frac{\partial(\partial P_i / \partial m_i)}{\partial m_i} < 0$$

In regard to the second component on the right hand side of Equation 3.4, it would seem likely that

$$\frac{\partial(\partial P_i / \partial m_i)}{\partial n_i} < 0$$

because the incentive to free-ride will increase as the numbers in the group increase. In bigger groups the probability that the individual's active support will result in substantial personal gain or be of major influence diminishes. As a result there is less of an inducement to individuals to participate in generating political pressure. This effect undermines the economies of scale argument for generating political pressure in groups, and suggests that in the context of generating political pressure there may exist an optimum sized group. The effect also serves to explain why small interest groups can in many cases be more effective in generating political pressure than much larger groups.

13. In this event it follows that,

$$Q_B < -Q_W$$

or

$$Q_W < -Q_B$$

and hence that

$$g_B(P_W; P_B) < -g_W(P_W; P_B) \quad \dots\dots\dots (3.7)$$

or

$$g_W(P_W; P_B) < -g_B(P_W; P_B)$$

14. In political equilibrium:

$$\frac{d(Y_i/n_i)}{da_i} = \frac{d(X_i/n_i)}{da_i} + \frac{d(Q_i/n_i)}{da_i} - \frac{d(a_i n_i/n_i)}{da_i} = 0$$

which simplifies to

$$1 = (1/n_i) \cdot (dQ_i/da_i)$$

, where,

$$Q_i = g_i(P_i; P_j);$$

$$P_i = f(m_i),$$

$$P_j = f(m_j), \quad i \neq j .$$

Equivalently,

$$1 = (1/n_i) \cdot (\partial Q_i / \partial P_i) \cdot (\partial P_i / \partial m_i) \cdot (\partial m_i / \partial a_i) + (1/n_i) \cdot (\partial Q_i / \partial P_j) \cdot (\partial P_j / \partial a_i) .$$

Therefore, assuming (see Feature (e) of the South African situation)

$$\partial P_j / \partial a_i = 0,$$

implies

$$1 = (\partial Q_i / \partial P_i) \cdot (\partial P_i / \partial m_i),$$

which in turn implies,

$$(\partial Q_i / \partial P_i) = 1 / (\partial P_i / \partial m_i)$$

and hence,

$$\partial Q_i / \partial P_i = \partial m_i / \partial P_i \quad \dots\dots\dots (3.9)$$

15. For this reason it was tempting for the author to leave the model at the theoretical level. However, on reflection it was felt that this was too weak an excuse for not making any attempt to quantify the model. If this attempt achieves nothing else it should at least draw attention to some of the difficulties encountered in quantifying such a model.
16. Under present circumstances such pressure can be argued to be aimed at counteracting Black political pressure on the state for redistributive income transfers from Whites to Blacks.
16. The fact that the National Party has become more reform minded is not of any consequence in this context. Their reforms were not a consequence of White political pressure but increased Black political pressure.
17. It is also worth noting that not all detentions without trial take place in terms of security legislation. Many Blacks have also been detained under Emergency legislation, namely, the Public Safety Act (Number 3) of 1953. In terms of this act, if the State President declares a state of emergency, a person may be detained without trial over its full duration. On 30 March, 1960, a state of emergency was declared and 156 days later, on 30 August, 1960, it was lifted. On 21 July, 1985, it was declared for a second time and each year since then it has been renewed in June until 1990 when it was lifted. The number of people detained under emergency legislation between 1985 and 1988 is shown in Table 3.10 below.

Table 3.10

Detention without trial under emergency legislation between 1985 and 1988

<u>Year</u>	<u>Number of Detentions</u>
July 1985 - June 1986	7 996
July 1986 - June 1987	25 000
July 1987 - June 1988	5 000

Source: Human Rights Commission, Fact Paper FPI, 1989.

19. As would be expected in the context of the above inefficiencies a decrease in the rate of growth of real GNP has taken place. In contrast with the 1960s, when growth of real GNP averaged 7,7 per cent per annum, over the 1980s it fell to 1,4 per cent (as shown in Table 3.11 below).

Table 3.11

The average percentage growth of real GNP in South Africa  
from 1950 to 1987

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<u>Period</u>	<u>Average Growth of Real GDP per annum</u> %
1950-1960	5,4
1960-1970	7,7
1970-1980	3,9
1980-1987	1,4

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Sources: 1. S.A. Statistics 1986, pp. 21.4 - 21.5  
2. S.A.R.B. Quarterly Bulletins (Sept., 1988).

20. An alternative way of considering the South African situation is as a political disequilibrium. In this context a game theoretic approach would seem to merit further investigation by economists.
21. These costs are in no way offset by the fact that rent-seeking can reduce the private cost of schooling by influencing the government to pay more towards their schooling (and thereby making schooling more privately attractive).

## CHAPTER FOUR

### SOME PROBLEMS ASSOCIATED WITH A WELFARE RATIONALE FOR THE PROVISION OF EDUCATION BY THE STATE : THE CASE OF SOUTH AFRICA<sup>1</sup>

#### Introduction

In welfare analyses of education an open-ended 'time horizon' is most commonly adopted.<sup>2</sup> In this analysis the same time procedure is followed: the men in whose welfare we will be interested include all existing and future members of South African society. It will also be assumed that the tastes of these people and the labour market conditions they will face are known; uncertainty therefore, will be assumed away (Graaff, 1971, p.55).

There are two fundamental premises on which a welfare rationale for the provision of education by the state is typically developed. Aspects of the first of these premises have already been considered (see Chapter 2), namely, an empirical verification of the external (rather than private) productivity benefit of education.<sup>3</sup> The importance of this premise is that it provides the basis for the welfare argument that the social transformation function (the production

potential) of society is increased by the provision of education. The second premise is the demonstration that (either) an undesirable distribution of income or market failure exists, that these problems can be redressed by the provision of education and that in the process of redressing these problems even more serious distortions are not introduced into the economy. If one cannot establish both of the above mentioned premises, one cannot consider the welfare argument for the provision of education by the state to be persuasive. In this investigation the fact that the provision of education by the state can also be influenced by a desire to promote macroeconomic stability is not considered relevant to the 'welfare rationale'.<sup>4</sup>

Both of the above-mentioned premises relating to the welfare rationale for the provision of education by the state, namely, human capital theory and the existence of market failure or undesirable income inequalities which may be redressed by the provision of education, have attracted the attention of academics in South Africa. For example, one finds that Trotter (1976, 1977 and 1984), Malherbe (1977) and the reports of the de Lange Commission (1981) on the provision of education in South Africa, all rely heavily on human capital theory in their respective outlines of a

rationale for the provision of education by the state, and also devote considerable attention to the equity aspects of education. The most prominent recommendation of the de Lange Commission (1981) is that the achievement of 'parity' (i.e. equal standards and opportunities) in the education received by members of the different race groups of South Africa be considered a national priority.

In this chapter attention is focussed on problems relating to the second of the above-mentioned phenomena, namely, the possibility that the state could improve welfare by its intervention (e.g. by itself providing education) if market failure or 'inequities' exist. These problems are discussed both in partial and general equilibrium contexts. In a partial equilibrium context the possibility of making a comparison between the costs of market failure and government failure is considered. The purpose of this comparison is to determine whether or not the state will improve welfare by itself providing education. It will now be shown that such a comparison is complicated by the fact that these costs are difficult to measure and that the problem of market failure may not be as serious as it is often believed to be. In a general equilibrium context the theory of second best will be used to show that in order to evaluate the welfare

results of the provision of education by the state, it is necessary to specify the social welfare function. This complication is made even more relevant when a distributional rationale for the provision of education by the state is 'added' to the market failure rationale.

**1. The problem of comparing 'failures'**

A potential for the state to improve welfare through the provision of education arises when certain cases of market failure occur. Five cases of market failure which can be alleviated by the provision of education by the state are listed below.

- (a) The most commonly cited case of market failure which could be considered important for education is that where positive external effects emerge (as seen, for example, in the works of classical writers such as Smith, Marshall, Malthus and Mill as reported by Cohn, 1979, pp.20-22, and in a South African context, in the Finance Committee Report of the de Lange Commission, 1981). These effects (which are sometimes termed 'employment related external benefits')

emerge when income gains are experienced by people other than those who have received the education and these gains are a direct (ideally measurable) result of improvements in their productivity (Blaug, 1972, pp.102-112).

Presumably they take the form of educated supervision raising the productivity of less educated members of a working team in industry (Blaug, 1987, p.110).

It is also sometimes argued that improved child care and civic functioning are examples of external effects of education, because these phenomena can also be linked to the efficiency of labourers in the economy.<sup>5</sup> By improved civic functioning is meant, inter alia, developing citizens who are literate, who wish to improve themselves and others through knowledge, are patriotic, share the same fundamental values and limit the sizes of their families. Besides external production benefits there are also external consumption benefits. These emerge when the provision of education is responsible for the discovery of new talents.

All that is spent during many years in opening the means of higher education to the masses would be well paid for if it called out one more Newton or Darwin, Shakespeare or Beethoven. (Alfred Marshall, reported in Cohn, 1979, p.21)

- (b) Another case of market failure is where public good characteristics (i.e., jointness in supply) are evident, that is, where technically it is difficult to exclude anyone from sharing the benefits of the education which is provided.<sup>6</sup> In this case two related problems prevent an adequate provision of education, namely, the free-rider and assurance problems. Where people who desire education cannot effectively be excluded from receiving it if it is provided, such as over the radio or television, they have an incentive to deny that they receive any benefit from it and avoid contributing towards the cost of this provision; they have an incentive to free-ride. Similarly, where an individual lacks the assurance that other individuals will not free-ride, he will avoid contributing to the costs of this provision because he will not want to pay their share of the costs, as well as his own.

- (c) Market failure can also arise because the market participants possess imperfect information on the benefits of education.<sup>7</sup>
  
- (d) Similarly, where the market participants face imperfect capital markets in the financing of their education, market failure can arise. In this connection one thinks of poor scholars who are unable to raise the money for a profitable investment in human capital because they cannot offer collateral security.
  
- (e) A case of market failure can also arise where increasing returns to scale facilitate a natural (government) monopoly in the provision of education.

If any one or more of these cases of market failure is relevant, the potential exists for increasing economic efficiency by offsetting the distortions which are thereby introduced into the economy. This potential may be realised, *inter alia*, through the provision of education by the state.<sup>8</sup> A welfare assessment of this solution can be conducted at a partial or general equilibrium

level. In this analysis attention will mainly be focussed at the general equilibrium level.

At a partial equilibrium level a comparison is made between market failure and government failure and a 'welfare' assessment consists of deciding where a 'healthy' balance is achieved between the 'failures'. In this context the issue of whether the state can improve welfare by providing Black schooling becomes one of determining whether or not market failure in the provision of such schooling 'outweighs' government failure.

But can a meaningful comparison be made? The cases of market failure are listed above. In the light of the evidence presented in Chapter 3, two cases of government failure also deserve mention, namely, government inefficiency caused by bureaucratic rent-seeking ('inherent' government failure) and the expenditure of resources on the attainment of political influence ('induced' government failure), where the incentive to gain such influence is related to the level of government 'intervention' in the economy.

It seems possible that the cost of some aspects of market failure and government failure could be

estimated and a comparison be made on this basis. However, such a comparison (being based on less than the full costs of these failures) will not enable one to draw concrete conclusions. In order to determine the full costs of these failures one has to measure all the differences between market situations and government behaviour under perfect conditions and under real conditions, which is not feasible in practice.

In practice the closest an economist can come to making such a comparison is by comparing the private rate of return to investment in education with the social rate. If the social rate greatly exceeds the private rate he can argue that this indicates a 'severe' case of market failure, and that the severity of the problem is a reason in itself for increasing government expenditure on education. However, generally speaking the reverse is true; private rates of return to education exceed social rates, even in Africa (see Psacharopoulos and Woodhall, 1985, pp.56-57).

**2. Market failure, general equilibrium analysis and the social welfare function**

With respect to policy decisions a partial equilibrium approach is in fact only justifiable where the impact on the whole economy of an additional distortion or constraint is minimal and therefore can be ignored. For example, it would appear legitimate to ignore a constraint in the toothpick industry when analysing the steel industry because it is likely to be of no significance to the latter. However, this type of situation does not seem to apply when the government intervenes by providing education itself, as it does in the case of South Africa. Approximately 6 per cent of GNP is spent on education by the state in South Africa, i.e., a large component. Furthermore, in South Africa the taxes used to raise the required money are distorting.

To sum up, not only are distortions introduced into the South African economy as a result of the provision of education by the state, but these distortions are large scale. For these reasons a general equilibrium analysis of government expenditure allocations to education in South

Africa would seem to be more appropriate than a partial one.

In terms of general equilibrium (welfare) analysis, the potential to redress market failure is not a sufficient justification for such government intervention in its own right, but merely a necessary one. A sufficient reason for government intervention can only be established if the intervention is also efficient in terms of the theory of second best. This means that social welfare must be increased by state intervention, which according to the theory of second best may not be the case. However, in order to determine this, it is necessary to specify the social welfare function.

The social welfare function is defined as a utility relation incorporating the utility levels of all members of society, and is based on the axiom that higher values are preferred to a lower ones. Such a function is often referred to as a Bergson (1938) function, after the man who first used the idea. Harsanyi (1955) was the first person to provide an ethical justification for the treatment of social welfare in this way. Economists tend to restrict their attention to

that part of the function which may be related to money, i.e., to the 'measurable' part.<sup>9</sup>

In the context of this analysis 'measurable welfare' relates to the costs and benefits of education which can be estimated as a monetary sum (Blaug, 1972, pp. 102 - 112). To the extent that economists are explicit on the issue, they typically relate these costs and benefits to social welfare in terms of Harberger (1971) type functions (although few economists explicitly admit to doing so). This function relates utility to monetary costs and benefits in a positive linear way. The assumption which underlies the function, is that any distributional consequences arising from government expenditure (on the provision of education) are neutral, i.e., do not influence social welfare.

However, when used in this way the Harberger (1971) social welfare function is employed more because it eliminates the need for a more complex (but just as arbitrary) weighting of income in the course of cost-benefit analysis than because economists actually believe in the ethics which underlie it. Furthermore, economists have long recognised that except under restricted

circumstances the relationship between money measures and utility generated can neither be a constant nor a simple linear one.<sup>10</sup> Money measures are for the most part generated in a market environment, whereas the utility generated depends on the intensity of the desires satisfied, and the latter normally differ for the same money value of goods from person to person, situation to situation and time to time in indeterminable ways.<sup>11</sup> Therefore, in reality a standardised measuring rod, namely money, will most often be related to different utility levels and hence to different levels of welfare between persons and across time and situations - quite contrary to the implications of the Harberger (1971) social welfare function. As a result, despite the convenience of the Harberger (1971) function, it is not an adequate basis for determining welfare and (as would be expected) is not regularly referred to in welfare analyses of education.

The criterion which appears to be most regularly referred to in welfare analyses of education is that of Pareto. This criterion may be used to compare different allocations of goods. A Pareto preferred allocation is one where all parties are at least as well off under this allocation as

under any other allocation; and at least one of them is better off. Its popularity arises from the fact that in order to maximise Pareto welfare there is no need to make inter-personal comparisons of utility. Based on the Pareto criterion it is possible to derive a set of marginal conditions which describe points on a welfare frontier (Graaff, 1971, p.60). However, there are also problems with the approach. The most significant of these problems is the demonstration by Lipsey and Lancaster (1956-7) that Pareto criteria cannot generally be relied upon to point the way to an improvement in welfare where market failure exists. They demonstrate that if one of the Pareto criteria cannot be met (and thus a 'first' best social welfare position be unattainable) fulfilment of the other criteria will not necessarily enable a 'second' best social welfare position to be achieved. In other words, it is possible that a new constrained optimum may only be attainable by also departing from other Pareto criteria as well.

A further fundamental problem with the Pareto criterion is that it is founded on a tacit but very important ethical assumption, namely that the current distribution of income is preferable to

all others (Melck, 1987). This is because only those 'shifts' through which at least one person benefits and no one loses are sanctioned. As soon as there is a potential loser, the status quo is preferred. As a redistribution of income is by definition a situation in which some people benefit and some people lose, any redistribution will fail the Pareto test. Furthermore, for every distribution of income there is a set of Pareto optimal conditions as well as a set of prices for the goods and services produced under those conditions. This means that the distribution of income must be determined *a priori* on the basis of the ethical norms of society before pronouncements on Pareto efficiency are attempted (Melck, 1987, p.260).

**3. The problem of incorporating distributional motives into a welfare rationale**

The limitations of welfare analysis are made all the more apparent when redistribution takes place as a result of the provision of education by the state, whether this be the result of a deliberate policy or not. A distributional rationale for state intervention can be established by showing that the existing distribution of income differs

from what is ideal, and that through state intervention it would be possible to reduce this difference. The main weakness of this type of rationale is that there is considerable disagreement between members of society (and economists) over what constitutes an ideal end-state pattern of distribution. The latter concept is explored in greater depth in Chapters 5 and 6. It does not coincide with the concept of an efficient distribution of wealth envisaged by authors such as Graaff (1971) and Samuelson (1954; 1955)

In general the distribution of outputs among final consumers will affect the efficiency of labour....When it does, we have no alternative but to distinguish (in both social and private transformation functions) between physically identical units of output going to different consumers. (Graaff, 1971, p.27)

There are also differences in perception amongst economists over what 'facts' are relevant about distribution (as will be shown in Section 4 below), over whether government expenditure on education does or does not reduce inequality, and over the issue of whether efficiency is sacrificed or improved when distributional objectives are pursued. The essence of the latter two issues are outlined below.

There is considerable doubt as to whether the indiscriminate provision of 'free' education by the state does indeed reduce income inequality.<sup>12</sup> People who are already from an above average income cohort are also usually in a better position to exploit the opportunities for education thereby created (by performing better in tests and examinations). As a result, the provision of 'free' (secondary and higher) education by the state can aggravate rather than reduce the inequality problem, because poor people are made poorer by their tax payment, while rich people are made richer by the extra earnings they derive as a result of their better subsidised education. In effect the present poor are taxed to subsidize the future rich.

It was stated above that a Pareto efficient configuration could only be defined once a specific distribution of income had been chosen. In this sense 'efficiency' is a static concept. In a dynamic model 'efficiency' is used to denote not only the way existing resources are used but also how resources are generated over time for future use. In both cases the efficiency which can feasibly be attained is determined by the distribution of income chosen. That is to say,

economic growth may be affected; there may be a trade-off between growth and a more equal distribution of income.

In addition, a phenomenon such as the Scitovsky (1941) paradox may become relevant, i.e., where both more and less publically produced education are considered to be preferable, depending on the current distribution of income, with the current position always appearing to be less desirable than its alternative. The paradox is illustrated in Figures 4.1a and 4.1b (overleaf) with the use of 'potential' rather than 'actual' welfare concepts (Graaff, 1971, pp.55-74).

Figures 4.1a and 4.1b  
The Scitovsky (1941) paradox

Figure 4.1a

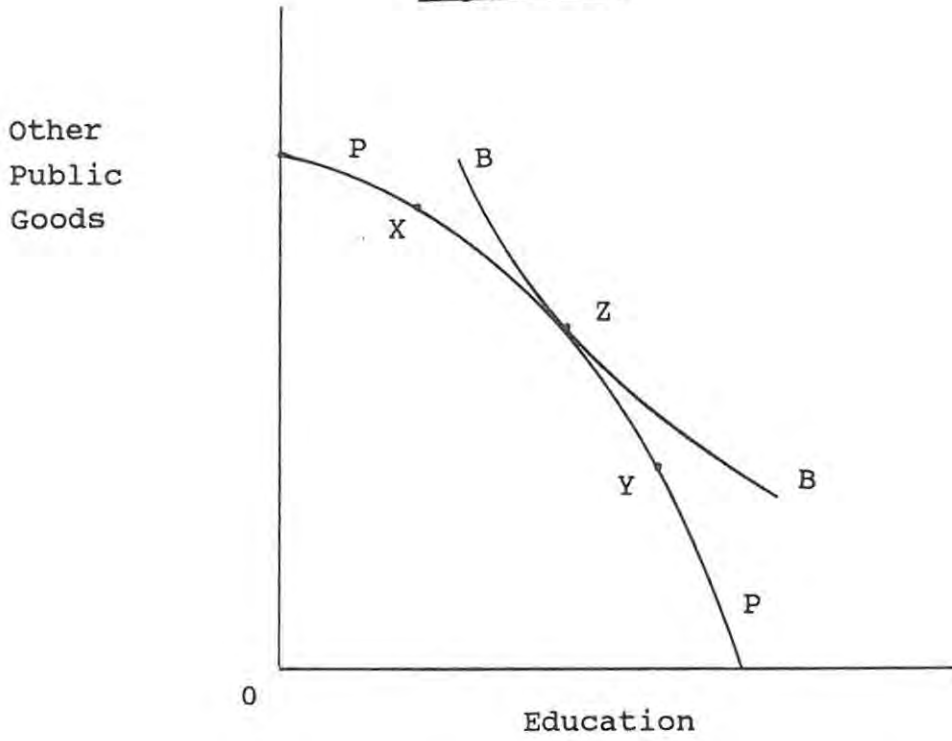
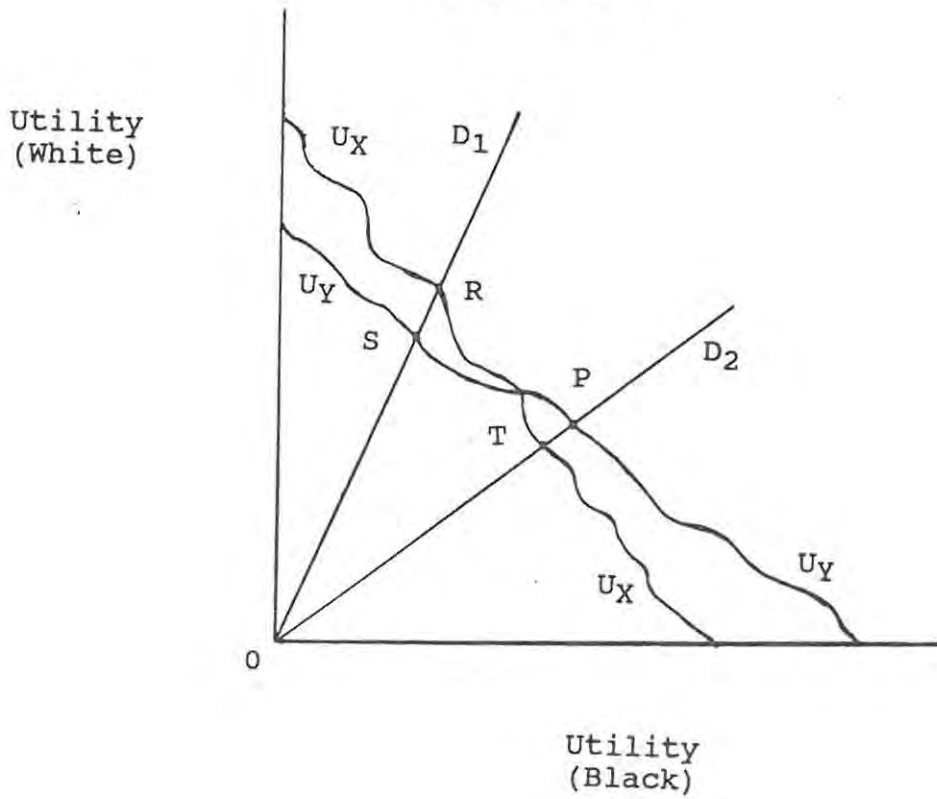


Figure 4.1b



In Figure 4.1a, the PP curve is a social transformation function (alternatively called a production possibility frontier) and the BB curve is a social indifference curve of the Bergson frontier type corresponding to a Pareto welfare function. Furthermore, as Pareto himself did, it is assumed that external effects are absent in consumption (Graaff, 1971, p.57).

