Quality of Education and the Rise in Returns to Schooling in South Africa, 1975–1985

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Abstract — In the South African context, the returns to schooling of young African males between 20 and 29 years of age increased significantly between 1975 and 1985, while the returns enjoyed by older African males improved negligibly if at all. Evidence is presented suggesting that an improvement in the quality of schooling of Africans between the early sixties and the early seventies is partly responsible for the rise in schooling returns. The implications for wage levels of the breakdown of the educational system during the 1980s are pointed out.

1. INTRODUCTION

IT IS well-known that wage levels of black[1] workers in South Africa rose considerably from the mid-1970s to the mid-1980s (Hofmeyr, 1989). In this article I make a contribution to this literature by showing that the returns to schooling of young African males increased between 1975 and 1985. I present evidence to support one explanation for the increase in schooling returns: an improvement in the quality of education received by Africans between the early sixties and the mid-seventies.

The plan of the paper is as follows. In Section 2 I review the literature on schooling input quality, academic achievement and subsequent labor market earnings. In Section 3 the returns to education for African males in 1975 and 1985 are calculated. In Section 4 I present evidence that an increase in the quality of schooling received by Africans during the sixties and seventies may partially account for the increase in returns to education observed between 1975 and 1985. Conclusions are presented in Section 5.

2. LITERATURE REVIEW: SCHOOLING INPUT QUALITY, ACADEMIC ACHIEVEMENT AND LABOR MARKET EARNINGS

The objective of this short review is to find out whether anything systematic can be said about three relationships in the less-developed country context: the relation between schooling inputs and achievement; the relation between schooling inputs and subsequent labor market earnings; and the relation between academic achievement and subsequent labor market earnings.

There is a strong intuitive presumption that enhanced schooling inputs should result in improved academic achievement. Although the bulk of developed country studies fail to find such a relation (Hanushek, 1986), there are some notable exceptions which do (e.g. Summers and Wolfe, 1977; Margo, 1986; Orazem, 1987), and a close relation has been found repeatedly in less-developed countries. Heyneman and Loxley (1983) use a set of surveys taken in the mid-seventies in 29 countries, and find that the effect of school and teacher quality

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on academic achievement in primary school (as measured by standardized test results) is greater in poorer than in richer countries. They conclude that in less-developed countries "the predominant influence on student learning is the quality of the schools and teachers to which the children are exposed".

In a similar vein, Solmon's (1985) review shows that in less-developed countries schooling quality variables positively influence schooling achievement, even after standardizing for family background. Variables such as teacher qualifications, teacher experience, salary levels, the availability of school textbooks and per-pupil school expenditures are regularly found to have positive and significant coefficients. One exception is class size: despite the widespread belief that class size is a major determinant of schooling success, this variable does not normally have statistically significant coefficients.

As far as the relation between schooling inputs and labor market performance is concerned, Solmon (1985, 1987) cites considerable evidence of positive and statistically significant effects for the U.S.A. Some of the studies reviewed show that expenditures per student have a strong effect on subsequent earnings, even after considering a wide array of personal (e.g. IQ) and family characteristics.

In a longitudinal study of schooling quality and earnings, Smith and Welch (1977) find an increase in black–white earnings ratios in the U.S.A. between 1960 and 1970. In addition they find a pro-skill bias in schooling returns, that is, black–white earnings ratios of people with more schooling increased more than those with less. Their "best guess" for rationalizing the pro-skill bias is increasing school quality available to black Americans. They note that attributes such as days attended, teacher educational levels, teacher salaries and expenditures per pupil improved through most of the century for black students relative to whites (see also Welch, 1973; Smith and Welch, 1989). Similarly, Card and Krueger (1990), in the U.S.A. context, find a link between increases in measured school resources in a person's state of birth and in the monetary return to schooling as an adult.

The relationship also holds in less-developed countries. Behrman and Birdsall (1983) cite studies from Latin America showing that the level of teacher education influences student performance. In their own study of Brazil, their preferred measure is the average schooling of teachers in the area in which individuals obtained their schooling; and they show that this measure of school quality positively influences subsequent earnings of Brazilian men. Moll (1991a) finds that a similar regional measure of teacher education enters positively and significantly into a Mincerian regression of wages on characteristics using a 1980 sample of young South African black workers.