External effects exist in consumption whenever the shape or position of a man's indifference curve depends on the consumption of another man (Graaff, 1971, p.43).

By excluding external effects in consumption it is possible to avoid interpersonal comparisons in defining the BB curve.

When external effects in consumption are absent from consumption social and private rates of indifference coincide and are quite unambiguously determined by individual utility functions (Graaff, 1971, p.57).

In terms of a Pareto general optimum interpersonal comparisons can be avoided because the levels of well-being of all men except one are fixed and that one is made as well off as possible. The points X, Y and Z all lie on the PP curve, but only point Z also lies on the BB curve.

In Figure 4.1b the utility levels of a White and a Black, associated with points X and Y, are shown by welfare frontiers (alternatively called utility possibility frontiers)  $UU_X$  and  $UU_Y$  respectively.<sup>13</sup> Along these frontiers, social welfare is maximised in terms of any Pareto welfare function, there are no upward sloping sections, and movements along the frontier can be secured by lump-sum redistributions of the fixed collections of goods (Graaff, 1971, pp.60-63). If welfare frontiers corresponding to all points on the PP curve were drawn, the outer limit (or envelope) of these curves would define a grand utilities possibility frontier. In the context of such a frontier it is possible to identify what Samuelson (1955) defines as the 'optimum of all the Pareto optima'. This optimum occurs at all points where the highest social welfare function tangentially touches the grand utilities possibility frontier.<sup>14</sup> In Figure 4.1b the two rays from the origin,  $D_1$  and  $D_2$ , represent alternative distributions of utility.

If one assumes that the initial allocation of public goods is indicated by point Y and the initial distribution by ray  $D_1$ , it is clear that an improvement in welfare could be achieved (compare R with S) by the state cutting back on

its provision of education. However, if one further assumes that at the same time and on the basis of a distributional rationale, a hypothetical lump-sum transfer (with the funds made available by this reduction) is made to the Black person, thereby changing the distribution of utility from  $D_1$  to  $D_2$  (but leaving society on its welfare frontier) a potential improvement in welfare no longer can be achieved by the state decreasing its provision of education.<sup>15</sup> In this case the potential exists for welfare to be increased by the state reversing its previous policy, by lump-sum measures to increase the provision of education, as can be seen by comparing (in Figure 4.1b) points T with P. Thus, before and after redistribution, the use of a hypothetical compensation test (procedure) by which to compare different allocations of public goods produces contradictory conclusions - the essence of the Scitovsky (1941) paradox.<sup>16</sup>

The Scitovsky (1941) paradox serves to demonstrate that distributional criteria may contradict Paretian efficiency criteria (Mishan, 1981, p.40). As already indicated above, the latter are a set of marginal conditions which describe efficient points on a grand utility frontier and which are

based on the Pareto criterion. In order to resolve the contradiction between the two sets of criteria it is necessary to reduce them to (or replace them with) one overall 'welfare' criterion, and to do this one has to specify the social welfare function. Hence, we may conclude that if a welfare justification for distributional criteria is to be provided, the problem of specifying the social welfare function cannot be avoided.

For this reason, it is not surprising that (despite the daunting practicalities of the task) there have been attempts to make progress along these lines. The attempt of Hochman and Rogers (1969) is considered below. Hochman and Rogers's (1969) derive a set of properties a welfare function would need to possess in order to support what they call a 'Pareto optimal income redistribution' through state intervention. They develop the concept of a 'Pareto optimal income redistribution' between a rich person (in the case of South Africa, say a White) and a poor person (say a Black) in a two person community using utility functions, such as those shown below.

$$U_B = f_B(Y_B; Y_W) \dots \dots \dots (4.1)$$

$$U_W = f_W(Y_B; Y_W) \dots \dots \dots (4.2)$$

In the above functions,  $U_B$  and  $Y_B$  are the initial values (i.e. prior to redistribution) of the Black individual's utility index and income respectively, and  $U_W$  and  $Y_W$  are those same values for the White individual.

Hochman and Rogers (1969) show that if these functions are specified in accordance with the following restrictions:

- (a)  $\partial U_B / \partial Y_B > 0$
- (b)  $\partial U_W / \partial Y_W > 0$
- (c)  $\partial U_W / \partial Y_B > 0$
- (d)  $\partial U_B / \partial Y_W < \partial U_B / \partial Y_B$

, that income transfers which make everyone better off are possible, although not assured. The cornerstone of their argument rests on the fact that as an interpersonal utility comparison, restriction (d) is not very demanding. However, whether this restriction is demanding or otherwise is a matter of conjecture, rather than reasonableness. From a White perspective, the incorporation of restriction (d) alone and not others in order to formulate the social welfare function could appear very demanding indeed. It would seem equally (if not more) plausible that a White would have been more content had (d) been specified as follows:

$$\partial U_W / \partial Y_B < \partial U_W / \partial Y_W$$

However, in this case Hochman and Rogers (1969) style functions could support a redistribution from Blacks to Whites.

In conclusion, the welfare rationale for state intervention in the provision of schooling is unclear and becomes more complicated if distributional criteria are added. Because the characteristics of an efficient configuration are determined by the distribution of income or, in a dynamic setting, feasible efficiency is constrained by the distribution chosen, the distribution desired by society must be set before the efficient allocation of resources to education can be derived. However, if it is not possible to justify a particular distribution of income using an economic welfare rationale; *a fortiori* it is not possible to justify a particular allocation of education using welfare economics. For the purpose of welfare economic analysis society's objectives in this regard must be stated axiomatically.

4. **A review of the de Lange Commission's position on redressing inequality and improving efficiency in South Africa through the provision of education**

In the de Lange Commission Report (1981) on the provision of education in South Africa (specifically, that of the Work Committee: Education Financing) the authors adopted the view that the two objectives of efficiency and redressing inequality through education were (probably) compatible. However, in the light of the foregoing analysis it will be shown that there are several weaknesses in their argument. It will be argued below that from an economist's perspective there is insufficient empirical support for their views, that they are inconsistent on the question of redressing inequality and that there is insufficient foundation for their premise that the bringing about of equality in the provision of education is desirable in its own right.

In order to support their view that efficiency would be improved they use Joubert's (1978) estimates of the private rates of return to White, Coloured and Indian (but not Black) education. Joubert's (1978) estimates are made using a Mincerian (1974)

earnings function approach. There are various reasons why this support can be considered inadequate. Firstly, Joubert (1978) did not estimate a rate of return to investment in Black education. Secondly, Joubert (1978) estimated private and not social rates of return and it is only in the context of the latter that it can be argued that government expenditure improves social welfare. Finally, as has been shown in Chapter 2, it is inappropriate to place reliance on the accuracy of rates of return to education calculated on limited bases, even in terms of a Mincerian (1974) earnings function.

Their approach is also inconsistent on the redress of inequality:

With the same degree of skewness (in government expenditure) but with a selection process which would achieve a composition of the elite group that would be more representative of the total population than its present composition, a higher return on the given investment in education would also be realised (Report of the Work Committee: Education Financing, 1981, p.6).

The problem with their argument is that if a higher average return could be achieved in this way (and this is a controversial point) the problem of inequality would not be redressed but

merely changed.<sup>17</sup> Under this system, the inequality problem would become one where differences in income were determined by a person's success in passing tests, because this success would open the doors to him of education at higher levels (where in fact the government subsidies are generally much higher than they are at lower levels) and thereby enable him to achieve higher earnings in employment. This inequality problem would also tend to repeat itself across generations, because to achieve success in tests depends significantly on the resources, culture, efforts and ambitions of the parents of the pupil (Johnson, 1971, p.285; Bowles, 1971, pp.219-255).

Probably the most serious failing of the authors of the de Lange Commission Report (on Education Financing) is the mixing of socio-political objectives with economic objectives without reference to the trade-offs involved. One example is the implicit premise that it is economically desirable to bring about equality in the provision of education between members of the different race groups (see also, for example, Malherbe, 1977; Trotter, 1977; Thembela, 1986; Hartshorne, 1986; Pillay, 1989).

Societies are justified in setting their own objectives, which naturally encompass more than purely economic aims. Many of these objectives may in fact be in conflict with the aims of economic growth or efficiency. Consider, for example, the aim of placing a man on the moon - an objective with questionable economic returns, but nevertheless one which has always been taken seriously. Likewise, given a particular socio-political and moral framework, society may justifiably wish to equalise government expenditure on education. The fault lies in not accepting the objective axiomatically but in rationalising it, using an incorrect economic approach to do so. The correct approach in most cases is not trying to show that the benefits exceed the costs, but finding the most cost effective means of attaining the objective.

Although it is never made clear, the approach followed in the de Lange Report gives the impression of being based on a 'selected facts' approach. In terms of this approach the economic desirability of equalising the provision of education between members of the different race groups in South Africa is not rationalised on utilitarian assertions, as would be appropriate in

a proper welfare analysis, but on a belief in selected facts. An example of such an approach is provided below, where facts (a) to (c) are listed, and from which the hypothesis (d) is derived.

- (a) Whites earn more than Blacks - estimated to be four times as much on average (SAIRR, 1982, p.63).
- (b) Under successive 'White' governments Whites have come to own most of the productive land and capital in South Africa and yet constitute only about 18 per cent of the total population.
- (c) Under 'White' governments, government expenditure per capita on Whites has been greater than on Blacks. For example, in 1987, an amount of R3320,7 million was allocated to White education and R3400,2 million to Black education (see Table 1.4). Yet in the same year 6 644 859 Blacks and 954 454 Whites enrolled at schools in South Africa and the homelands and about 72 344 Blacks and 186 027 Whites at universities; many more Blacks overall (Table 1 and SAIRR, 1987/8, p.181). Some authors also perceive 'high' allocations of government expenditure on defence as allocations for the benefit of

the Whites only (for example, Malherbe, 1977).

(d) Inequalities (b) and (c) listed above contribute to inequality (a).

On the assumption that the hypothesis (d) has been confirmed it is believed that 'parity' in the provision of education in South Africa is not only desirable, but will help bring about 'parity' in the income earned by Blacks and Whites - if not immediately, then more assuredly in the long run (see, for example, Abedian, 1986).

There are many limitations to a 'selected facts' approach such as the one provided above. One limitation is that it is entirely uncertain whether or not income parity can in fact be brought about the way assumed in (d) above.<sup>18</sup> There are many factors other than inequalities (b) and (c) which also contribute to inequality (a) and some of these factors are of fundamental importance (in the sense that they not only influence (a), but also (b) and (c) as well). The other factors referred to include parental choice of family size, perceptions of value, culture and geographical location. As one would therefore expect, the experiences of other countries do not confirm (d). In an international context there is

conflicting evidence on the exact nature of the connection between educational expansion and income inequality (Psacharopoulos and Woodhall, 1985, pp.264-270; Ram, 1989, pp.185-195).

### Conclusion

The welfare rationale typically employed to justify the provision of education by the state in South Africa is a blend of efficiency and distributional arguments. However, these are arguments which lead to indeterminate conclusions.

The efficiency basis for the provision of education by the state is developed on human capital theory and the presence of market failure. The use of market failure as a rationale for the provision of education by the state has been reviewed in this chapter in the context of the compensation test and the theory of second best. In both of these contexts it is clear that if the provision of education by the state is to be justified, the social welfare function must be specified (in order to determine the distribution of welfare desired by society). The problem with this requirement is that economic science has no objective way of doing so. In

reality the social welfare function is nothing more than an

expository device enabling us to talk about curves without abandoning a behaviourist approach to welfare (Graaff, 1971, p.35).

From an economic perspective the requirement would not be an overly serious problem if the majority voting system could largely be relied upon to reflect the social welfare function. However, unfortunately such reliance would be misplaced - a conventional welfare approach does not encompass issues of public choice, such as the reliability of the majority voting system to reveal society's preferences, other than to observe that the system cannot generally be relied upon for this purpose (Arrow, 1951). Therefore at present, welfare economics has no alternative but to accept the welfare function axiomatically; and this being the case, it cannot be argued on the basis of economics that a particular axiom is either good or bad.

In Chapters 5 and 6 respectively, some liberal and contractarian perspectives of the role played by the state with respect to Black schooling in South Africa are outlined. These are not alternatives to a welfare approach. It will be shown that they are complementary approaches, in that from these perspectives different and not contradictory insights into government policies

are generated. By considering all three approaches it can be shown that many ethical issues are relevant to government policy on educational expenditure and that these issues are more complicated than they may at first seem.

**Notes**

1. Utilitarianism, the dominant tradition in welfare economics, can be separated into three parts, namely, welfarism, sum-ranking and consequentialism (Sen and Williams, 1982; Hamlin, 1986). Welfarism, the most fundamental part of utilitarianism, is concerned with the translation of individual preferences into utility levels. Sum-ranking, the most controversial part, involves ranking of these preferences in terms of utility sums. Its controversial nature derives from inter- personal utility comparisons.

As a result of the controversy surrounding sum-ranking, it is often explicitly avoided, and a Paretian approach followed. Paretianism is a special type of utilitarianism where no sum-ranking is attempted, thereby reducing the need for inter-personal utility comparisons to situations where no one is worse off. In this thesis the term 'welfare rationale' is used to 'capture' all aspects of utilitarianism, namely, welfarism, sum-ranking, consequentialism and Paretianism.

2. The time horizon adopted in a welfare analysis demarcates the group of men in whose welfare one is interested (Graaff, 1971, pp.116-121).
3. A productivity benefit can be considered a return to investment (as done in Chapter 2) or a by-product of consumption (as done in some welfare analyses, e.g. Melck, 1987, p.160)
4. In any market economy, where an allowance is made for macroeconomic stability a rationale for the provision of education by the state can be argued to encompass a welfare judgement about the fiscal policy appropriate to the macroeconomic situation. A lower level of education expenditure would be appropriate (and hence socially desirable) under a macroeconomic policy of fiscal restraint, whereas a higher level of education expenditure would be appropriate under a macroeconomic policy of fiscal stimulation. It is plausible that the provision of education by the state is to some extent affected by changes in policy on macroeconomic stability because over the last few years expenditure on education by the state has accounted for about 17 to 20 per cent of the total budgeted.

However, there is little agreement on what approach the government should follow in order to stabilise the economy. Monetarists and non-monetarists disagree both on the principal sources of instability in the economy and over the ability of the government to fine-tune the economy along an optimal natural growth (of real gross national product) path. Modigliani (1977), for instance, identifies private spending as the principal source of instability in the economy, whereas Friedman (1968) believes that inappropriate government monetary and fiscal intervention are the principal sources of instability in the economy.

In terms of a non-monetarist perspective of fiscal policy, the level of government expenditure on education may in part reflect the government's attempt to sustain macroeconomic stability.

5. For example, Friedman (1962) does so in his review of the case for state intervention in his celebrated work, Capitalism and Freedom. Blaug (1972) strongly objects to this practice. He contends that phenomena like improved civic functioning are "atmospheric effects" (p.108), i.e., non-economic in essence. He argues that they are non-economic because they are not reflected in market values in ways which can be measured. On these grounds he recommends that they be considered separately, as 'other' advantages of education.
6. Samuelson's (1954) definition of a public good is used here.
7. The fact that individuals may have imperfect information on the benefits of education has been recognised for a long time. For example, see Marshall (1938, pp.571-574).
8. The provision of education, although the primary focus of this thesis, is not necessarily the most appropriate way to address all forms of government failure. This type of solution would appear most appropriate for cases (a), (b) and (e). In order to redress the type (c) market failure, the provision of counselling services would appear more appropriate, while direct state participation in the capital markets would seem more appropriate to redress type (d) market failure. As the provision of education is the primary focus of this thesis, the most relevant of the market failure cases for state intervention discussed in

this chapter are those of (a), (b) and (e), particularly the former two. The provision of counselling services and participation in the capital markets are only relevant in so far as they require money to be spent by the state and therefore influence the allocation of government expenditure on education.

9. The consideration of welfare matters other than 'the measurable part' has conventionally been felt by economists to lie beyond the limits of the 'science' of economics (Pigou, 1938, pp.3-23).
10. Empirical work on many different people's evaluations of different levels of income within a finite time horizon show such evaluations to follow a log-normal distribution (van Praag, Kapteyn and van Herwaarden, 1977).
11. The complexities of specifying the social welfare function are enormous. A social welfare function must relate monthly and lifetime incomes to utility between individuals of both the same and other generations in a fixed and realistic way. In this regard it is noteworthy that economists have not been very "clear and simple" on its nature at a given instant in time, let alone across full lifetimes and between generations (Johnson, 1971, p.286). It is necessary to consider intergenerational effects because the situation and choices of parents have a very significant bearing on the welfare benefit their children derive from education (Bowles, 1971).
12. A distinction should be made between different educational levels. Basic education ensures literacy and numeracy and is a prerequisite for employment in an industrial economy. Its provision by the state therefore helps those who would not have had access to the formal economy to earn incomes and may reduce income inequality. However, the position with secondary and higher education is different.
13. These welfare frontiers can assume any of a great number of possible positions. In this case they are assumed to cross each other, but there is no reason why they should do so.
14. A distinction should be drawn between social indifference curves (Bergson) and welfare functions. In the case of social indifference curves we have goods on the axes (see Figure

4.1a), whereas with welfare functions we have utilities on the axes (see Figure 4.1b).

15. It is necessary to refer to 'hypothetical' lump-sum transfers because such transfers are neither practical nor feasible (Graaff, 1971, pp.77-80).
16. The Scitovsky paradox is described here in 'potential welfare terms. It was originally formulated in terms of what Graaff (1971, pp.86-87) describes as 'feasible welfare', that is, in terms of what could actually be achieved in non-optimally organised societies. Scitovsky's (1941) paper serves to demonstrate the limitations of the Kaldor (1939) and Hicks (1940) compensation tests. In essence Kaldor (1939) and Hicks (1940) argued that if winners could compensate losers and still remain winners after a given change, a case existed for considering the change to be Pareto superior. In order for the test to have practical significance the compensation must actually be affected.

In other words, in terms of Kaldor's (1939) and Hicks's (1940) approach all points on the frontier can be regarded as feasible end-points (and therefore preferred). The need for a compensation test arises because of the impossibility of using Pareto criteria to assess projects where redistribution occurs. If there is a loser, the use of Pareto criteria will always result in the status quo being preferred.

Scitovsky (1941) demonstrated that as soon as two 'efficiency loci' intersect, contradictions can emerge. The terms 'efficiency loci' and 'welfare frontier' are distinguished by Graaff (1971) in the following way:

The welfare frontier shows the best we can do, given tastes and techniques, in an institutional vacuum. The efficiency locus shows the best we can do if we take the existing institutional set-up as datum. (p. 76)

17. There is conflicting evidence on whether discrimination in government expenditure on education in favour of more able individuals does indeed improve efficiency, especially at the higher levels of education (Denison, 1971, p. 292).

18. Another (somewhat obvious) limitation to the 'selected facts' approach to the inequality issue in South Africa is that it 'permits' other important facts to be omitted from consideration. For example, in regard to inequality (c), other relevant 'facts' would appear to be that Whites also pay a disproportionate amount of the taxes used to finance government expenditure and that there are negative consequences of extending such taxes. Over the financial year 1975/6 (before the situation became complicated by the introduction of GST) it has been estimated that although the Whites share of government expenditure amounted to 56 per cent they contributed 76,9 per cent of the total tax revenue (McGrath, 1979). Conversely, over the same financial year Blacks received 28 per cent of government expenditure, while they contributed 16,2 per cent of the total tax revenue (Bromberger, 1982, pp.192-193). In the light of these figures inequality (c) is less offensive than it seems at first glance.

## CHAPTER FIVE

### LIBERAL AND MARXIST PERSPECTIVES OF THE ROLE PLAYED BY THE NATIONAL PARTY GOVERNMENT IN THE PROVISION OF BLACK EDUCATION

#### Introduction

In this chapter liberal and Marxist perspectives of National Party policies (from 1948 to the present) on the provision of Black education are discussed. Two 'types' of liberalism are identified, classical (that is, liberalism as it was originally formulated) and reform. The term 'reform' liberalism derives from an association by the public in Nineteenth Century England of liberals with political reforms (Moss, 1982, p.607); a major aspect of which was extending the right to vote.

Reform liberals will be shown to place more emphasis on 'positive' freedom and the outcomes of 'populist democracy' (Lingle, 1989) than classical liberals. The latter place more emphasis on 'negative' freedom. As a result of these respective emphases, reform liberals are sympathetic to many forms of government intervention in the economy which classical liberals reject. For example, they are sympathetic to intervention which is directed at bringing about greater equality (even if such intervention is on a large scale, as is typically the case in socialist states).

Another notable difference which exists between the two liberalisms is over the issue of property rights. While classical liberals consider such rights as fundamental, reform liberals do not. In the context of South Africa, reform liberals either disregard issues relating to property rights (such as Hofmeyr, 1987) or claim them to be irrelevant (such as Simkins, 1986). As could be expected, reform and classical liberal perspectives on the education policies of the National Party also have their differences; a major one being over how much education it is appropriate for the state to provide.<sup>1</sup> It will be shown that classical liberals favour a lower level of provision than reform liberals.

Some problems with the reform liberal position on the education policies of the National Party are also discussed; their position being that these policies prevented Blacks from becoming more productive (and hence earning more) and undermined the generation of sufficient skilled manpower for the needs of the South African economy (Malherbe, 1977; Hartshorne, 1986; Schlemmer, 1986; Abedien, 1986). The problems discussed are: that it is difficult to substantiate that investment in Black schooling in South Africa does in fact yield a high productivity return, as shown in Chapter 2; and that because they (Hofmeyr, 1987; Simkins, 1986) equate moral righteousness with mere popularity and employ Rawls's (1971 and 1974) contractarian analysis out of

context the ethical foundations adopted by reform liberals are not 'secure'.

In this chapter some Marxist views of the National Party's policy on Black schooling are also considered, but are shown to contribute little to the understanding of such policy; arguably because ethnic interests have been stronger in shaping the provision of education by the state in South Africa than have class interests. However, as no attempt is made in this thesis to investigate other aspects of a Marxist interpretation of the policies of the National Party, the validity of the Marxist thesis on South Africa cannot and should not be judged to stand or fall by this example alone.

#### **1. Two types of liberalism**

John Locke is usually regarded as the founding father of liberalism (Machlup, 1969, p.119). In its original (classical) form, it emphasized the importance of removing coercive constraints on the individual imposed by the state, so that he or she could enjoy freedom of choice. The desirability of freedom of choice is founded on the belief that the individual is the best judge of his own interests, can be relied upon to pursue them with dedication and appreciates the

responsibilities associated with his actions (Moss, 1982, p.606).

In terms of this approach (and what is often called a 'libertarian' one) liberty is taken to be a 'natural' right of all human beings and given a negative emphasis.<sup>2</sup> In particular, classical liberals attach importance to there being an absence of coercive influence on the individual by other individuals, or through human arrangements (Hayek, 1960, p.11). For this reason (as stated above) classical liberals are often characterised as proponents of 'negative freedom' (Berlin, 1975, pp.118-172; Hayek, 1960, p.19).

The concept of freedom can be considered as a 'triadic relation':

"x is (is not) free from y to do (not do, become, not become) z"(MacCallum, 1967, p.314),

where x ranges over agents, y ranges over preventative conditions and z ranges over actions or conditions of character or circumstance. Classical liberals are characterised by a particular set of ranges. For example, the agent they have in mind is a living human being, the preventative conditions they have in mind are arrangements made by other human beings and the actions they have in mind are the things that the person himself indicates he would want to do, such as

to express himself or raise a family or "rise to the top" (MacCallum. 1967, pp.223-327).

Reform liberals disagree that such ranges are ideal, especially over the range of preventative conditions adopted. In one sense they contend that the range of classical liberals is too wide, while in another they contend it is too narrow.

The classic liberal perception of preventative conditions is held by reform liberals to be too wide in the sense that the general will of the community is treated as a potential preventative condition. Jacques Rousseau was one of the earliest proponents of the view that the 'general will' should not be regarded in this way. He argued that

the property right exercised by each individual over his particular share is always subordinate to the right of the community over everything (Palgrave IV, 1987, p.226).

Rousseau believed that this subordination was necessary in order for the individual to escape domination by other members of his community. In other words, in Rousseau's view the general will of the community is most appropriately considered as a foundation for individual freedom rather than as a preventative condition.

In this context the right to vote assumes enormous importance. It is important because only by exercising this right can the individual participate in government and thereby permit a practical interpretation to be made of the concept 'general will'.<sup>3</sup>

Reform liberals do not only contend that the classical liberal perception of preventative conditions is too wide, they also contend that it is too narrow. In their view there are more obstacles to free human action than those 'few' considered by classical liberals, namely, those brought about by human arrangements alone. For example, they also perceive a lack of access to education, a lack of initial wealth and a lack of certain human talents as being obstacles to human action. For this reason reform liberals believe that there is much more scope than do classical liberals for government intervention to reduce these obstacles. In other words reform liberals believe that the government can increase individual freedom by intervening; it can create 'positive' freedom (Berlin, 1975, pp.118-172).

Reform liberalism is more complex than classical liberalism and there are many situations where the two liberalisms yield conflicting conclusions. These situations arise when 'negative freedom' has to be

sacrificed in order to realise 'positive freedom'. The provision of schooling by the state in South Africa gives rise to a situation of this sort.

From a reform liberal perspective, schooling is seen as a means whereby people are able to improve their employment and consumption choices, and thus enhance their positive freedom. However, the problem (from a classical liberal perspective) is that if the state is to provide such schooling, tax payments must be coerced from other individuals, thereby violating their freedom of choice over the benefits accruing to their private property (see for a discussion of the problems of taxation, Hayek, 1960, p. 306-323; Nozick, 1974, pp.169-174). For this reason large scale expenditure on education by the state is not favoured by classical liberals. However, (as observed above) because positive freedom may be enhanced, the reform liberal's position is different. He is obliged to make a choice between freedoms (Machlup, 1969, p.117) and typically that choice is for 'positive freedom' (for example, see Hartshorne, 1986; Simkins, 1986; Hofmeyr, 1987).

2. **Reform liberalism and the National Party's response to unrest amongst Black pupils**

Reform liberalism would appear to be the dominant type in South Africa; which is why Gerson (1987, p.251) describes it as being 'mainstream', and what leads Enslin (1985, p.133) specifically to stress the pursuit of 'equality' in her characterisation of South African liberalism. From Enslin's (1985) point of view, the main features of South African liberalism are

opposition to the Apartheid policies of the Nationalist Government

and support for

certain principles like that of equality, a rejection of racist discrimination, and the defence of certain rights (Enslin, 1985, p.133).

The 'choice of freedoms' dilemma faced by reform liberals is reflected in their views on the government's response to unrest amongst Black school children over the 1970s and 1980s (Hartshorne, 1986). In the process of controlling violent political activities, the National Party government was obliged to place greater restrictions on individual freedom than it had over the immediate past, and to explore new strategies by which to protect the interests of their constituency, the Whites. As a result, from the reform liberal perspective (and from the classical liberal

perspective) the situation in South Africa deteriorated because negative freedom was reduced. However, at the same time, and as a result of a substantial increase in Black political pressure, racially discriminatory policies were also being removed (as has been shown in Chapters 1 and 3). Thus from a reform liberal vantage point, the situation in South Africa also improved because positive freedom was enhanced.

Hartshorne's (1986) analysis of the role of the state in Black schooling also reflects the 'choice of freedoms' dilemma. His analysis contains expressions of dismay, at the government's 'intransigence' toward the Black schooling crisis, and distress, that the government's response to the crisis took so long and was so limited. The government's 'positive' reaction to this crisis took the form, *inter alia*, of the de Lange Commission (1981) and the White Paper (1983) which was based on this investigation. However, not all of Hartshorne's (1986) analysis of the role played by the government reflects negatively on the latter. There is also a concession in his analysis that the government appeared to be actively pursuing a policy of genuinely and substantially increasing government expenditure on Black schooling:

On a more positive note .... In the 1985/6 budget, at a time of considerable economic stress, education as a whole was given a 19 per cent increase, while the specific budget of the Department of Education and Training increased by 29,3 per cent to R917 million (Hartshorne, 1986, p.129).

This provision included a substantial allowance for technical education.

Reform liberals are heartened by these increases because they see them as making it possible for Blacks to achieve greater positive freedom, but they are concerned that such gains are negated by further erosions of Black negative freedom. The fact that this positive freedom may have been gained at the expense of the negative freedom of those people paying the taxes necessary to finance these increases, is not an issue with them. Their view is based on the perception that such a trade-off reflects the general will of the community, as would be reflected under real democratic circumstances (Hofmeyr, 1987), and by their belief that past injustices in South Africa make it impossible to determine the 'legitimacy' of current holdings (Simkins, 1986, p.48). Further elaboration on these points (especially the second) is provided below (in Sections 3 and 4 respectively).

### 3. The populist democratic viewpoint of South African reform liberals

The populist democratic viewpoint (what is or would be popular in a democracy) is often presented by reform liberals in South Africa as an aspect of the search for 'relevance'. Hofmeyr's (1987) paper is an example of this sort. In order to avoid 'irrelevance' she urges liberals in South Africa to become part of the process of change set in motion by the Black schooling crisis, and that a major dimension to such involvement should be 'engagement' with popular movements, namely, the 'left'. Her reason for rejecting the notion of non-alignment is as follows:

that the future of South African liberalism lies largely in black hands because blacks are the overwhelming majority of the population;

populist democratic reasoning. Hence, she concludes:

that a liberal institution must make an overt choice and broadly identify itself with the forces on the left (Hofmeyr, 1987, pp.310-311).

In this regard, she notes the existence of considerable common ground with Marxist views on education.<sup>4</sup> The latter are based on the Marxist conception of state, which is discussed later in this chapter.

Hofmeyr's (1987) ambivalence toward the left (and therefore socialism) is not without precedent. From its very inception reform liberalism was in fact strongly influenced by socialist sentiments (Machlup, 1969, p.120). In the works of Beatrice Shaw, Sidney Webb and other Fabian writers, reform liberalism advocated that the state should impose a national plan on the chaos of the market economy, and when reform liberalism takes this line it becomes indistinguishable from socialism (Moss, 1982, p.608). However, Hofmeyr (1987) does not follow the Fabian line of reasoning in her analysis. Her ambivalence toward socialism is based on the view that in South Africa it would be a highly likely outcome under a populist democracy.<sup>5</sup> Lingle (1989), although classical liberal in orientation, shares this view:

Populist democracy is (thus) compatible with, and in fact encourages, the type of centralisation of economic processes which are characteristic of socialism (p.20).

The difference between these two authors is that while Hofmeyr (1987) believes that populist democracy should serve as a source of authority for liberals, Lingle (1989) does not.

What is the most surprising aspect of Hofmeyr's (1987) flirtation with the 'left', is that it came at a time when there were growing doubts about whether people who

have lived in socialist states really do prefer them to capitalist ones (and reflected immediately after this time by events in Eastern Europe, the USSR and in the People's Republic of China) and about the economic efficiency of socialist systems.<sup>6</sup>

#### 4. The rejection by reform liberals of current entitlements in South Africa

##### 4.1 Nozick's (1974) entitlement theory

Another reason why reform liberals reject or choose to ignore the classical liberal argument that negative freedom is sacrificed when property rights are infringed (through taxation) in order to provide schooling, is that they reject the legitimacy of current entitlements in South Africa (Simkins, 1986). This reason will be considered in the context of Nozick's (1974) entitlement theory, which is one of the most influential contemporary theories on the question of entitlements. An outline of Nozick's (1974) theory is provided below.

In terms of Nozick's (1974) entitlement theory, people have a property right both in respect of their labour power and in respect of the 'holdings' that they come

into possession of in a just way. There are two principles of justice involved here, namely, a principle of justice "in initial acquisition" and a principle of justice "in transfer". The latter revolves around a definition of agreement in the exchange of property, while the former revolves around a definition of when a right to property comes into existence. Nozick (1974, pp.174-182), using a Lockean approach, defines a property right as coming into existence when the person appropriating the property:

- (i) improves it with his labour; and
- (ii) does not worsen the actual (rather than potential) position of others in his acquisition by preventing them from using freely what they previously could, or alternatively, compensates them sufficiently if their actual (rather than potential) position is worsened.

The fact that the principle of compensation is not invoked by Nozick (1974) to cover opportunities (potential) forgone makes the second requirement a weak interpretation of Locke's proviso that after acquisition there be,

enough and as good left in common for others (Locke, 1952, Section 27).

Nozick (1974, pp.160-167) contends that if a property right has come into existence, the socio-economic system which avoids its violation is the best one, and

in his view a free market system with a minimal state is the only feasible one which achieves this objective. His reasoning here is that other feasible systems (such as market socialism) embody some pre-conceived notion of a desired pattern of distribution, and that in order to maintain this pattern it is continually necessary to interfere with the actions and choices of people, thereby violating their rights. It is on these grounds that he compares the payment of tax above what is required to sustain a minimal state to forced labour:

it is like forcing the person to work n hours for another's purpose (Nozick, 1974, p.169).

For this reason Nozick (1974, pp.170-172) considers redistributive taxes to be immoral. The individual called upon to pay the tax has little choice in the matter - either he pays the tax or he must reduce the amount of work he does until his earnings are so low (just sufficient to cover his basic needs) that he is able to avoid the redistributive payment; he cannot avoid sacrificing negative freedom.

However, Nozick's (1974) moral opposition to tax does have exceptions; the main one being where the tax raised is used to cover the expenses of what he terms the 'minimal state'. He describes such a state as a type of 'monopoly agency' which individuals would voluntarily enter into a contract with in order to

protect themselves from violence, theft, fraud and breach of contract by others. His source of authority for this exception is the principle of compensation (Nozick, 1974, p.114).

In the first part of his treatise, Nozick (1974, pp.54-146) justifies the existence of the 'minimal state' on the grounds that almost all citizens, if given a free choice between anarchy (that is, a situation where there is private enforcement of justice) and making a contract with the 'minimal state', would voluntarily choose the latter. He believes they would make this choice because under the principle of compensation the net benefits of doing so would be greater, that is, the benefits left over after the cost of a tax payment to the minimal state had been taken into account. In terms of the principle of compensation the tax payment made to the minimal state should be in proportion to what a person stood to gain or save by entering into a contract with it.

Another (weaker) exception to Nozick's (1974) moral opposition to taxation can be argued to arise when many individuals' holdings simultaneously and in a consistent way fail to satisfy the principles of entitlement in 'initial acquisition' and 'in transfer'. Under such circumstances, as an issue of justice, the

role of the 'minimal state' is one of 'rectification' (of the injustice) and one way for the state to effect this is through redistributive taxation. However, it should be borne in mind that Nozick (1974) does not employ the principle of rectification with much conviction:

The principle of rectification presumably will make use of its best estimate of subjective information about what would have occurred (or a probability distribution over what might have occurred, using the expected value) if the injustice had not taken place (Nozick, 1974, pp.152-153).

In other words, the case for rectification rests on a comparison of an actual with a hypothetical history, where the latter is 'estimated' in terms of the principles of entitlement. Clearly, Nozick (1974) expects that in most cases the use of "subjective information" would yield ambiguous results. Yet, to the possible detriment of his analysis, he makes no serious attempt to resolve the problems posed by such ambiguity. His reason for evading a discussion of these problems is that the

issues are very complex and are best left to a full treatment of the principle of rectification (Nozick, 1974, p.231).

One such complexity would appear to be whether an individual's liability can be passed on to another

without his consent, and in particular whether one can be held liable for one's father's or one's race group's 'debts'? On the face of it the answer appears to be negative, because of the absence of consent on the part of the individual who 'inherits' the liability. However, reform liberals in South Africa have not been inclined to reach this conclusion.

#### 4.2 Reform liberal perspectives on 'rectification' in South Africa

As suggested above, reform liberals in South Africa are inclined to invoke the case of rectification as a rationale for the government to redistribute wealth from Whites to Blacks. Simkins (1986 pp.48-49) provides a good example of this approach: citing "forcible transfers of land" from Blacks and "a great deal of conquest" by Whites, he contends that a case exists for rectification, by the government redistributing income from Whites to Blacks. However, like many other reform liberals, he appears to make no attempt to compare the disparities as they actually are with those which would have resulted from a hypothetically just history.

Within the classical liberal framework one cannot come to a conclusion on the justice or otherwise of a

situation based on a current time-slice. Nozick (1974) points out that one can only come to conclusions on the basis of a current time-slice in terms of patterned theories of justice, such as, for example, Rawls's (1971). It is also not enough from a classical liberal perspective to show that the current distribution of holdings was facilitated by actions which prevented justice in acquisition, such as Land Acts, Pass Laws, etc. Before such actions can be allowed to assume significance there are at least two things which must be demonstrated. Firstly, it must be shown that a pattern of holdings different to those currently in existence would have occurred if principles of entitlement had been respected, and secondly, it must be possible to establish the proportion of this difference. However, there are many factors which make such a demonstration difficult, if not impossible. For example, inconsistencies between individual and group experiences, differences in culture, differences in access to overseas capital and differences in education all serve to complicate such a demonstration.

The same complications beset Simkins's (1986, pp.53-57) assertion that the inequalities in education expenditure per capita between the races in South Africa, which have been evident over the Twentieth Century, are unjustifiable. In order to make out such

a case in terms of liberal principles of entitlement it must be shown that Blacks merited more education from the state than they actually received. However, in the context of the principle of compensation, this case is far from clear. (This is not to say that there may not be other perspectives that do justify more education for Blacks.)

The reason why the case is unclear is that increases of government expenditure on Black education were increasingly financed out of 'general' revenues over the Twentieth Century, that is, out of taxes raised mainly out of the incomes of Whites and companies owned and organised by Whites (see Chapter 1). These financing arrangements were made necessary because taxes on Black incomes were insufficient to meet the costs of providing Black education (see Chapter 1). Therefore, in the context of the principle of compensation Blacks appeared to receive more and not less education than they were actually 'entitled' to.<sup>7</sup>

It follows that in order to make out a case that Blacks have been entitled to more education than they received, it is necessary to show that White incomes have been illegitimately high and Black incomes illegitimately low, and to estimate the illegitimate proportions. If White incomes were higher than they

would have been under liberal principles of entitlement and Black incomes lower, it follows that Blacks would have been able to pay more tax and Whites less tax, and therefore Blacks would have been entitled to greater levels of government expenditure on their education than they received, and Whites to lower levels than they received. Furthermore, if the illegitimate proportions could be estimated it would be possible specify appropriate rectification. However, this case can only be made if some clarity is achieved on the concept of a 'just' level of income, and as has already been pointed out, there are many problems which serve to prevent such clarity.

In this sense an interesting analogy exists between classical liberalism and the Pareto criterion discussed in Chapter 4. Both inherently favour the maintenance of the *status quo* because the onus of proving a different configuration, better than the existing one, rests on him who would suggest such a change.

Simkins's (1986) failure to address the complications of estimating a hypothetically just history of South Africa is not the only limitation to his case for rectification (*inter alia*, through expenditure on Black schooling). Another facet of his case, which is equally problematic, is that which he develops on the

basis of the notion that an equal distribution of income is, or at least should be, a universally acceptable social dispensation. In adopting this position Simkins (1986) operates within a Rawlsian (1971) concept of justice. In terms of this concept, justice can be considered in the context of two main principles (which will be discussed at greater length in Chapter 6). Simkins (1986) relies heavily on the second of these principles to support his position, namely, that social and economic inequalities should be both

to the greatest benefit of the least advantaged

and

attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls, 1971, p.83).

Using this principle as his source of authority Simkins (1986) concludes that Whites must be brought 'down' into line and Blacks 'up' into line. 'Ideally',

if the equalisation of per capita expenditure were achieved by 2000, everyone would enjoy the same level of services as Coloureds and Asians had enjoyed a quarter of a century earlier (Simkins, 1986, p.54).

However, the universal desirability of the redistribution necessary to bring about this 'ideal' is questionable. Simkins (1986) rests his case on the assertion that all South Africans would accept Rawls's (1971) principles (if they objectively addressed

themselves to the issue of what an ideal world would be like) and that these principles are consistent with such redistribution. What Simkins (1986 and 1987) does not explain is that Rawls (1971) did not intend his principles to be applied in the context of a country like that of South Africa (Du Toit, 1988). Rawls (1974) argues that his principles are only appropriate in the context of a "well-ordered society" and not in an unjust one, and it is clear that Simkins (1986) perceives society in South Africa to be unjust.