The third relationship, that between academic achievement and subsequent labor market earnings, is uncontroversial. Two examples will suffice. Olneck (1977), using the Kalamazoo brothers' study, finds positive and significant coefficients on the test score variable, even after taking into account socioeconomic background, family background, years of education and occupation. Similarly, Boissiere *et al.* (1985), using samples of Kenyan and Tanzanian workers, found positive and significant coefficients on their measure of cognitive skill, which incorporates numeracy and literacy, even after inserting a dummy for completion of secondary school and standardizing for reasoning ability and work experience.

3. RETURNS TO SCHOOLING OF AFRICAN MALES, 1975 AND 1985

The effects of education are tested by the standard Mincerian regression of the log of earnings on personal characteristics and dummies. The independent variables include years of school, dummies for diploma- and degree-holders,[2] experience, a marital status dummy, tenure in the current job, city dummies (to reflect differences in the cost of living) and industry dummies. The dependent variable is the natural log of earnings, defined as the cash wage plus bonus, overtime, and the value of employer-provided transport, clothing and meals, less tax, insurance and pension deductions. Since hours worked are not available in the BMR data sets, it is assumed, probably not too inaccurately, that employed males between 20 and 59 are full-time workers. In order to test for differential effects with age, one regression is performed for each age decile, i.e. 20–29, 30–39, 40–49 and 50–59.

The data sets used for the human capital regressions are the surveys of 1975 and 1985, conducted by the Bureau of Market Research (BMR) at the University of South Africa, Pretoria. The aim of the surveys is to monitor consumption patterns of blacks. Samples are selected randomly from address

lists; the sampling unit is the household. The response rate is good, e.g. in the Soweto survey in 1985 only 14 of 440 households refused to provide information (BMR, 1986, p. 4).

In this study, the BMR samples from the major urban areas are simply concatenated. Thus, although each individual sample is random, the overall sample as used in this study may not be completely so. It is unlikely that the resultant slight over-representation of less populous centers such as Bloemfontein will affect the results.

The means of the variables of the youngest samples (20–29 years) are presented in Table 1. It is apparent that between 1975 and 1985 the urban African male workforce made gains in qualifications, job tenure, occupational status, unionization and wages. Unionization increased dramatically from 3.1% in 1975 to 26% in 1985. Real earnings grew at 0.45% annually, rising from R4340 p.a. to R4540 p.a. (in 1985 Rands).

The regression results for all the samples are presented in Tables 2 and 3. They appear to be in accord with human capital theory, with statistically significant and positive coefficients on years of school, tenure, and the dummies for diploma- and

Table 1. Sample means: urban African males between 20 and 29 years of age, all sectors other than agriculture

	1975	1985
Years school	7.5	8.8
Diploma	0.011	0.014
Degree	0.003	0.004
Experience*	11.3	10.2
Married	0.30	0.24
Tenure with current employer	2.4	2.8
Professional	0.032	0.030
Manager	0.007	0.0014
Skilled	0.041	0.078
Semi-skilled	0.26	0.40
Unskilled	0.57	0.38
Administrative	0.088	0.11
Unionized	0.031	0.26
Log annual earnings†	7.04	8.30
Annual earnings‡	4340	4540
N	714	722

* Experience = age − years' education − 6.
† Current Rands. Annual earnings = cash wage − tax − insurance − pension + bonus + overtime + value of employer-provided transport and clothing and meals; converted to annual figures.
‡ Constant 1985 Rands. CPI for 1975 = 29.4, for 1985 = 100.
Source: author's computations, BMR microdata sets.

degree-holders. The experience variable is significant in only two of the eight samples, and in these two cases it is positive. The explanatory power of the regressions, while not great, is of an acceptable magnitude for cross-section sample data, with adjusted R-squares of 0.15–0.38.

Apparently, the returns to schooling for the 20–29 year-old group rose considerably during the period. The coefficient on years of schooling increased from 0.049 in 1975 to 0.077 in 1985. This difference is significant at the 5% level (t-statistic = 2.07). (It would be unwise to infer anything from changes in the coefficients on the dummies for diploma- and degree-holders since in seven of the eight samples, diploma- and degree-holders comprised only 1% or less of the total.)

Tests for changes in the returns to schooling for all the samples are presented in Table 4. Although the returns to schooling increased between 1975 and 1985 for all age cohorts, the increase is large (57%) and statistically significant only for the 20–29 age group.