In his A Theory of Justice Rawls (1971) gives the impression that his principles could be applied in unjust societies:

The beneficiaries of clearly unjust institutions (those founded on principles which have no claim to acceptance) may find it hard to reconcile themselves to the changes that will have to be made. But in this case they will know that they could not have maintained their position anyway (p.176).

However, in a later work he specifically rejects this view:

I am afraid that I misled Alexander on this point by not being clear myself. The bottom lines of A Theory of Justice, p.176, are incorrect (Rawls, 1974, p.653).

What Rawls (1971 and 1974) does, is present a theory of justice and make a proviso that if one wished to relate

his theory to a real society, one should make sure that there was no "strain of compliance" with the principles of justice within that society, i.e. that the society was basically a just one.<sup>8</sup> What Simkins (1986) does, is relate the theory to South Africa as if Rawls's (1974) proviso was either of no consequence, or was met. For this reason, as Du Toit (1988) observes in connection with Simkins's (1986) application of Rawls's (1971) principles of justice to the case of South Africa:

Unless he can find a way of relating Rawlsian principles to our own historical experience and political traditions, Simkins' project is doomed to remain a purely academic exercise (pp.17-18).

The main practical problem of relating Rawls's (1971) second principle to the case of South Africa, would appear to be that Whites would reject it. An acceptance by Whites of this principle would amount to an acceptance that Blacks and others were entitled to the benefits of both their assets and their labour. Under these circumstances it seems plausible that most Whites would stand to lose less by refusing to become 'clients' of the minimal state.

From a classical liberal vantage such a refusal should be taken seriously. As Buchanan (1987) points out:

Individuals acquiesce in the coercion of the state, of politics, only if the ultimate constitutional 'exchange' furthers their interests. Without some model of exchange, no coercion of the individual by the state is consistent with the individualistic value norm upon which a liberal social order is grounded (p.246).

The relevance of this refusal has not escaped all reform liberals. For example, Hoernle' (1939), a pioneer of reform liberalism in South Africa, appears to have appreciated its significance well before the National Party came to power in 1948.

Hoernle' (1939 and 1979) set out to explain what underlay the

powerful 'will to segregation' on the part of the dominant Whites (Hoernle', 1979, p.4)

which characterised the structure of South African society and yet from an economic perspective was so impracticable. As could be expected, he found that the pursuit of White interests underlay this will. He distinguished two ways by which Whites pursued their interests, namely, "single-mindedly" and "double-mindedly", where the latter incorporated a paternalistic regard towards Black advancement.

He found both approaches to be equally offensive because:

if you segregate them whilst still holding them tight in your economic system, you are in fact introducing a caste system, a system of disguised helotry and serfdom, which is in bitter conflict with the whole Christian and humanitarian tradition of European civilisation (Hoernle', 1979, p.5).

In other words, both approaches were offensive because they permitted scope for Whites to dominate and exploit Blacks.

However, Hoernle' (1939) also believed that assimilating all races in South Africa into one multi-racial society was not an ideal solution. He realised that Whites would not accept such an arrangement because under it they would be rendered politically impotent (and thus would be unable to secure their entitlements through the state). For these reasons he concluded that the (reform) liberal was only left with one choice by which the domination of one race (the Blacks) by another (the Whites) could be avoided, namely, the total separation of the races, both politically and economically.

From a classical liberal perspective neither Hoernle''s (1939) community based rather than individual based interpretation of liberalism, nor the conclusion he reaches on this basis are useful. In terms of this perspective, a total separation would only have merit if the problems of securing and achieving respect for

just entitlements could not be resolved any other way, and it does not seem plausible that these problems cannot be resolved in South Africa. In principle, each particular case where there exists a dispute between individuals over a right of holding should be capable of being resolved in terms of principles of entitlement.

It is also debatable whether the gains achieved by Blacks through large scale redistribution would be worthwhile, even if universal acceptance of these redistributive policies could be obtained. In this regard Caldwell (1989, pp.60-73) has pointed out that Whites are insufficient in both number and wealth for immediate and substantial improvements in Black incomes to be accomplished through redistributive taxation on Whites. He estimates that to give each Black one additional Rand, it would be necessary to take six from each White or twenty-four from each household of four Whites. These estimates are probably conservative ones because when faced with the prospect of enforced redistributive government policies on a grand scale, it seems certain that many Whites would leave South Africa.<sup>9</sup>

## 5. The Marxist concept of state

Before discussing Marxist perspectives on the role played by the National Party in Black schooling in South Africa, some background to their concept of state is provided. Marxist analyses of the National Party's policies on Black schooling are conditioned by their concept of the state and in particular by the special relationship they perceive to exist between the owners of capital and the state. Like many liberals they perceive a connection between the interests of these owners and the actions of state. However, unlike liberals they do not see these interests as but one of many influences on the actions of state; they see this influence as the most powerful one. By virtue of the vast resources the owners of capital are able and permitted to control, Marxists feel that they are able to advance their interests (by manipulating people) within the structures of state to a far greater extent than any other interest group.

Marxists also place great emphasis on the fact that labour is not neutrally contracted, but is extracted from labourers through the coercive power of capitalists, and that the market economy and the state in such an economy, facilitate what can be extracted, and hence the degree to which labourers can be

exploited. The concept of exploitation is employed here to describe the use of a person as a mere instrument of production (in the form of a labourer) who has no choice but to be used, to the exclusive advantage of the capitalist (Buchanan, 1985, p.87). Marxists object to this practice because the ideology of Marxism is developed around freedom from exploitation.

The fact that Marxists feel much is wrong in capitalist states does not mean they necessarily hold the view (by way of contrast) that all is perfect in socialist states. Many contemporary Marxists also concede that the state in socialist societies has not (and does not) always behave in ideal or predictable ways (Bowles, 1981 and 1985). The major characteristic of their position is rather the belief that other concepts of state, particularly liberal ones, are not realistic alternatives to their own.

The views of Bowles (1985) are used to explain why they reject the liberal concept of state. Bowles (1985) argues that liberals hold too narrow a definition of politics because it only incorporates the practices of individuals and groups in the arena of government, whereas political activity is also evident in many other arenas, such as in the labour market and within

the family unit. He considers the liberal theory on politics in terms of the following 'grand question':-

How is it possible to develop a set of institutions which allow for the rational co-ordination of the social division of labour and which are at the same time compatible with a nonabsolutist state? (Bowles, 1985, p.152).

In the market economy he argues that liberals believe non-absolutism is secured by the political neutrality of the process of contracting. He points out that liberals are not inclined to see any reason why the power of the capitalist over the worker should be relevant to the marginal worth of either capital or labour and hence to the process of contracting (Samuelson, 1971; Lerner, 1972; Nozick, 1974, pp.253-262).<sup>10</sup>

Bowles (1985) contends that the reason why most liberals have not been inclined to perceive the economic strength of the capitalist as a problem is that they believe that if any socially undesirable consequences of the capital-labour contracting process occur, they can be resolved in the government arena (see, for example, Friedman, 1962). In the government arena itself, liberals typically take the view that non-absolutism can be secured by universal suffrage and

constitutionally determined decision-making procedures or voting rules, that is, through democracy.

However, as Bowles (1985) points out, this view is necessarily based on the existence of a proper boundary between the market economy and government arenas of political activity, and in reality such a boundary may not exist because there are many ways in which others, such as capitalists, can influence the actions of government in a liberal democratic state. Three of these ways he refers to are described below.

- (i) One way is by threatening a capital strike, that is, a threat by the owners of capital not to invest where voting produces policies they consider not to be conducive to such action.
- (ii) Another way is through the division of labour. There are two main reasons why this division is argued by him to undermine policies which are in conflict with the interests of owners of capital. The first is that the information necessary for decision-making is typically concentrated at the (narrow) pinnacle of the pyramidal capitalist organisational structures, thus limiting the scope for policy initiatives from the base. What is unclear about this particular argument is that it should be considered a problem peculiar to capitalist structures. It would appear to be just

as relevant to senior entrepreneurial elements within modern socialist organisational structures (as pointed out by Galbraith, 1969). The second reason offered by Bowles (1985) for this undermining effect is that by affording different remuneration and promotion opportunities to different types of labour, in terms of sex, race, education, etc., capitalist enterprise is instrumental in developing a mutually alienated and hence politically ineffective labour class.

(iii) A third way is through the structure of liberal discourse. With the popularisation of the liberal views, Bowles (1985) contends that there has developed a widespread belief that the opportunity costs of not actively participating in the government arena are low, and that this belief has encouraged a market orientation within society.

For this reason, appeals to solidarity and co-operation necessary for the exercise of popular power are ill served by the liberal discourse (Bowles, 1985, p.176).

Classical liberal discourse on why the state's encroachment into the economy should be limited, is mainly focused on two issues; one being concerned with the individual's right to private property, and the other being concerned with the capacity of the market

to generate opportunities for the individual to protect himself against the coercive power of the state.

The strongest argument for limiting the state's encroachment into the market economy is based on the individual's right to private property. The historical basis for this right would seem to have been laid by the Christian Church:

Christianity, with its stress on the individual did carry with it the notion of inalienable rights .... In Western Europe, missionary Christian bishops ... set down in writing the laws of the barbarians and invested them with spiritual authority and sanction. By its work on these law codes, Christianity implanted the concept of the rule of law: a rule which for the Church's own protection could be invoked even against the state .... the rule of law was progressively extended to cover and underpin the rights of the individual. By a similar process the idea of freehold property was established (Johnson, 1979, p.16).

The use of this right in order to build up the case against the state's encroachment into the market economy has been attributed to John Locke (1952) and Robert Nozick (1974):

Perhaps the most influential contemporary moral case for the market is that presented by Robert Nozick in his book Anarchy, State and Utopia (Buchanan, 1985, p.64).

Nozick's (1974) case, which is developed on a theory of entitlement, has already been outlined in this chapter.

In addition to the right to private property, another (weaker) argument is also usually employed by liberals against the state, namely, the need to keep any coercive power in society in check, no matter what its source. The most well known proponent of this argument is Milton Friedman (1962).

The fundamental threat to freedom is the power to coerce, be it in the hands of a monarch, dictator, oligarchy or momentary majority. The preservation of freedom requires the elimination of such concentration of power to the fullest possible extent and the dispersal and distribution of whatever power cannot be eliminated - a system of checks and balances. By removing the organisation of economic activity from the control of political authority, the market eliminates this source of coercive power (Friedman, 1962, p.15).

However, casual empirical observation does not always confirm Friedman's (1962) view. In countries such as the United States of America and South Africa, where the market has played a prominent role, there have been very serious violations of Black political and civil liberties. By way of contrast, in the Scandinavian countries, where there has been significant interference in the market by the state, political and civil liberties have been strongly upheld (Buchanan, 1985, p.79).

To a large extent one's preference for Marxist versus liberal concepts of the relation between capital and the state would appear to rest on one's political inclination and this may reasonably be assumed to depend on what ideology suits one's economic interests, as has been argued in Chapter 3.<sup>11</sup>

## 6. Marxist perspectives on the policy of the National Party on Black education

### 6.1 The general orientation of the National Party government

Marxist views on power structures in capitalist societies have enjoyed considerable influence over much of the Twentieth Century. However, they were slower in gaining support amongst intellectuals in South Africa - only achieving widespread recognition in the 1970s (Welsh, 1987). Their major contribution was to draw attention to a misconception held by many South African liberals that there existed an automatic inverse relation between the policy of apartheid and economic development.

Some South African liberals (for example, Hutt, 1965) noting amongst other things, a loss of individual freedoms by Blacks (such as over the choice of where to

work) under the apartheid policy, have argued that as a result, economic development in South Africa has been undermined. Other liberals (for example, O'Dowd, 1974 and to a lesser extent Lipton, 1985) recognising that capitalists do have some influence over the state, have argued that in the interests of economic expansion, they would bring about an end to the apartheid policy. Therefore, these liberals also presume that economic growth and apartheid policy are ultimately incompatible.

In contrast to these views (that economic development in South Africa is constrained under the apartheid policy, or that apartheid policy is undermined by economic development) Marxists have observed that White dominance in South Africa has prevailed over long periods where there has been 'healthy' economic growth. Consequently, they conclude that over these periods, capitalism and apartheid policy were compatible rather than in basic conflict (Legassick, 1974; Johnstone, 1976).

Some Marxists also argue that apartheid was an inevitable outcome of capitalist development in South Africa (Hartwig and Sharp, 1984). They contend that apartheid was an optimal response by the state on behalf of capitalists to a 'crisis' during the 1930s

and 1940s which threatened the supply of cheap labour. The causes of the 'crisis' to which they refer were unrest in the reserves, emigration from 'capitalist' farms and the unprecedented expansion of industry after 1933. The nature of the 'crisis' was

a growing proletarian consciousness  
which

increasingly called into question  
capitalist exploitation itself,  
especially insofar as it was based on a  
racially defined cheap labour force  
(Hartwig and Sharp, 1984, p.310).

In the interests of capital accumulation Hartwig and Sharp (1984) argue that an appropriate response to this 'crisis' was demanded (by capitalists) of the state. For this reason they see the fact that the National Party and not the United Party won the general election of 1948 as being of little consequence. In terms of their concept of state they believe that the United Party's policies would have exhibited the same essential characteristics,

since what the state actually does, as opposed to what political parties say they are going to do, depends upon the requirements of the accumulation process including the necessity to contain class struggle (Hartwig and Sharp, 1984, p.312).

## 6.2 The provision of education from a Marxist perspective

The usefulness of the Marxist concept of the state is only considered in this paper in respect of the provision of schooling in South Africa. In line with their concept of state, Marxists in South Africa concern themselves less with the training needs of labour, than they do with the question of how the education system in capitalist societies serves to facilitate capitalist exploitation (Collins, 1980; Chrisholm, 1982; Christie and Collins, 1984). For them the major purposes of education in Western societies are that it promotes a capitalist view of the world, it disciplines labourers to accept capitalist employment conditions and it prevents the natural formation of working class coalitions which might challenge capitalist interests. In connection with the latter they allege that education, by differentiating labourers, facilitates the placement of workers into different salaried and promotional positions from which they are less able to perceive a common interest (Bowles and Gintis, 1975).

It is an interesting way of interpreting the rationale for the provision of education by the state, but it is also one which is difficult to substantiate. Marxists perceive the fact that Black education has been

a mass-based system, geared toward schooling on the lower levels, quite unlike its White counterpart (Christie and Collins, 1984, p.181),

as consistent with their views. They conclude from this 'evidence' that schooling served to discipline Blacks so they could be made "better" workers at unskilled and semi-skilled jobs (see, for example, Collins, 1980, p.15). However, what they do not examine in terms of this 'evidence' is another important part of their theory, namely, whether it is plausible that this education helped prevent working class coalitions.

It is not surprising that they do not focus on this aspect because under the apartheid policy, the most numerate constituent of the labour class, namely the Black labour class, was not sub-divided by education in any way. Instead of the Black education system producing real differences in skill and ability, as would be expected in terms of a policy of sowing division within Black labourers, a large mass of minimally educated and equally disadvantaged people was generated (especially over the 1950s, 1960s and 1970s). Thus, whereas Christie and Collins (1984) see the mass-based Black schooling system as being consistent with a Marxist view of the role played by education under the apartheid policy in South Africa, the opposite could as easily be true.

The two aspects of the education system under National Party government which were plausibly connected with the sowing of division in the labour market were the provision of Whites with different levels and types of education and the separate schooling of Blacks and Whites. However, as the division by race was already well established by other means in the labour market, one is left to conclude that from a Marxist vantage, apartheid policy on Black schooling, in fact, served no purpose at all.

The problem of finding support for their particular labour market segmentation hypothesis, is not the only factor which complicates a Marxist position on Black schooling under the apartheid policy in South Africa. There is also the problem of why Black technical training was neglected under the apartheid policy.

In view of the emergence of recurring shortages of skilled manpower over the period following the Second World War, there would appear to have been a strong incentive for capitalists to encourage the state to develop technically skilled labour, regardless of its race. However, the National Party government did not facilitate such a development. Although White

technical education was continued, its Black counterpart was all but abandoned:

within two weeks of becoming Minister of Labour in 1948, B.J. Schoeman announced that the training of Blacks as artisans would be suspended until legislation had been passed to protect the White worker (Bromberger, 1982, p.178).

In Table 5.1 the number of White and non-White technical institutions and students are shown for 1953 (when the Bantu Education Act was passed) and 1954. The impact of National Party policy was clearly to diminish the number of technically trained Blacks.

Table 5.1

Enrolments in technical and vocational education in 1953 and 1954

Year	Whites		Non-Whites	
	No. Institutions	No. Students	No. Institutions	No. Students
1953	82	10 716	54	13 842
1954	88	11 814	21	3 981

Source: Christie and Collins (1984) p.180.

If indeed the National Party government was acting as an agent for capitalist expansion over the 1950s, 1960s and early 1970s, the recruitment of Blacks to technical and vocational training institutions should ideally have been encouraged by their policies. The fact that this recruitment was undermined makes it more plausible that the National Party's education policies were aimed

at other things, such as restricting Black competition for (White) technical jobs, even if this was to be at the cost of future capitalist expansion (as believed to be the case by many South African liberals).

### 6.3 The 1976 Black school riots

In the late 1970s and early 1980s, a wave of unrest broke out amongst Black pupils (see Chapter 1). A Marxist interpretation of these events would also seem to be problematic:

whilst led by school students, and starting with school stay-at-homes and public demonstrations, it was accompanied by widespread labour unrest penetrating even into the homelands .... The internal class struggle, aggravated by a crisis in the world accumulation process, had reached a stage where it could be contained within the limits of capitalist class relationships only by tear gas, batons and guns (Hartwig and Sharp, 1984, p.328).

If the 1976 riots had broken out and been sustained amongst labourers, this type of (class) sentiment would not have been out of place. In that event, it could have been argued that the riots occurred precisely because the state failed to implement education policies, *inter alia*, which would have successfully sub-divided Black labour. However, the locations of the disturbances were not at the workplace but at Black schools and in the Black residential areas, and the

labourers themselves only played a secondary role in the riots. At the time the riots broke out, unrest amongst Black labour was not increasing but decreasing (see Chapter 3, Table 3.7). The only significant role played by the labourers appears to have been one of expressing sympathy for the pupils; nothing more than what one would have expected. (After all, the upliftment of the Black population was their cause too.)

#### 6.4 The de Lange Commission

The fact that over the 1980s some owners of capital showed concern at structural imbalances in the National Party's education policy and participated in the de Lange Commission (1981) is also seen as significant by some Marxists:

the theme of 'manpower shortages' and the role of education in meeting such skill shortages is reflected in capital's many speeches and reports on the question (Chisholm, 1982, p.3).

As a result of this participation Chisholm (1982) concludes that any restructured education system, *inter alia*,

will serve the needs of the monopoly sector of the capitalist economy, rather than the interests of the working class (Chisholm, 1982, p.18).

As is the case with most aspects of a Marxist interpretation of National Party policy on Black schooling, Chisholm's (1982) view on the role played by the owners of capital has major shortcomings. She equates participation by some owners of capital in the de Lange Commission (1981) with management of education policy reforms, and this is illegitimate. Furthermore, her description of the costs and benefits of the reforms (from the point of view of the owners of capital) is distorted. While she attaches considerable significance to the benefit those owners may gain by being able to fill skill vacancies through increased provision of education by the state, she all but ignores the cost burden of this provision to these owners (amongst others) in the form of increased tax payments.

### Conclusion

It has been shown in this chapter that liberals in South Africa are likely to have different and often conflicting views on the provision of education by the state. From a reform liberal perspective the level of provision of Black education by the National Party government would seem to have been inadequate. However, from a classical liberal perspective this inadequacy cannot be substantiated. The root of the difference between the two liberalisms can be

traced to the issue of who or what should be the ultimate source of authority for social decision-making. Classical liberals believe it should be the individual, while reform liberals believe it should be the community.

The dominant liberal tradition in South Africa appears to be of the reform variety. If it could be firmly established that the net social benefit of Black schooling exceeded that of other similar social investments, this dominance would not be a problem. In this case the increases of government expenditure on Black schooling encouraged by reform liberals would improve efficiency. However, this case cannot be persuasively established (as shown in Chapter 2). In fact, given that government expenditure on education in South Africa is correlated with rent-seeking by race, it is plausible that increases of such expenditure may even initiate government failure, and thereby decrease efficiency (see Chapters 3 and 6). For these reasons one is led to suspect that in the context of South Africa as it is today, the dominance of reform liberalism over classical liberalism is unfortunate.

It has also been shown in this chapter that Marxist interpretations of apartheid policy on Black education do not contribute to the understanding of such policy. This conclusion is based on the fact that the policy of apartheid homogenised rather than sub-divided the Black labour class,

the very opposite of its supposed 'objective', and the fact that the policy did little to generate exploitable Black labour which was technically skilled, as ideally it should have. It is also concluded that Marxist interpretations of the Black schooling crises of the 1970s and 1980s are not well supported by facts: the relation between capital and labour appearing to be more incidental to, rather than the cause of these crises.

Notes

1. Of course, there are also similarities between the two liberalisms over the education policies of the National Party. For example, they are similar in respect of their opposition to the restrictions imposed over the past and currently by the National Party on individual free choice in enrolment at schools.
2. Gerson (1987) distinguishes libertarians from classical liberals on the issue of property rights. The former interpret 'negative freedom' as meaning property rights should be completely inviolable (Nozick, 1974) whereas the latter's interpretation is not quite as extreme (Hayek, 1944; Friedman, 1962). In terms of such a distinction, classical liberals are inclined to favour a greater role for the state than libertarians with respect to the provision of goods that have strong public good characteristics, yet which are not pure public goods. However, as the difference is more a matter of degree than principle, in this thesis classical liberalism and libertarianism are treated as synonyms.
3. One of the biggest shortcomings of reform liberalism is that of relating the concept of the 'general will' to the few simple arrangements that are made for balloting in modern democracies. Reform Liberals appear to be willing to equate what is most popular, in terms of votes cast in general elections, with the concept of the general will of the community. Lingle (1989) describes this equation as a 'populist democratic' viewpoint. The problem with it (see Chapter 6) is that the majority vote rule cannot (and should not) be relied upon to reveal society's preferences in a consistent way. In fact, as Hayek (1960) has observed, there may be real dangers in doing so because:
 

It has been with the help of this equivocation that the notion of collective power over circumstances has been substituted for that of individual liberty and that in totalitarian states liberty has been suppressed in the name of liberty (p.16).
4. Her view, she maintains, is also consistent with Rawlsian principles of justice favoured by other reform liberals (who do not openly identify with Marxists) such as Simkins (1986 and 1987). Hofmeyr's (1987) view would also appear to be consistent with the spirit of the Freedom Charter of the African National Congress. Lingle (1989) observes that the

wording and the rhetoric of its supporters are the outcome of at least an implicit embrace of populist democracy (p.15)

The main basis for his argument is that in the Freedom Charter

a conspicuous priority is placed upon democratic procedures rather than freedom per se (Lingle, 1989, p.31).

For this reason Lingle (1989, p.25) argues that the Freedom Charter provides a constitutional setting which legitimates the abuse of negative freedoms.

5. In the Financial Mail (20 September, 1985) it was reported that a poll had indicated that 77 per cent of urban Blacks were in favour of socialism. Gerson (1987) argues that the socialist orientation of liberals in South Africa may be attributed to the search by White liberal 'activists' for a meaningful role in the struggle for political power between White and Black nationalists. White liberal activists perceive themselves to be at a disadvantage (if not inconsequential) when compared with Blacks in the (Black) struggle for political power.

It should also be noted that although Marxist analysis, which is the primary source of authority for socialist ideology, has undoubtedly been instrumental in illuminating certain weaknesses within the capitalist system, it has proven far less than perfect, when itself used as a practical guide to the organisation of economic systems (as will be shown in Note 6 below).

6. In Table 5.2 below a comparison of GNP per capita is made between countries with similar type populations but different styles of economic organisation. It indicates that on average in 1980 people were better off in capitalist systems than in centrally planned socialist ones. In all the comparisons a centrally planned socialist economy is listed first. These comparisons give rise to questions about whether worker interests are indeed best served in socialist systems. A higher average level of income would seem to be preferable to a lower one for a worker, whether he is employed within a capitalist or a socialist system.

Table 5.2

An international comparison of basic socio-economic indicators for 1980\*

	GNP per capita U.S. Dollars	Ratio	Life Expectancy at birth (years)
(i) East Germany	7 180	1:	72
(ii) West Germany	13 590	1,9	73
(i) Hungary	2 270	1:	71
(ii) Austria	9 880	4,4	73
(i) Ghana	360	1:	55
(ii) Ivory Coast	950	2,6	47
(i) Tanzania	280	1:	52
(ii) Kenya	390	1,4	57
(i) Nicaragua	920	1:	58
(ii) Costa Rica	1 430	1,6	74
(i) Burma	190	1:	55
(ii) Thailand	790	4,2	63
(i) China (People's Rep.)	310	1:	67
(ii) Taiwan	1 420	4,6	73
(iii) Hong Kong	5 340	17,2	75
(iv) Singapore	5 910	19,1	72

Source: World Development Report (1982)

\* More recent comparisons of all of these countries cannot be made because some have not provided further data.

The outcome of the comparison is a clear-cut indictment of Marxist-inspired economies. In all comparable cases, the value of the output of goods and services per head of population is far greater in the market orientated than in the centrally planned economies (Truu, 1986).

Truu's conclusion does require some qualification. The fact that the figures in Table 5.2 are not placed in a comprehensive historical dynamic and do not take differences of resource endowment into account restricts the 'legitimacy' of these comparisons. Also, the fact that there are other socialist economies which have performed well and other capitalist economies which have performed badly has to be borne in mind. However, these qualifications do not amount to an

argument that the comparisons of Table 5.2 are invalid. In order to support such an argument it would also have to be shown that the centrally planned economies chosen have been consistently disadvantaged in terms of these qualifications, and this would be difficult to establish.

The explanation classical liberals offer for disparities between the per capita incomes of socialist and capitalist countries (such as those shown in Table 5.2) is that capitalism is inherently superior in efficiency. They argue that capitalist organisation is better able to harness man's strong selfish and materialistic drives for the purpose of generating real income (Tullock, 1976; Seldon, 1980, pp.14-19). Many of the themes of their case are associated with the "socialist calculation debate" (Mises, 1967; Hayek, 1967).

First and foremost amongst these themes is that the information required to make a socialist system as responsive as a capitalist system to consumer preferences and resource availabilities, is too great. Furthermore, in a socialist system there does not appear to be any built in motivation for people to collect such information and act upon it. Thus, in the unlikely event of an adequate system for synthesizing the required information actually being developed (and none is yet apparent) there would also be this motivational problem to attend to. One way of attending to the motivational problem would be by rigorously auditing the information gathering processes. However, the administration of such audits would also add to costs and therefore would also undermine the efficiency of the socialist system.

Another reason classical liberals offer for the poor performance of socialist systems is that it is entirely uncertain to whom the officials of a socialist state are accountable, other than to their own 'elitist' interpretation of Karl Marx's "sketchy" visions of a world in which no exploitation could take place (Shearmur, 1984, p. 69). This lack of accountability would be less of a problem if such officials were of outstanding quality. However, as Hayek (1944) has observed, the characteristics required for a person to get to the top of a state bureaucracy are often quite different from those required to perform a job efficiently.

7. Over the 1980s this comparison has been made more difficult by the introduction of GST.

8. Of course, the problem with this proviso is that it begs the question of why have a theory justice? If the theory is only applicable in just societies, there would appear to be little scope for applying it to the real world.
9. *Prima facie*, even before such redistribution White incomes (in US dollars) are not particularly high when compared with those enjoyed by people of equal skill in most parts of Western Europe, Canada and the USA.
10. The marginal worth of any factor in the science of (bourgeois) economics, is ultimately regarded as a function of its scarcity and not the (apparent) power of the owner of one factor over the owner of another (although in isolated cases and within limits, this power may be relevant, such as in the case of monopsony). For so-called 'bourgeois economists', scarcity is indicated by a comparison of the demand with the supply of a commodity or factor. They reject the labour theory of value as an alternative to valuation in terms of scarcity, inter alia, because it assumes that all labour time is spent on producing things of equal value. The assumption is flawed because it is based on demand for the different products of labour being equal (Samuelson, 1971; Nozick, 1974).
11. Marxists have a tradition which is fiercely anti-capitalist. Therefore, they are inclined to see inefficiency in capitalism and (the thing they find most objectionable, namely) the exploitation of one person by another. On the other hand, classical liberals have traditions which are pro-capitalist and are therefore inclined to find it agreeable, almost certainly in terms of efficiency, but also even in terms of Marxist ethics (because they have great difficulty in perceiving an inherent exploitation problem within a society which is both capitalistic and democratic).

## CHAPTER SIX

### CONTRACTARIAN PERSPECTIVES OF THE ROLE PLAYED BY THE NATIONAL PARTY GOVERNMENT IN THE PROVISION OF BLACK AND WHITE EDUCATION

#### Introduction

In conventional economic analyses, political decision-making processes are often regarded idealistically; the idealism being that the majority vote mechanism will produce decisions which are consistent with the optimisation of social welfare. However, it is a misplaced idealism, as demonstrated, *inter alia*, by Kenneth Arrow (1951). He proved that democratic decision-making processes could not guarantee outcomes consistent with the optimisation of social welfare.

Since this demonstration there has been a growing awareness amongst economists that it is unrealistic to differentiate the economic motives of human beings in private enterprise from those held by them in government, and a wave of investigations have been made into the rationale for public choices. A prominent feature of these investigations is their contractarian nature, that is,

the identification of ethical values with the outcomes of particular types of agreements between individuals (Hamlin, 1986, p.83).<sup>1</sup>

A contractarian approach is one which is based on the perceptions of 'objective fairness' that individuals, who appreciate the advantages of agreement, would develop. The nature of the perceptions thereby generated depend upon the circumstances that these individuals are hypothesised to face; they are usually hypothesised to be either idealised 'perfect' circumstances or a real bargaining ones. The agreement the individuals reach under these circumstances may also be of two types; a 'private' one, between a few members of society; or a 'social' one, between all members of society. The latter type of agreement is generally referred to as 'the social contract' and describes what is fair from a societal perspective.

In this chapter discussion will focus on three popular contemporary views on the social contract; those of John Rawls (1971 and 1974), Robert Nozick (1974) and James Buchanan (1977, 1979 and 1986). John Rawls investigates what information is generated about the social contract by man in an idealised situation of ignorance. He assumes the person to be rational, disinterested in any one else's welfare other than his own, and 'purified' of all attributes which differentiate him from his fellows. For this reason historical information is of no relevance in Rawls's (1971) theory of justice. The most well known critique of John Rawls's (1971) theory is that of Robert Nozick's (1974).

In contrast with Rawls, Buchanan (1986) investigates what information can be generated about the social contract from the perspective of a person in a real 'bargaining' situation. In this situation the person is aware of 'his' attributes, but it is not possible to say *ex ante* what is rational for him and what is not, and therefore to derive any information about the social contract other than on matters of procedure. In this connection Buchanan focuses attention on the rules for decision-making with which all people could agree. The differences between these two approaches led Mueller (1976), in his survey of the theory of public choice, to characterise Buchanan's approach as positive analysis, and Rawls's as normative analysis.

In this chapter an analysis is also made of the role played by the National Party government in the provision of Black and White education. In this context the rationale for the majority vote rule and some problems in applying it to the case of South Africa are discussed; the main one being that the median vote result may not be an 'equilibrium' public choice. This situation arises because of the existence of differences between the intensities of preference of Blacks and Whites for the provision of education by the state; differences which lead the White voter to pursue actions aimed at preventing the median vote result. The discussion is concluded with the observation that a tax constitution could play a part in alleviating this problem.

1. Rawls's (1971) concept of the social contract and its implications for the provision of Black schooling by the state in South Africa

1.1 Fairness in the (idealised) Rawlsian sense

1.2.1 The original position

In his celebrated work on "justice as fairness" Rawls's (1971) proposes that justice be thought of in terms of rules that a person would consider to be fair when starting out his life in society. In order to derive these rules he requires one (a 'rational' individual) to step behind a 'veil of ignorance', and from this hypothetical vantage to reconcile one's own intuitive perceptions of ethical justice with those to which one would agree, no matter who one was in society; a reconciliation he terms a 'reflective equilibrium'. He observes that:

It is an equilibrium because at last our principles and judgements coincide and it is reflective since we know to what principles our judgements conform and the premises of their derivation (Rawls, 1971, p.20).

When a rational individual has stepped behind the 'veil of ignorance', he is said to be in the 'original' position; a situation where he is stripped of all his specific attributes. People in this position do not know their class nor their social position. They do not know what talents they have nor their religious commitments. They do not know what their attitude towards risk is. However, they do have 'general' knowledge and their desire as rational individuals is to maximise their share of 'primary goods', such as income and wealth. As all individuals are faced with the same situation when in the original position, they all achieve the same reflective equilibrium. Furthermore:

Since all are similarly situated and no one is able to design principles to favour his particular condition, the principles of justice are the result of a fair agreement or bargain (Rawls, 1971, p.12).

The concept of a contract is an essential component of this agreement. It introduces a further constraint on the parties to the agreement and hence to the person in the original position, namely, a binding element. As Rawls (1974) observes in a later paper:

if we make an agreement, we have to accept the outcome; and therefore to give an undertaking in good faith, we must not only intend to honor it but with reason believe that we can do so (p. 651).

In other words, the "strains of commitment" to the principles agreed upon must not be so great in the original position that people would have reason to believe they would be unable to honour their commitment. For this reason Rawls (1974) argues that,

The strains of commitment test applied to cases of hypothetical transition from unjust societies is irrelevant (p.653),

and that his conception of justice must be considered in the context of a "well ordered society" (Rawls, 1974, pp.633-639). In such a society, *inter alia*:

1. Everyone accepts, and knows that others accept, the same principles (the same conception) of justice.
2. Basic social institutions and their arrangement into one scheme (the basic structure of society) satisfy, and are with reason believed by everyone to satisfy, these principles (Rawls, 1974, p.634).

There are many criticisms of Rawls's use of the original position to derive principles of justice, where fairness conditions what is just; a major one being that he uses too limited a definition of individual rationality (Nozick, 1974, pp.228-231).

Nozick feels that people in the original position are stripped of characteristics to the point where the concept of rationality becomes incoherent. He contends that in order to define rational choice one needs to know something about the perspective of the people one is considering, and to find out about this perspective one has to investigate their history. However, as this knowledge is purified out of the individual in the original position, he contends that Rawlsian fairness is irrelevant to real individuals and that the theory is more applicable to macroeconomic questions (where the individuals are not 'important') than to microeconomic ones (where they are). Rawls's (1971) counter to the criticism that his theory is not applicable to real people is,

that the conditions embodied in the original position are ones that we do in fact accept (p.21),

in our attempts to achieve the impartiality which is necessary for serious reflection on issues of fairness.

Another of Nozick's (1974, p.215) criticisms of Rawls's original position is that it illegitimately favours patterned principles of justice over entitlement principles. He regards this ordering as illegitimate because he does not

agree that the mental processes by which real individuals decide on issues of fairness are ones which lead them to accept the conditions embodied in the original position. Nozick (1974) sees the process whereby the individual excludes particular knowledge from consideration when making decisions on fairness, as one of internally accommodating the wishes of others with whom he sees advantage in associating. In respect of this process he observes:

you choose what you will with the sole constraint being that others may do the same for themselves and refuse to stay in the world you have imagined (Nozick, 1974, p.302).

The process of internal accommodation is one of assaying whether other people with whom one sees advantage in associating would be better off with or without you and your entitlements, and the reflective equilibrium reached through this process is described by Nozick (1974, pp.297-306) as Utopia. Nozick (1974) believes that although different people hold different visions of Utopia, all such visions uphold the principles of entitlement (outlined earlier in Chapter 5), where they can be applied. Only where these principles cannot be applied does Nozick (1974) concede that Rawls's principles may have some practical use.

Nozick's principles of entitlement cannot be applied where it is impossible to identify how the total product of joint social co-operation should be divided, because the marginal product of a factor is indeterminable and no voluntary exchange can resolve how the total product should be distributed.

Nozick is also critical of Rawls's view that principles of justice can only be applied to resolve disputes over the product of social co-operation. It is Nozick's (1974, p.185) view that such principles can be applied even when there is no co-operation. For example, he argues that they could be used to resolve a dispute over some product which arose between two 'Robinson Crusoe's'.

In addition to the above criticisms of the original position there have also been objections (Musgrave, 1974, pp.625-632; Siglitz, 1986, pp.66-70) to the strong and unrealistic assumptions made by Rawls about a person's attitudes towards risk in this position, quite in contrast to his claim for "grounding the theory of justice on weak stipulations" (p.149). Rawls (1971, pp.153-154) rules out any attitude toward risk from the

original position, other than that of aversion; and as Musgrave points out, only if a person is infinitely risk-averse would he favour a society in which the benefits accruing to the least well-off individuals are maximised; the maximin implication of Rawls's second principle (see below).

#### 1.1.2 Rawls's principles of justice

Rawls's principles of justice are derived as elements of the reflective equilibrium achieved in the original position. One way these elements can be understood is by examining the conditions, which if they occurred, would cause the 'agreement' implicit in the reflective equilibrium (the social contract) to break down, by virtue of the hypothetical withdrawal (or return) of some people back behind the veil of ignorance in search of a new agreement (Hamlin, 1986, pp.89-91). One could envisage such a situation arising if some people enjoyed less liberty than others. Hence, one of the elements of a reflective equilibrium, and the first of Rawls's principles of justice, is that each person should enjoy,

an equal right to the most extensive basic liberty compatible with a similar liberty for others (Rawls, 1971, p.60).

By "basic liberty" he means:

political liberty (the right to vote and to be eligible for public office) together with freedom of speech and assembly; liberty of conscience and freedom of thought; freedom of person along with the right to hold (personal) property; and freedom from arbitrary arrest and seizure as defined by the concept of the rule of law (Rawls, 1971, p.61).

One of the things not listed as a basic liberty is the right to hold the means of production. It is an interpretation of liberty which is more in the reform liberal tradition than it is with the classical liberal tradition (see Chapter 5). His rejection of the classical liberal interpretation of liberty is based on the grounds that in terms of this tradition it is legitimate for distributive shares of primary goods to be influenced by factors such as natural endowments and inheritance, that are arbitrary from a moral point of view, that is, from the original position (Rawls, 1971, p.72).

Another situation in which the social contract would presumably not be accepted and hence (hypothetically) 'break down' would arise if some people could obtain a better allotment of the

social product by 'returning' behind the veil of ignorance and making a new agreement. The people who would be most inclined to follow this course of action would be the worst off members of society because they could not get a worse 'deal', that is, a worse share of societies "collective assets". From the vantage of the original position all assets, including personal attributes, are perceived to be part of society's "collective assets" (Rawls, 1971, p.74). In order to prevent these people from following this course of action Rawls (1971, p.179) feels that there is a need for the social contract to incorporate some mitigation or "redress" from "the arbitrary effects of the natural lottery".

Rawls's second principle can be interpreted as this mitigation. His second principle is stated as follows:

Social and economic inequalities are to be arranged so that they are both (a) to the greatest benefit of the least advantaged and (b) attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls, 1971, p.83).

Rawls's concept of "fair equality of opportunity" is developed on the basis of a person's expectations of primary social goods. He defines these expectations in terms of an index of primary

social goods. These goods generally facilitate the realisation of an individual's interests, whatever they may be. The "broad categories" of primary social goods are identified by Rawls (1971, p.92) as rights and liberties, opportunities and powers, income and wealth, and self-respect. Although Rawls (1971, pp.93-94) does not appear to consider the problems of actually constructing such an index "so great", they would undoubtedly be enormous, and similar to many of the problems encountered in specifying the social welfare function, outlined in Chapter 4.

His principles of justice are serially ordered, the first enjoying priority over the second. His justification for prioritising his principles in this way is that above some general level of well-being, man cherishes his liberty to pursue spiritual and cultural interests above all else (Rawls, 1971, p.571). Clearly, this prioritisation should be seen in the context of Rawls's (1974) requirement that his principles only be considered relevant to well-ordered societies.

Despite the controversy which has surrounded Rawls's (1971) concept of the original position,

it has been heralded by some as a major contribution to normative theories on public choice (Mueller, 1976, pp.416-417). The main contribution of Rawls's (1971) approach would appear to be that it overcomes the problems which complicate generalisations on distributive justice developed solely on the basis of the desirability of 'equality' between all men (see Hayek, 1960, pp.85-100). These problems are those of 'having to know all the differences between men in their different situations and formulating consistent moral views on them.

Of Rawls's (1971) two principles, the one which has attracted the most criticism is the second (that differences should be to the benefit of the least advantaged). Firstly, it is unclear why

individuals in the original position would choose a principle that focuses upon groups, rather than individuals" (Nozick, 1974, p.190),

and secondly, it leads to conclusions which do not coincide with intuitive perceptions of fairness. In particular, the principle implies that the welfare of the great majority may be ignored, so long as the welfare of even a small minority of worst-off individuals is improved (Rosen, 1985, pp.76-77). The practical difficulties of

identifying the 'worst-off' group, which may or may not include people such as drug addicts, alcoholics and the insane, would more than likely compound the problem of connecting Rawls's second principle with intuitive perceptions of fairness.

1.2 Rawlsian fairness in the provision of education by the state in South Africa

The relevance of Rawls's concept of justice to the case of South Africa has already been questioned in Chapter 5. In Chapter 5 it is observed that Rawls (1974) only considered his theory of justice appropriate to "well-ordered societies" and that South Africa did not appear to fit this description. However, not all authors share Rawls's (1974) view that his concept of justice should only serve as a source of authority in "well-ordered societies". Such authors find Rawls's (1971) principles of justice so appealing in their own right that the context within which they are 'derived' is not important to them. Charles Simkins (1987) appears to be one such author.

Using Rawls's (1971) second principle as his primary source of authority, Simkins (1987) observes that

there can be no liberal justification, for instance, of the present racial pattern of educational spending. One of the most important tasks of the coming years in South Africa is the reform of entitlement expenditures to make them conform with the requirements of justice,

which in the end means putting these expenditures

to the best possible use in terms of the interest of the poorest (Simkins, 1987, p.234).

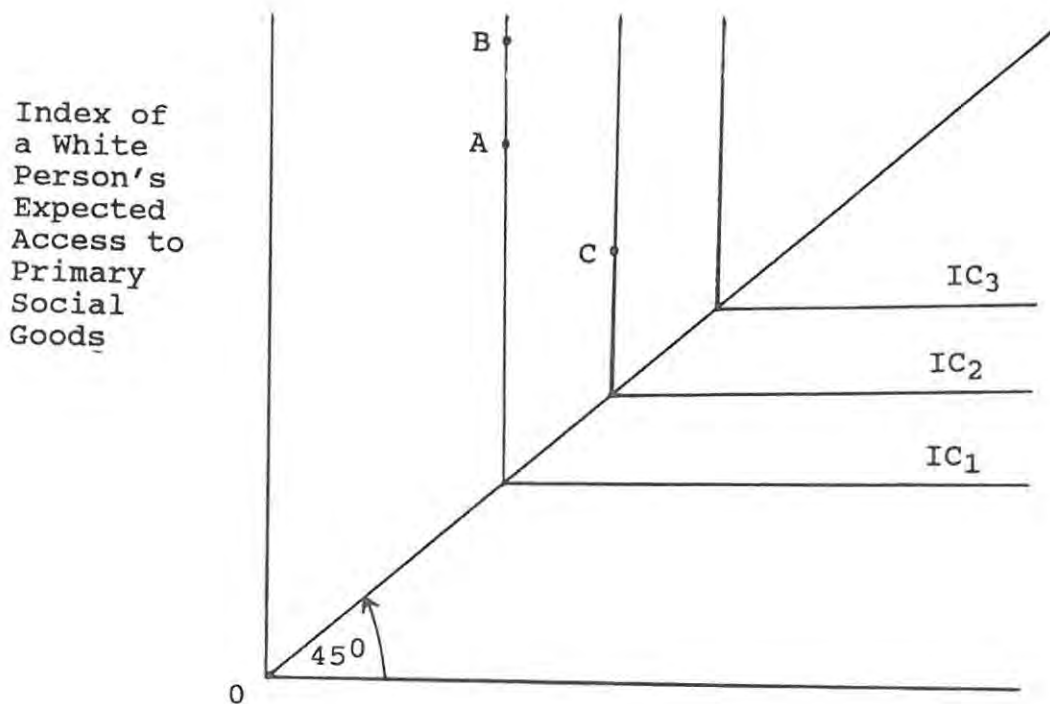
In terms of access to "primary social goods", Simkins appears to regard Blacks in South Africa as being 'the poorest'. On the basis on this perception, Rawlsian fairness is equated by Simkins with the advancement of Black interests in South Africa towards equality with Whites in access to all primary social goods. This interpretation of Rawlsian fairness is illustrated in Figure 6.1, where three Rawlsian indifference curves ( $IC_1$ ,  $IC_2$  and  $IC_3$ ) are depicted (Rawls, 1971, p.76).

If in Figure 6.1 (overleaf), we let the current distribution of access to primary social goods be represented by point A, it is clear that on its own an increase in the index derived by the White individual would not improve the overall situation (say by a move from point A to B). In order to improve the overall situation one can concentrate on the index of the Blacks alone. For example, if an increase in government expenditure on Black schooling increased the

index of the Black in Figure 6.1, by changing the situation in South Africa from point A to C, an improvement in the overall situation would be implied, even though the White's index was decreased. It would appear that as long as the distribution of access to primary social goods is above the 45 degree line (Figure 6.1) and Black access to "primary social goods" is positively related to government expenditure on Black schooling (which seems likely) any increase in this provision is a desirable thing; on the grounds of (Rawlsian) fairness.

Figure 6.1

Rawlsian indifference curves



Index of a Black Person's Expected Access to Primary Social Goods

2. **Actual unanimity as a basis for fairness : Buchanan's (1986) concept of the social contract**

Like John Rawls one of the most well known proponents of actual unanimity as an ethical source of authority is a contemporary figure, namely, James Buchanan.<sup>2</sup> His approach, also like that of John Rawls's, is developed around the concept of fairness. However, unlike Rawls, Buchanan does not restrict the applicability of his approach to hypothetical idealised circumstances, and therefore, his approach lends itself to applications in all types of societies, not only well-ordered ones.<sup>3</sup> For this reason it is a more appropriate approach to use for the purpose of assessing the role of the state in the provision of education in South Africa than is Rawls's.

Buchanan (1986, p.126) takes a procedural approach to fairness. He defines it to exist whenever prior agreement is achieved between all participants (to an interaction) over what rules shall apply to their conduct. In other words, for him fairness is a matter of consistency between social rules and unanimity on these rules amongst those people who will in fact participate in some way in the interaction under consideration.

As unanimity on the rules is an all important requirement in Buchanan's approach, he places great emphasis on when a basis for such unanimity actually comes into existence. In this connection he observes that because most exchanges of goods and services are entered into voluntarily in a market economy and therefore with the agreement of the individuals involved, unanimity on these rules is extensively achieved (Buchanan, 1986, pp.127-133). The infrastructure required for such exchanges to take place is that of a constitutional order whereby the state protects life, enforces contracts and secures property rights (Locksley, 1983, p.40). Buchanan (1977, p.223) attributes the widespread occurrence of the market form of organisation and its supporting constitutional order, to the fact that such arrangements are the only ones to which all men can agree in true democracies; these being countries where all adults enjoy full rights to participate in social decision-making.

One of the main reasons why unanimity is so often achieved in exchanges within the market economy is that there are only a few people involved in each one of the multitude of agreements made. However, in the case of public goods, the whole of society has to agree, both on how much of the public good should be provided (by

the state) and on who should pay for this. As a result, formulating decisions on public goods can involve high transaction costs, and the most cost effective rule be one that requires less than unanimity (Buchanan and Tullock, 1962).

Thus, to the extent there are public good characteristics to education, a less than unanimity decision rule on how much education should be provided by the state may be more cost effective than one requiring unanimity. The public good characteristics (or which might be called publicness) of education are positive externalities and (some degree of) jointness in supply (see Chapter 4, Blaug, 1972, p.102; Samuelson, 1954).

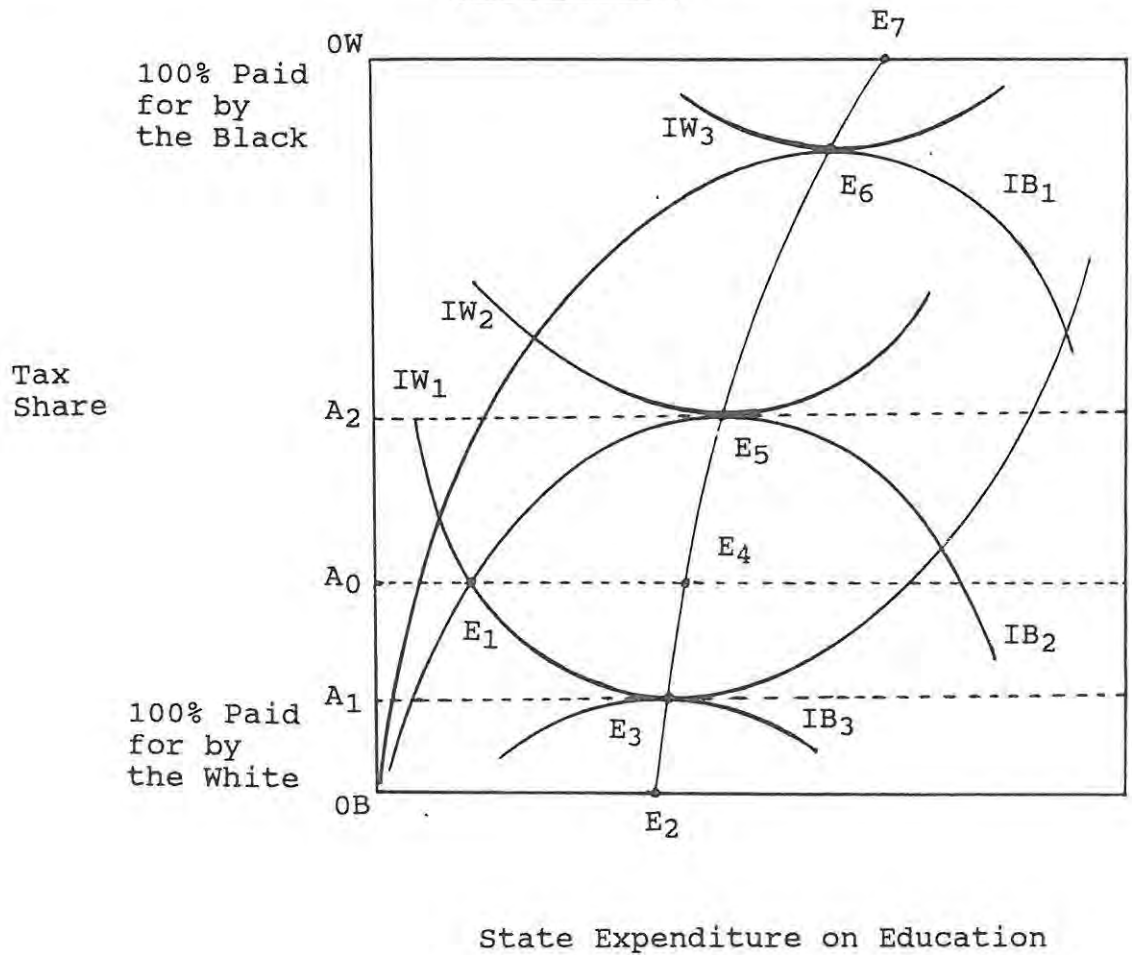
Like any other public good there is a trade-off between the individual's desire for education and his willingness to finance it. This trade-off may be represented in the form of an indifference map, as done in Figure 6.2 (overleaf).

In Figure 6.2, a White (W) and a Black (B) individual's relative preferences for tax shares and state expenditure on education are represented by IW curves and IB curves respectively, and a locus of Pareto efficient public choices is drawn through points  $E_2$  up

to  $E_7$ . The concept of Pareto efficiency is defined here under the assumptions that both individuals are fully informed and rational, and that unanimity is required in public choice (Buchanan, 1977, pp.215-234).

Figure 6.2

Indifference curves relating tax shares to state expenditure on education



Source: Mueller, 1976, p.400

For any given level of state expenditure on education, the lower the tax share paid by the individual, the

higher is his indifference level. On the other hand, for any given individual tax share, the higher the level of state expenditure on education, the higher will be his indifference level, until diminishing returns set in. The indifference curves are U-shaped in Figure 6.2 because at some point (for every tax share) the opportunity cost of financing further state expenditure on education would outweigh the value of the returns derived from this education, *ceteris paribus*, by the law of diminishing returns. If in Figure 6.2, the initial situation was one which corresponded to  $E_1$ , both individuals could be made better off, if by an increase of state expenditure on education, the situation changed to one within the region bounded by indifference curves,  $IW_1$  and  $IB_2$ . For this reason, in the absence of a change in tax shares, both individuals would vote for an increase in the provision of education by the state. For example, they would vote for  $E_4$  in preference to  $E_1$ .

However, if the initial situation was already Pareto efficient, such as  $E_3$ , and an issue of public choice arose between this and another Pareto efficient position, such as  $E_5$ , no such unanimity would be obtained. Discord would arise because these positions are associated with a substantially different division between the two individuals of the tax paid. In the

situation represented by  $E_5$ , the White's share of the tax burden would be  $OWA_2$  and the Black's share  $OBA_2$ , whereas at  $E_3$ , the White's share of the tax burden would be greater at  $OWA_1$  and the Black's share less at  $OBA_1$ . Thus, if faced with a voting option of  $E_3$  or  $E_5$ , the White individual would vote against the situation represented by point  $E_3$ , whereas the Black individual would vote against the situation represented by point  $E_5$ . Clearly, in order to resolve the situation considerable bargaining would be necessary, and this requirement seriously undermines the feasibility of using the unanimity voting rule for determining public choices amongst Pareto efficient positions by adding to the social cost of doing so (Buchanan, 1977, pp.230-232).

High bargaining costs are not the only complication associated with the unanimity voting rule. There is also a related problem: in order to establish unanimity it is necessary to communicate full (and equal) information to all voters, and in most cases the time and other costs of such communication are enormous. For these reasons, a less than unanimity vote rule has lower decision-making costs associated with it than has the unanimity rule.

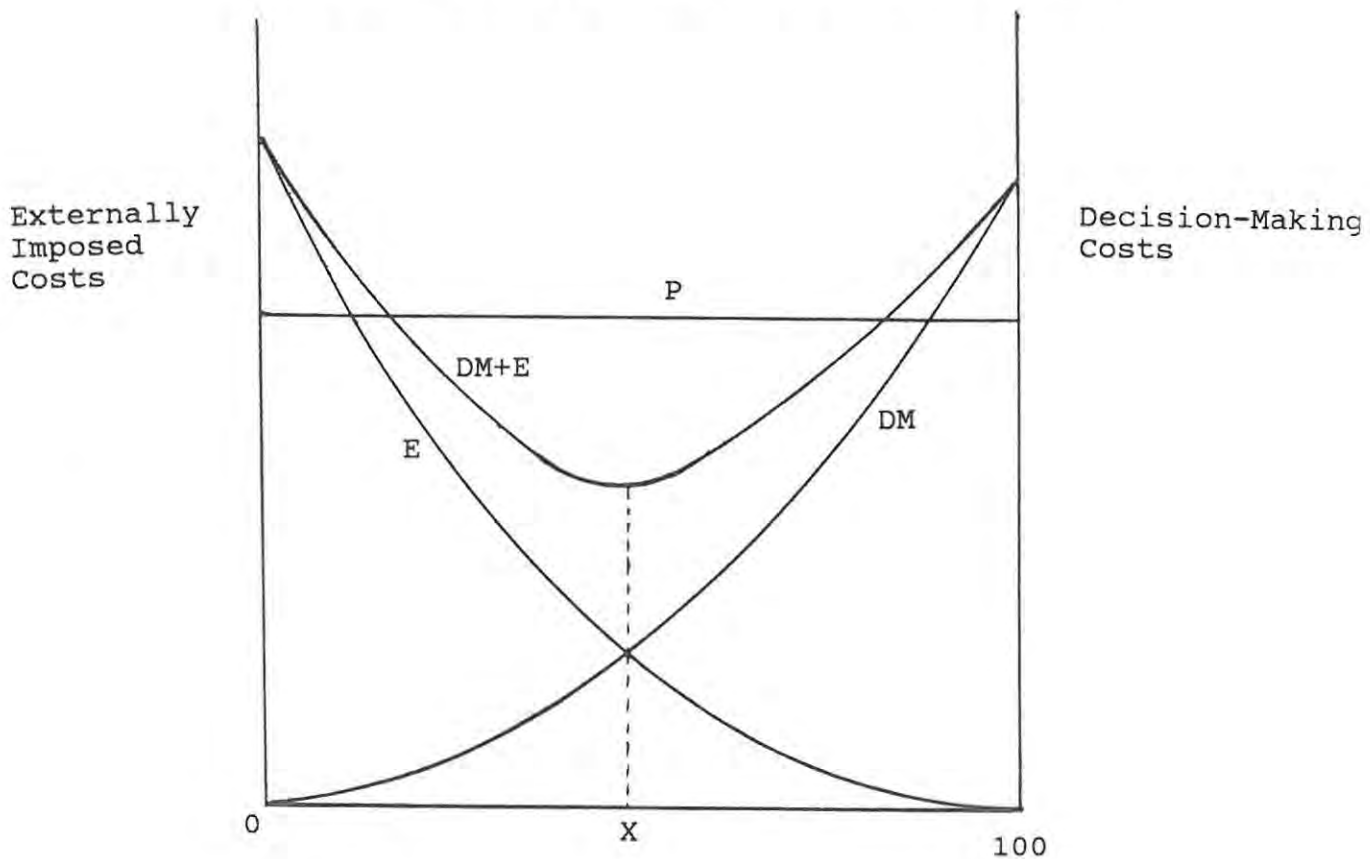
Buchanan and Tullock (1962) provide a simple model in terms of which one can identify the voting rule which minimises the total cost of making public choices. They argue that the larger the number of individuals between whom agreement is required, the greater are the decision-making or bargaining costs, as shown by the DM curve in Figure 6.3. On the other hand, they also point out that the smaller the percentage of individuals between whom agreement is required, the greater are the costs which can be imposed on some individuals, who would oppose the proposal, by the actions of the others, who would agree with the proposal. Such externally imposed costs are shown by the E curve in Figure 6.3 (overleaf).

The external cost plus the decision-making cost make up the total or "interdependence" cost of reaching agreement under every decision rule - as shown by the (DM + E) curve in Figure 6.3. For the reasons already provided, this cost may be lower in the case of a public good than it would be if choices were made by voluntary exchange. The total cost of reaching agreement by voluntary exchange is indicated by the P line in Figure 6.3. The total cost of reaching agreement is minimised where the decision rule adopted is one which requires OX per cent of society to reach agreement. This percentage would presumably be

different for different public choices, and in many cases even constitute the smallest of majorities, that is, a simple majority.

Figure 6.3

The costs of different decision-making rules



Percentage Of Those People With An Interest In  
The Contract Between Whom Agreement Is Reached

Source: Tullock and Buchanan (1962)

The problem raised by this result is that, *prima facie*, such a decision-rule does not meet Buchanan's (1986)

ethical requirement for the social contract, namely, that there be unanimity. Agreement between less than one hundred per cent of the participants of a 'game' is not a state of agreement, but rather a state of disagreement. However, this problem does not mean that a simple majority vote cannot be reconciled with the notion of unanimity and hence with Buchanan's concept of the social contract. In principle, such a reconciliation is achieved if at some ultimate constitutional level of decision-making, at which full consensus is required, it is agreed that certain subsequent decisions, in the interests of cost effectiveness will be determined by the majority vote (Tullock and Buchanan, 1962).

Buchanan's ranking of unanimity above simple majorities for social decision-making is not without its weaknesses. The main weakness of prioritising the unanimity requirement is that it can provide those individuals who establish an initial position of advantage with a way of blocking changes, perhaps to the detriment of an overwhelming majority in society. By way of contrast, the simple majority vote requirement,

minimises the chances of a person supporting an issue that fails and opposing an issue that passes (Mueller, 1976, p.402 and Rae, 1969).

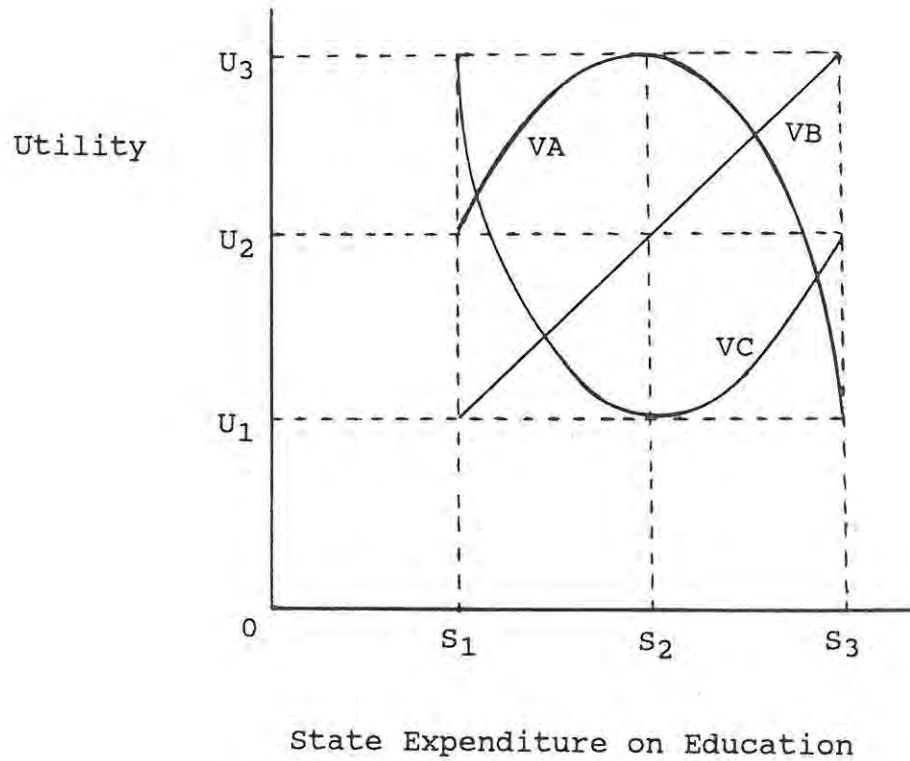
However, the simple majority vote rule, even if used in a subordinate capacity, also has problems associated with it. The main problem is that a stable equilibrium may not exist under the majority vote rule (Mueller, 1976). The concept of equilibrium is employed here to describe a situation where there is consistency of outcome in public choice.

### **3. Majority voting and the case of South Africa**

#### **3.1 The problem of cycling majorities**

One reason why equilibrium may not exist under the majority vote rule is that a cycling of voting majorities may occur. This problem arises when some voters have double-peaked preferences for public goods. The nature of the problem is described in the context of Figure 6.4, where the preferences of three individuals for government subsidised education are depicted. Two of these individuals are assumed to have single-peaked preferences, Voters A and B, and one is assumed to have double-peaked preferences, Voter C.

Figure 6.4

The Paradox of voting

In Figure 6.4 the total utility curves of Voters A and B represent the normal cases of people who have well-behaved utility functions; they experience increasing and then diminishing marginal utility to increased government expenditure on education. On the other hand, Voter C represents a person who prefers the extremes of all or nothing in respect of the provision of education by the state, hence his double-peaked pattern of preference.

If the issue to be decided by majority vote was one of whether the state should spend  $OS_1$ ,  $OS_2$  or  $OS_3$  on the provision of education, the presence of Voter C would prevent a stable outcome because as soon as a different voting procedure is used, the previous decision would be overturned. For example, in voting,  $OS_2$  would defeat  $OS_1$ ,  $OS_3$  would defeat  $OS_2$  and  $OS_1$  would defeat  $OS_3$ . In other words, no consistency (or equilibrium) in decision-making would be established.

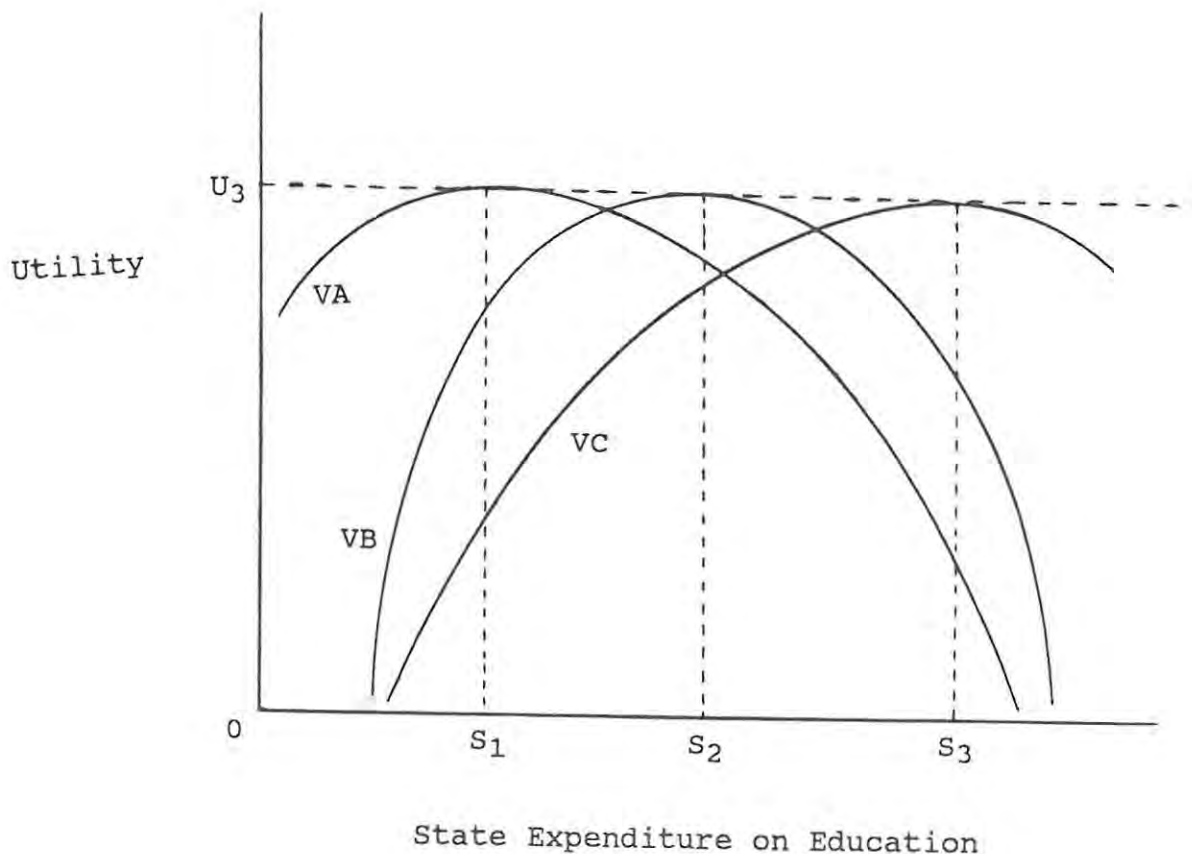
This result is known as the paradox of voting, and is one of the most publicised aspects of Arrow's (1951) Impossibility Theorem. The latter theorem is a mathematical proof that under reasonable requirements for individual preferences, inconsistent social preferences cannot be excluded with certainty, thus implying that the social welfare function cannot exist in general (Frey, 1978, p.71). Arrow (1951) also showed that the outcome of voting depends upon the order in which the proposals are considered and on whether or not other irrelevant options are entered into the voting processes.

However, the inconsistency described above is not an intractable problem. With the relaxation of some of Arrow's (1951) reasonable requirements, it becomes possible to determine a consistent majority vote result

from individual preferences. For example, in the context of the majority vote rule, if instead of admitting all logically possible individual preference orderings, as done in Arrow's (1951) Impossibility Theorem, only single-peaked preferences are admitted (because it is felt that in practice an all or nothing preference pattern is unlikely to occur), the tendency for a majority vote rule to produce cycling disappears. In place of this cycling there is a tendency towards the median vote, as proved by Duncan Black (1948). The case of single-peaked preferences is shown below in Figure 6.5.

Figure 6.5

The Median Voter Theorem



In Figure 6.5, the single-peaked preferences (for expenditure on education by the state) of three people are shown. Clearly under the majority vote rule,  $OS_2$  would defeat both  $OS_1$  and  $OS_3$ ; in other words the preferences of the median voter would coincide with equilibrium.

However, while the provision of a level of  $OS_2$  education is an equilibrium position in this particular case, it is not so in all cases where only single-peaked preferences are admitted. The case shown in Figure 6.5 is a particular one because in it no allowance is made for differences in the intensity of preference between voters. If such differences exist,  $OS_2$  may not be an equilibrium position; a possibility which is relevant to the South African paradigm (to which we now turn) because it is probable that substantial differences between intensities of preference exist between the voters. In the analysis below only differences between White and Black 'voters' are considered.

3.2 Where intensities of preference differ between the voters : a hypothetical model of South Africa

If under a simple majority vote rule, both Whites and Blacks in South Africa enjoyed equally weighted votes, the preferences of Blacks would dominate public choices because there are many more Blacks than there are Whites (the Median Voter Theorem). This dominance would not be a problem if the members of both groups felt equally strongly about these public choices and there was unanimity over the use of the simple majority vote rule. The differences in preference by race would not be a problem because of the underlying unanimity between the voters. However, in regard to the provision of education by the state, there is reason for doubting that these conditions would be met.

The reason is that the economic benefit Blacks and Whites can be expected to derive from the same amount of government expenditure, and the incidence of the associated tax burden, are likely to differ. The above reason will be discussed in the context of a hypothetical model (see Figure 6.6 four pages from hence). In this model circumstances similar to those in South Africa occur in the sense that there are two Black voters and one White voter (a Black majority), the White voter has greater initial human and physical

capital than the Black voters, and the tax structure these voters face is progressive. The circumstances which are different are that all these people have votes, these votes are of equal weight and the allocation of government expenditure on education between the Black and White voters is equal.

Under these circumstances it can be argued that there would be a difference between the White voter and Black voter's intensity of preference for government expenditure. It would seem plausible that the White voter would not only experience a higher maximum utility benefit from this expenditure than the two Black voters, but also a faster decline in the net utility benefit he derives from this expenditure, the greater the level of expenditure.

The reason why the White voter is likely to experience a greater economic benefit than either of the two Black voters is that the academic standard he would achieve when exposed to the the same amount of education would be enhanced by his greater initial human and physical capital. The significance of this advantage is reflected in empirical work done on the contribution made by non-school variables to the educational performance of the pupil. For example, in the Coleman (1966) Report (conducted in the United States) on

"Equality of Educational Opportunity", which was one of the most comprehensive investigations ever carried out on the impacts of school and non-school factors on educational performance, it was found that non-school factors were not only important, but were even more effective influences on pupil performance than the school factors themselves (Cohn, 1979).

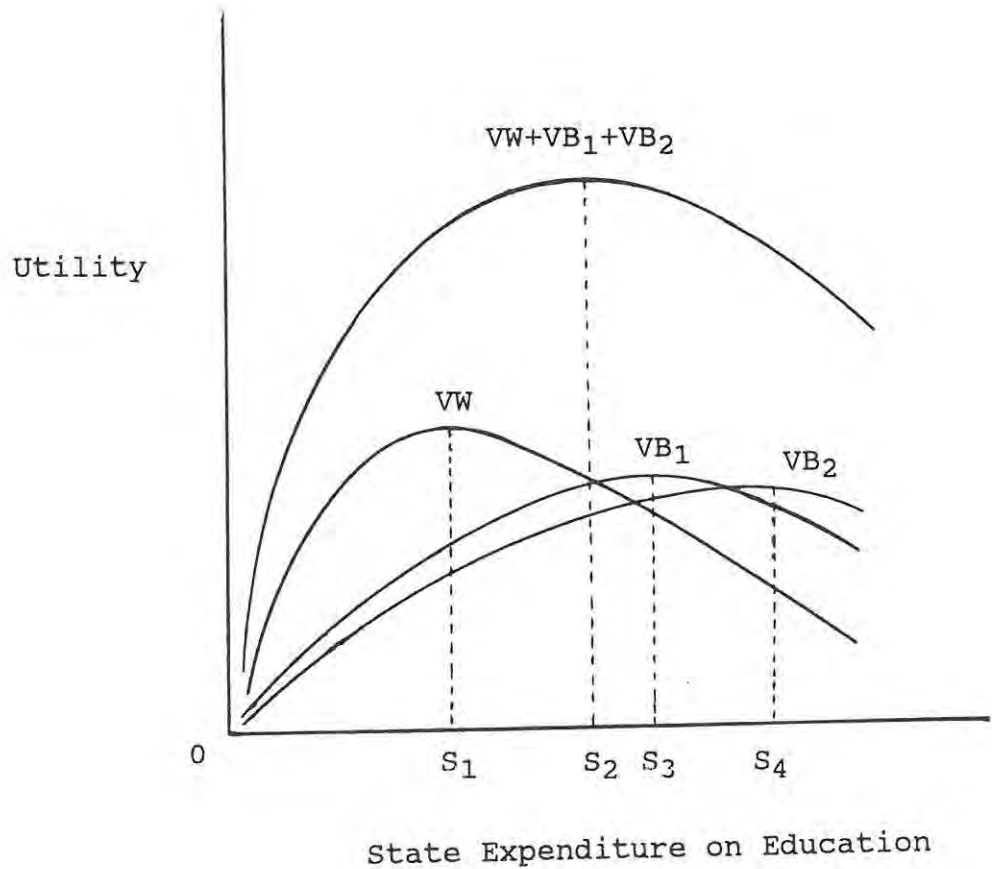
The impact of non-school factors on pupil performance would seem likely to be even more important in South Africa than it is in the United States, because in South Africa the language and culture of the Whites are utilised extensively in Black education. Only in the first four years of schooling are Black pupils provided with education in their mother tongue. After this period, generally speaking, English is used as the primary medium of instruction (Thembela, 1986, pp.77-80). The use of English as the medium of instruction places Black individuals at a disadvantage relative to Whites in the education process because it makes it harder for them to achieve the same academic standards as Whites from the same provision (as shown by Hosking, 1985). For this reason it is probable that the White voter would gain more educational benefit than the two Black voters from the same amount of government expenditure on their education, and hence realise higher gross economic benefits, as assumed above.<sup>4</sup>

In order to determine the net economic benefit to each voter of such expenditure it is also necessary to take into account their associated tax burdens. It is in this context (their net economic benefits) that the utility curves shown in Figure 6.6 are drawn.

As would be expected in terms of the law of diminishing marginal returns, the impact of the tax burden eventually undermines the net economic benefit the three voters derive from the provision of education by the state and hence also the utility they derive. However, the impact of this burden is not equal. Under the assumed progressive tax rate structure those taxpayers who earn more will pay more tax as a proportion of their income, and under the assumption that the White voter holds more initial human and material capital than the two Black voters do, he will earn more. For this reason (the problems of inter-personal utility comparisons notwithstanding) it seems likely that the marginal net utility benefit of education provided by the state would decline faster for Whites than it would for Blacks, the greater the level of expenditure on education by the state, as shown below in Figure 6.6.

Figure 6.6

White and Black preferences for public education in South Africa



In the context of Figure 6.6 it can be shown that the preferences of the median voter (that is, the provision of  $OS_3$  education) no longer coincide with what is equilibrium. The provision of  $OS_3$  education can no longer be considered an equilibrium situation because the utility maximising level of provision, namely  $OS_2$  (where the sum of all three voters utility is

maximised) is not equal to  $OS_3$ , and the White voter has an extraordinary strong inducement to undermine the median vote result.

This situation is consistent with White actions to influence public choice in South Africa; three of which are discussed below. One such action is their support for the apartheid policy; a policy in terms of which the median vote result is undermined by a suspension of the majority vote rule. Under this policy a higher proportion of expenditure on education is allocated to Whites than is allowed for in the above model (Figure 6.6), and as a result the redistributive effect of fiscal policy described in the model, is undermined; an effect which shifts the peak of the white voter's utility from government expenditure on education curve to the right of where it is drawn.

Another action of Whites relevant to public choice in South Africa, is that for emigration; this action is consistent with escaping the median vote result by voting-with-feet (Tiebout, 1956). The most recent action by Whites intended to influence public choice is that of bargaining with voters of the other race groups. This action is consistent with attempts to modify median vote results by log-rolling (Tullock, 1959).

#### 4.3 Apartheid as a way of undermining median vote results

The most obvious way for a person to undermine median vote results is by overthrowing rule by majority vote (Tullock, 1974). It can be argued that in South Africa White voters have in fact pursued this objective by supporting the apartheid policy. The rationale underlying this support is probably best understood in terms of the relative costs and benefits to Whites of the apartheid policy and the feasible alternatives to it.

There are several benefits which Whites can derive from the apartheid policy. One of these is a lower redistributive tax burden (because, inter alia, provision of education by the state would be lower for Blacks). Another is market advantage; where this refers to the scope for White employers to exploit Black labourers, who by being disenfranchised, are forced to compete in the labour market under disadvantageous conditions (see Johnstone, 1976).<sup>5</sup> There are also costs which result from the apartheid policy; White freedom is interfered with by (inter alia) compulsory military service, loss of international mobility and the presence of a living environment where there is widespread social

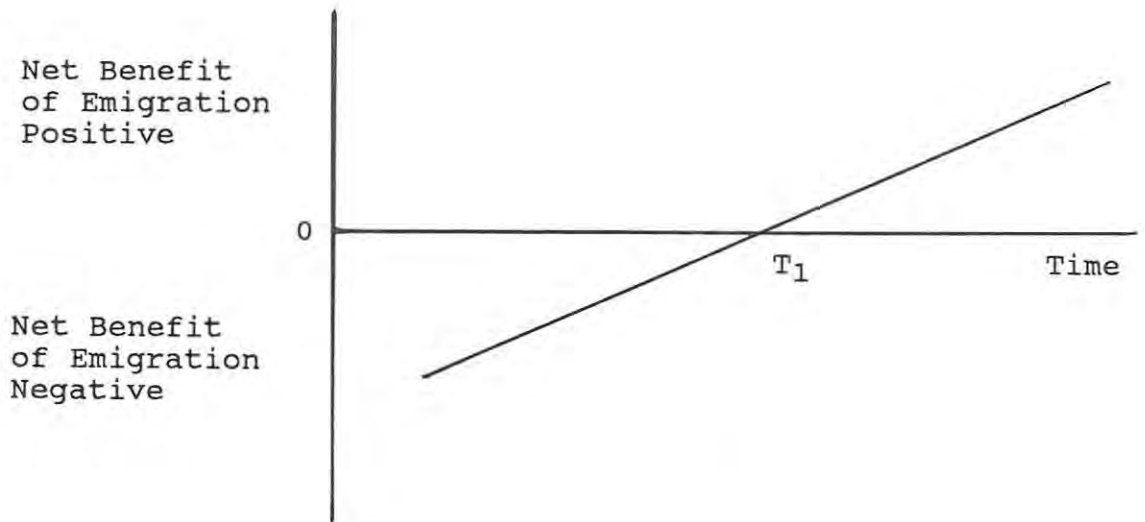
discontent. It would appear that until recently most Whites believed the benefits they could expect as a result of the apartheid policy exceeded the costs, and thus supported it.<sup>6</sup>

However, during the 1970s and 1980s this belief lost popularity, and as a result the policy of apartheid began to disintegrate (Lipton, 1985, pp.231-235 ; de Villiers, 1986, pp.22-34). As could have been expected in terms of our model (Figure 6.6), with the declining popularity of the apartheid policy, there has been an increase of interest in alternative ways of undermining median vote results. The two alternatives that will be considered are voting-with-feet and log-rolling .

#### 3.4 Voting-with-feet

The option of emigration becomes relevant when the expected net benefit to the White voter of emigrating from South Africa is positive; at time  $OT_1$  for the person whose net benefit is shown in Figure 6.7 below.

Figure 6.7

The net benefit of emigration

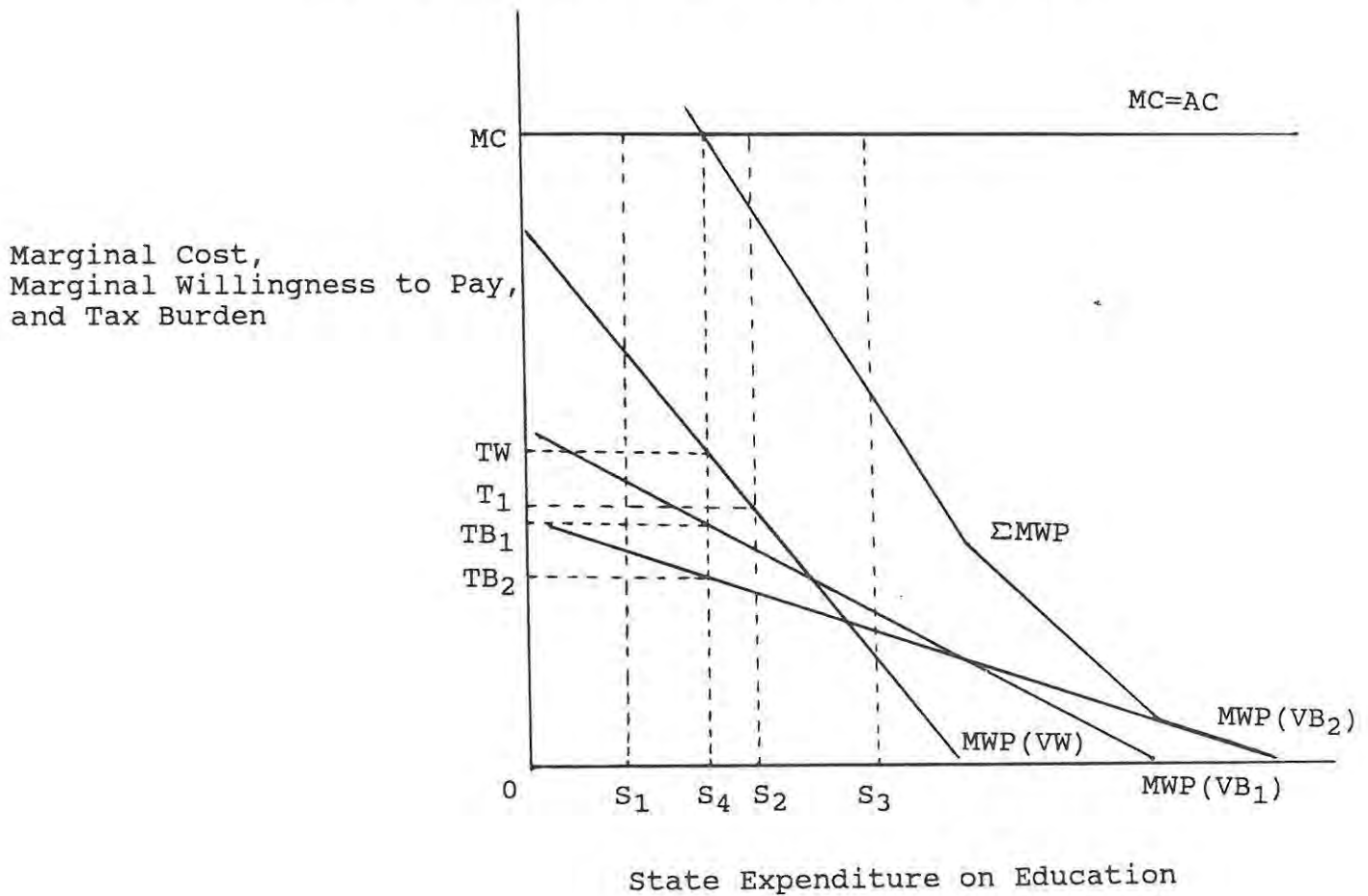
It seems likely that the excess tax burden on Whites associated (amongst other things) with the increased provision of education would play a significant role in promoting such a trend. The concept of an excess tax burden is illustrated overleaf (in Figure 6.8).

In Figure 6.8 there are four hypothetical marginal willingness to pay tax curves shown; one for each voter and one for the sum of all three voters. Also shown is one marginal cost curve of the education provided by the state. For the sake of simplicity, constant costs in the provision of education are assumed. The marginal willingness to pay for education curves are based both on the net benefit that each of the three

voters derive from education and on the share of education they receive from the state.

Figure 6.8

The marginal willingness of Black and White voters to pay for the provision of education by the state



Source: Frey, 1978, p. 84.

A Pareto optimal supply of education, or so-called Lindahl (1919) solution, would exist where  $OS_4$

education was provided by the state and the tax burdens of voters  $VW$ ,  $VB_1$  and  $VB_2$  respectively, were  $OTW$ ,  $OTB_1$  and  $OTB_2$  (Samuelson, 1954; Frey, 1978, p.84). However, in reality, because the paying of tax for education and the provisioning of it are two separate issues of public choice, there is no reason why Pareto optimal results should be produced under the majority vote rule. In terms of Black's (1948) Median Voter Theorem (see Figure 6.5),  $OS_2$  and not  $OS_4$  education would be provided, and in terms of the progressive tax structures in South Africa, the higher income earning White voter would seem likely to end up paying more tax for this education than he would be willing to pay. If the state provided  $OS_2$  education and the White's tax burden remained  $OTW$ , his excess tax burden would be  $T_1TW$ . Although this conclusion is based on hypothetical willingness to pay tax curves, it is plausible that they could reflect South African reality. No empirical research has however been done to verify these assumptions.

The burden of this excess tax clearly increases as more education is provided by the state and those people with the highest incomes are the most detrimentally affected. For this reason people with higher incomes can be expected to suffer the most rapid decline in net benefit of staying in South Africa and hence be most

inclined to consider emigration. Survey findings confirm this expectation. According to Market Research Africa's Omnipoll, the intention to emigrate from South Africa is directly related to income:

Only three per cent of those with an average household monthly income of less than R2 500 wish to leave as opposed to nine per cent from the category where household incomes exceed R4 000 (The Daily Dispatch, November 19, 1987).

However, while some Whites have emigrated from South Africa for this reason (or chosen not to immigrate to South Africa) over the 1970s and 1980s, the great majority of Whites do not appear to have been influenced in this way. Between 1970 and 1987, in all years except 1977, 1978 and 1986, more people migrated to South Africa than did away from it (Table 6.1). On average South Africa enjoyed a net gain of just over 9014 migrants a year between 1970 and 1987 (Table 6.1). Although no racial classification of migration figures is provided by CSS, it seems plausible that these figures are also a good reflection of trends in the migratory behaviour of Whites.

Table 6.1Net migration from South Africa between 1970 and 1987

<u>Year</u>	<u>Emigration</u>	<u>Immigration</u>	<u>Net Emigration</u>
1970	9 154	41 523	- 32 369
1971	8 291	35 845	- 27 554
1972	7 803	32 776	- 24 973
1973	6 290	24 016	- 17 726
1974	7 428	35 910	- 28 482
1975	10 255	50 464	- 40 209
1976	15 641	46 239	- 30 598
1977	26 000	24 822	1 178
1978	20 686	18 699	2 169
1979	15 694	18 680	- 2 986
1980	11 363	29 365	- 18 002
1981	8 791	41 542	- 32 751
1982	6 832	45 784	- 38 952
1983	8 247	30 483	- 22 236
1984	8 550	28 793	- 20 243
1985	7 366	17 284	- 9 918
1986	9 274	6 994	2 280
1987	7 061	7 953	- 892

Source: S.A. Statistics Quarterly Bulletins.

Amongst the Whites who have chosen not to leave South Africa, there has been increasing experimentation with what appears to be the only remaining feasible course of action open to them by which to prevent, or at least mollify median vote results, namely, log-rolling.

### 3.5 Log-rolling

The trading of votes or log-rolling, as it is known in the United States of America, may be explicit or implicit (Tullock, 1976). Explicit log-rolling takes place when one person or group offers to vote for something which would enhance the interests of another person (or group) on condition that they in turn will

vote for something else that enhances his own (or his group's) interest. Where an exchange of votes is not necessary because the whole trade is contained in one piece of legislation for which both vote in favour, the log-rolling is then not explicit but implicit. The scope for log-rolling is often created by the different impact which laws and government policies have on different people.

Opportunities for log-rolling are undoubtedly being explored at present in South Africa. The tricameral parliamentary initiative, where Whites, Coloureds and Blacks each have their own house and yet jointly legislate, is an example of an implicit log-rolling experiment between the White, Coloured and Indian population groups of South Africa.

The bargaining process taking place (at the time of writing) between the National Party and the African National Congress is another example of an ambitious log-rolling experiment. The exchange under consideration between these two political parties is one of Black support for a constitutional assurance package which panders to some strongly felt preferences of Whites in return for an immediate (and relatively painless) transfer to Blacks of control over the legislature. The pursuit by Whites of a constitutional

assurance package would mainly seem to be motivated by a belief that it is politically feasible , if not inevitable, for Black government under the majority vote rule to pursue much more aggressive redistributive policies (from Whites to Blacks) than the National Party, even though these policies may have negative consequences, such as reducing economic growth. The inherent weakness (or trade-off) in the exchange is that the more credible the constitutional assurance package, the lower are the gains that can be achieved by securing control over the legislature.

Clearly, a crucial element within such a 'package' would be the imposition of constitutional limits on the government's power to tax. This limitation can take various forms. For example, it can take the form of an upper house of parliament, which (in terms of the constitution) has to approve tax legislation.<sup>7</sup> This type of limitation is particularly interesting from an economic perspective because there are economic advantages (see below) to imposing constitutional limits on the government's power to tax, that is, to a tax constitution .

#### 4. **Some economic reasons for a tax-constitution in South Africa**

One reason for a tax constitution is to control undisciplined and imprudent increases in government expenditure. In principle this lack of discipline should be held in check by the refusal of an important section of the voting community to accept the associated increases in tax payments (by their rejection of these increases in parliament). However, (unfortunately) often it is not clear to the voting community or indeed their parliamentary representatives (Lingle, 1989, p.24) just what the financial implications of increasing government expenditure are. For example, when public debt is used to finance increases in government expenditure, the immediate burden of such increases is borne voluntarily by the purchasers of government bonds (Buchanan and Wagner, 1978). It is only later when tax-payers are required to service and repay this debt that they experience this burden. For this reason tax-payers are often deluded as to the real cost of the immediate benefits they experience as a result of the provision of goods and services by government.

The accuracy of a person's perception of the cost of government will vary inversely with the complexity of the revenue structure (Wagner, 1976, p.52).

It is against the background of fiscal illusion amongst the public that Brennan and Buchanan (1980) propagate the idea of a tax constitution. The purpose of such a constitution is to protect the unsuspecting individual from falling prey to an inefficient revenue-maximising government, or a Leviathan state, as Buchanan (1975) has termed such a government.<sup>8</sup>

A constitution of this kind would seem desirable for the case of South Africa because in this country there are reasons for believing that the hazard of the Leviathan state looms large. One reason is that debt financing is used extensively and therefore fiscal illusion (almost certainly) is already a reality. Some evidence of the use of debt financing is provided in Table 6.2 below. On the basis of this table it can be shown that the budget deficit, that is government expenditure minus government revenue, averaged about 18 per cent as a proportion of government revenue over the period from 1967 to 1989. It must also be borne in mind that the deficit is not the only financing requirement facing the government. There are also loans to the government which have to be redeemed and these redemptions are often larger than the budget deficits themselves (as can be seen in Table 6.2). For this reason the average total financing requirement

between 1967 and 1989, as a proportion of government revenue, has been much higher than 18 per cent. It has been about 33 per cent.

Table 6.2

The budget deficits and the total budget financing requirements in South Africa in millions of Rand from 1976 to 1988

Budget Year	Government Revenue	Government Expenditure	Deficit	Loan Redemptions	Total Financing Requirement	Total Real Financing Requirement
1976/77	5990,5	8244,6	2254,1	598,8	2852,9	8665,6
1977/78	7016,4	8960,5	1944,1	1144,5	3088,6	8440,3
1978/79	8138,4	9955,3	1816,9	1895,8	3712,7	9207,2
1979/80	9787,5	11441,0	1653,5	1285,3	2938,8	6441,4
1980/81	13310,3	13595,4	285,1	1720,7	2005,8	3864,7
1981/82	14416,3	16431,3	2015,0	3084,8	5099,8	8528,1
1982/83	17173,6	19183,0	2010,0	1768,0	3778,0	5507,3
1983/84	19087,7	22316,8	3229,1	2148,7	5377,8	6975,1
1984/85	23425,9	27130,6	3704,1	2457,6	6161,7	7164,8
1985/86	29320,1	32908,4	3588,3	2045,0	5633,3	5633,3
1986/87	34135,9	40247,4	6111,5	2326,5	8438,0	7114,7
1987/88*	37822,0	47836,2	10014,2	2592,6	12606,8	9155,3
1988/89*	44005,0	53865,5	9860,0	2671,0	12531,0	-

\* Preliminary figures.

Sources: 1. Information supplied by Syfrets  
 2. Budget Speeches 1980-81 to 1988/89  
 3. C.P/I. 1985 = 100 (S.A.R.B. Quarterly Bulletins)

The use of deficit financing is not the only factor which leads one to suspect that a Leviathan state could be emerging in South Africa. Another factor is the struggle for political influence, and controlling this struggle is another reason for advocating a tax-constitution in South Africa (see Chapter 3).

In his classic treatise Leviathan, Hobbes (1651) argued that in a social situation where people (whom he assumes to be selfish) were not constrained by a framework of law and custom, there would be continuous conflict. For this reason he argued that there was a need for an absolute power, the state, to implement laws against coercive individual behaviour and so end this conflict for the good of all. However, in the case of South Africa, it can be argued that the state is not merely attempting to implement the rule of law, but also to provide an extensive range of goods and services, and that as a result, the state has become a stimulus rather than a solution to this conflict. The state stimulates conflict as a result of this provision because Whites and Blacks are induced to allocate more and more resources to the production of political pressure, where this pressure is aimed at maximising their net benefit from these government services. In other words, they are induced to rent-seek (see Chapter 3).

For the above reasons it would appear that under present circumstances in South Africa the idea of a tax-constitution (Brennan and Buchanan, 1980) has considerable merit.

### Conclusion

In this chapter two of the most well known contractarian approaches by which the role of the state may be assessed have been outlined, discussed and related to South Africa. These approaches are those developed by John Rawls (1971) and James Buchanan (1986) on objective fairness. There would seem to be little doubt that if Rawls's (1974) proviso of a well-ordered society is excluded, his principles of justice serve as a rationale for increasing government expenditure on Black schooling. However, there are also strong grounds for exercising caution when using Rawls's (1971) principles in this way because they are derived in the context of the original position and this concept is controversial. In particular, it is uncertain whether real people do in fact consider all historical information irrelevant to what is justice and what is not (Nozick, 1974).

On the basis of Buchanan's unanimity standard it has been shown that although a case can be made for using the majority vote rule for social decision-making, there are many complications in doing so. The application of this rule to the issue of government expenditure on Black schooling is complicated by the fact that White voters are likely to have strong preferences for limiting increases of state expenditure on equal education for all. This

preference would appear to be one of the reasons why Whites have resisted the institution of the majority vote rule in South Africa. However, over the 1970s and 1980s the net benefit of this resistance amongst Whites appears to have been eroded by domestic and international opposition to continued White government in South Africa. For this reason, in order to avoid median vote results, Whites now appear to be seriously considering the options of voting-with-their-feet and engaging in log-rolling with members of the other race groups.

At the time of writing the latter possibility in particular, namely, logrolling, was being actively pursued; and in this context the issue of a tax-constitution arises. Besides the part it can play in log-rolling experiments, there are also economic advantages to a tax-constitution. For example, it appears to be a way whereby rent-seeking in South Africa can be controlled. However, under such an arrangement we cannot say with certainty that increases of government expenditure allocations to Black school would or should take place, and hence that a contractarian case (of the Buchanan type) for them can be made. In fact, in the context of the model outlined in the latter part of this chapter, there is reason to believe that such increases would be limited. Hence, the conclusion is reached that while Rawls's approach can be argued to lead one toward the view that government

expenditure on Black schooling should be increased (Simkins, 1987), Buchanan's approach does not.

Notes

1. Contractarianism, is one of many theories of ethics. Other very influential theories on ethics, which have already been referred, to are utilitarianism, Paretianism, liberalism and Marxian ethics.
2. Buchanan (1977, p.222 and 1979, p.197) attributes the first use of the unanimity criteria for the purpose of economic analysis to Wicksell (1896). Buchanan was awarded the Nobel Prize in 1986 for his contributions to economic theory.
3. Despite this difference, there are certain "affinities" between the approaches of Rawls (1971) and Buchanan (1986). For example, there is an 'affinity' between the two approaches at the constitutional level of rule-making.

To the extent that the individual reckons that a constitutional rule will remain applicable over a long sequence of periods, with many in-period choices to be made, he is necessarily placed behind a partial "veil of uncertainty" concerning the effects of any rule on his own predicted interests (Buchanan, 1987, p.248).

Buchanan (1986) also seems to have some sympathy for the spirit of Rawls (1971) second principle of justice, even though he rejects the principle as a fundamental 'source of authority'. For example, he feels that there is a case within the constitutional order for making provisions that

take some of the most apparent rough edges off gross inequalities in starting positions (Buchanan, 1986, p.133),

such as through transfer taxation and government financed education. However, it should also be pointed out that the case is not a strong one because it is based on an ethical objection to advantage in "birth" and in particular to the inheritance of non-human wealth, and these objections cannot be established in terms of unanimity criteria (Buchanan, 1986, pp.128-134). The ethics of the issue are unclear because in principle a person's property right should include his or her right to donate that property to someone else (for discussion, see Hayek, 1960, pp.88-91; Nozick, 1974, p.168). A bequest would appear to be a voluntary exchange between bequeather, as donor, and heir, as receiver, and therefore to satisfy the requirement that

there be unanimity between the relevant interacting persons.

4. If the disparity between White and Black non-school variables diminishes over time, Whites may well experience less of an advantage in education. In this event, a movement towards equality between Blacks and Whites of the net benefits they experience from education may take place. Such a development, for example, seems to have taken place between Blacks and Whites in the United States of America (Hoffman, 1984).
5. This type of private benefit should not be considered as unique to South Africa. As Tullock (1980) has pointed out, such benefits also arise as a result of the immigration laws of most Western countries. In both instances the law is used to prevent certain individuals from acquiring influence over the government. By declaring some categories of the country's residents 'illegal' and excluding them from voting, the 'legal' citizens are afforded a cheap source of labour because the illegal citizens are disadvantaged in the labour market by their illegality.
6. A person does not act on the existence of an incentive alone; his active involvement also depends on whether he perceives his involvement to be important to the success or failure of the policy. In this connection it would appear that Whites have a bigger incentive than Blacks to involve themselves in political actions because their numbers are less and therefore each person's participation is of greater relative consequence.
7. In order to link the composition of this house to the tax-payers interest provision could be made for a person to have two votes: one (say an 'A' vote) for the candidate of his choice and another (say a 'B' vote) for the party of his choice, where this 'B' vote was weighted in accordance with his (or her) contribution of income tax to the state. The parties could then nominate representatives to the 'upper' house in accordance with the total of their 'B' votes. As representation in this house would reflect the interests of the tax-payers, it would provide a safeguard against policies aimed at redistributing income from (White) tax-payers to others (*inter alia*, by increasing taxes in order to pay for increases of government expenditure on Black schooling).
8. The latter is commonly used to describe a real or imaginary sea monster (Cullis and Jones, 1987, p.xv). The hazard of the Leviathan state is that it may severely undermine economic development in a country.

For example, it would appear that Leviathan states are already a problem of crisis proportions in Africa.

African governments are almost everywhere engaged in demanding activities of secondary importance such as selling consumer goods at the retail level, buying food-grains from peasants, running truck and bus services - tasks that private agents could easily do as well or better (Berg, 1985, pp.49-50).

The crisis would seem to have arisen because imprudent bureaucratic expansion has been allowed to get out of control in many parts of Africa. One aspect of this crisis would appear to be that too much education is provided by the state. When this happens there is a tendency for people to become overeducated relative to the jobs that are available; an occurrence which is undesirable, not only because it is wasteful, but also because it leads to workers becoming dissatisfied at their places of work and engaging in counter-productive behaviour (Tsang and Levin, 1985).

## CONCLUSION

In this thesis an assessment of the welfare, liberal and contractarian justifications for government expenditure allocations to Black schooling in South Africa has been presented in the light of historical, human capital and rent-seeking perspectives. It has been shown that both human capital and rent-seeking explanations for government expenditure on Black schooling are plausible, but complicated by almost overwhelming empirical problems.

A welfare justification for government expenditure on Black schooling has been shown to be unconvincing. The problems of measuring and comparing the effects of government and market failures are considerable; as are those raised by the introduction of distributional criteria. It is also concluded that in a general equilibrium context, the problem of specifying the social welfare function cannot be avoided.

In terms of classical liberal and reform liberal interpretations of the freedom ideal, different conclusions emerge on whether more or less Black schooling should be provided by the state. From a reform liberal vantage point, increases may be considered desirable because they would enjoy the

support of the majority of South Africans and would serve to enhance the employment and consumption opportunities of Blacks. On the other hand, the classical liberal case is weak, because in order to increase government expenditure on Black schooling substantially, it is necessary to increase taxes, unless other government expenditures are equivalently reduced; and these taxes infringe the property rights of tax-payers (Nozick, 1974). With respect to Marxist views on the role played by the state in the provision of Black schooling it is concluded that they lack applicability.

Inconsistent conclusions also emerge out of a contractarian assessment of government expenditure allocations to Black schooling. If one disregards Rawls's proviso that his theory of justice be considered only in the context of 'well-ordered societies', his principles justify increasing government expenditure on Black schooling; a justification based primarily on Rawls's (1971) second principle of justice and the observation that most Blacks in South Africa fall into the lower income strata of society. Of course, if one takes Rawls's proviso seriously, this is not the case.

Against this background Buchanan's unanimity requirement approach would appear to be more suited than Rawls's to the South African paradigm. Applied to the issue whether the state should increase its provision of Black schooling, such an approach entails comparing the costs of decision-making under different voting rules; a comparison which leads one to the conclusion that there would be several shortcomings to government decision-making in South Africa on the allocation of education expenditure under the majority vote rule. However, they are shortcomings which can be overcome: for example, by log-rolling. It is in this context that the concept of a tax-constitution has been discussed; an idea which also has the economic advantage of reducing the incentive for rent-seeking along racial lines.

The problem of rent-seeking along racial lines deserves special consideration: not only because it is a socially wasteful activity, but also because it undermines the development of log-rolling 'solutions' in South Africa, by rewarding combative political behaviour; thereby creating an environment in which the trading of votes between members of the different race groups is discouraged. Such combative behaviour takes place despite the fact that there can be no absolute winner in the rent-seeking 'struggle'. The only gain

which can be achieved is that of a marginal increase in political influence ; a gain of income at the expense of other South Africans. The fortunate aspect of this result is that the gain is marginal, and thus combative behaviour is rewarded only in a limited way, but there are also unfortunate aspects. In particular, it becomes worthwhile, if not to make redistributive gains then to protect oneself against redistributive losses, for participants in the rent-seeking 'struggle' to expend even more than they have in the past on the attainment of political influence. As a result, resources in South Africa are diverted from the generation of real income, a problem which should be redressed.

There is clearly something wrong with an economic system which initiates such waste: too much is at stake in being able to manipulate state intervention, making it worthwhile for people to expend their resources on the attainment of political influence over the state. The solution is to reduce the incentive for people to seek such influence.<sup>1</sup> However, because neither the present restricted vote system nor the obvious alternative, namely a majority vote rule system can be expected on their own to facilitate such a reduction, other ways deserve investigation.

The main objective of this investigation has been to determine whether increasing government expenditure on Black schooling (at a rate exceeding that at which GDP increases) is justified. The following conclusions is reached.

Government expenditure on education is desirable from many perspectives, some economic and some non-economic. It is generally agreed it is desirable because it enhances the productivity of workers and facilitates technical advancement, even though it is difficult to arrive at undisputed conclusions using economic analysis. It is also positively correlated with economic growth, even though causality is difficult to prove.

From a humanitarian perspective it is desirable, inter alia, because it improves health awareness and childcare and promotes greater civic responsibility. Indeed, for many Blacks in South Africa, government expenditure on their schooling may be their only means to escape a cycle of poverty and lead more rewarding lives. In the final analysis these aspects must surely carry more weight than inconclusive economic reasons for and against government expenditure on education.

However, it is also important to remember that such expenditure has an opportunity cost. In order to spend more on education, either other meritorious expenditures have to be cut (e.g. on health and housing) or tax-payers have to be coerced (sooner or later) to pay more tax, and there are costs incurred and freedom lost as a result of such coercion. These costs comprise a serious complication to the economic case for increasing government expenditure on Black schooling because it is impossible to determine with economic arguments whether the benefits do or do not outweigh them. This conclusion is valid whether the alternative bases for assessment are: rate of return to investment in human capital, economic welfare, liberal principles, or the social contract.

Notes

1. The view is sometimes expressed that if Blacks and Whites in South Africa were integrated at the school level, political rivalry between them would decrease. The belief which usually underlies this sentiment is that an integrated education system promotes a better understanding and hence relationship between Blacks and Whites. There would seem to be merit in this argument, especially for cases where the differences between the pupils are not overwhelming.

However, unfortunately this does not seem to be the case - there are major differences between pupils of the different races. For example, at present Black and White pupils tend to be of different average ages by standard (about two years difference), speak different home languages and come from different cultural and economic backgrounds. The cultural difference tends to be to the disadvantage of the Black person in the education process because of the use of English and not his home language as the medium of instruction. The common use of English as the medium of instruction, makes integration possible, but not necessarily feasible or desirable, because the Black pupil is likely to 'learn' though this medium at a slower rate than the White pupil in formal academic schooling. The estimates of Hosking (1985) suggest that under these circumstances, on average, the White child comprehends what is read in about one-third of the time taken by a Black child. Therefore, it is plausible that in an integrated school system (geared to the Black majority) a White pupil would be 'exposed' to substantially less educational material than he would otherwise (in the schooling system geared to his own norms). As a result it seem likely that the standards and cultural differences that Whites presently enjoy in their schools would be lowered.

For this reason there appears to be a case in the South African context for a policy on the financing of education which does not punish 'differences' in order to encourage interaction amongst members of different race groups at the school level. In terms of such a policy it would be appropriate for the government to use the same subsidy formula for both privately and publicly administered schools. By adopting such a policy those people (mainly Whites) with a 'leftover'

demand for schooling (after the median voter had been 'satisfied' and within constitutional constraints on taxation) would not be put at a disadvantage by virtue of their wish to make up any 'differences'.

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