Before reflecting on the importance of the changes in the returns to schooling, it is well to ponder the possibility of bias due to my poor measure of work experience. As is common in the literature, I proxy experience with potential experience defined as age, less schooling, less six. This ignores unemployment and time out of the labor force. Unfortunately there are no data sets in South Africa which enable these distinctions to be made. The potential biases from ignoring time out of the labor force are reduced by restricting the sample to men only and by including tenure on the current job as a regressor. What bias remains is unlikely to differ greatly between 1975 and 1985, so that the observed *changes* in the schooling coefficients are unlikely to arise from *changes* in this source of bias.

The omission of unemployment is more serious, however, since unemployment conditions changed between 1975 and 1985. In the absence of credible time-series data on unemployment of the African population, I refer to the registered (i.e. benefit-related) unemployment rate of the colored, white and Asian groups combined. This rate rose from 0.4% in 1975 to 1.8% in 1985 (RSA 1988, Table 7.32). The unemployment rate was low in 1975, following a long upswing; with the slump of the 1980s unemployment became widespread by 1985. Unemployment in the African population was heavily concentrated in the younger age groups.

Table 2. Regression results: urban African males, 1975

Independent variable*	Age 20–29	Age 30–39	Age 40–49	Age 50–59
Intercept	6.48	6.46	6.90	6.93
(*t*)†	(39)	(41)	(25)	(20)
Years of schooling	0.049	0.053	0.048	0.028
(*t*)	(4.8)	(7.4)	(5.1)	(3.0)
Diploma	0.37	0.48	0.36	0.50
(*t*)	(2.0)	(2.7)	(2.0)	(2.3)
Degree	0.84	0.62	0.66	1.20
(*t*)	(2.3)	(2.2)	(1.3)	(4.1)
Experience	0.018	0.008	0.001	−0.002
(*t*)	(2.1)	(1.5)	(0.2)	(−0.3)
Married	0.14	0.15	0.02	0.12
(*t*)	(2.9)	(3.7)	(0.2)	(1.2)
Tenure	0.023	0.014	0.007	0.006
(*t*)	(3.1)	(4.2)	(2.7)	(2.8)
Union member	0.047	0.11	0.098	0.12
(*t*)	(0.4)	(1.3)	(1.0)	(1.1)
N	714	715	672	448
Adjusted *R*-squared	0.15	0.25	0.19	0.26
F observed	7.4	13.7	7.6	7.7
Root mean square error	0.50	0.39	0.49	0.40

Source: author's computations, BMR microdata sets.

*Dependent variable: log annual earnings. For brevity, the less-interesting coefficients on cities (11) and industries (7) are not presented.

†*t*-Statistics are presented below each coefficient in parentheses.

Table 3. Regression results: urban African males, 1985

Independent variable*	Age 20–29	Age 30–39	Age 40–49	Age 50–59
Intercept	7.38	7.92	8.04	8.22
(*t*)†	(49)	(50)	(32)	(21)
Years of schooling	0.077	0.057	0.055	0.036
(*t*)	(8.5)	(8.1)	(6.3)	(3.6)
Diploma	0.72	0.42	0.32	0.28
(*t*)	(5.3)	(3.7)	(1.9)	(1.4)
Degree	0.74	0.83	0.54	—‡
(*t*)	(3.1)	(6.0)	(3.1)	
Experience	0.016	−0.003	−0.007	−0.005
(*t*)	(2.4)	(−0.5)	(−1.2)	(−0.6)
Married	0.19	0.22	0.17	0.19
(*t*)	(4.9)	(6.8)	(2.9)	(2.1)
Tenure	0.022	0.020	0.022	0.006
(*t*)	(4.0)	(7.2)	(8.1)	(2.5)
Union member	0.059	0.10	0.082	0.068
(*t*)	(1.3)	(3.0)	(2.0)	(1.3)
N	722	816	616	443
Adjusted *R*-squared	0.31	0.38	0.35	0.22
F observed	15.3	23.1	15.6	6.5
Root mean square error	0.41	0.39	0.43	0.43

Source: author's computations, BMR microdata sets.

*Dependent variable: log annual earnings. For brevity, the less-interesting coefficients on cities (11) and industries (7) are not presented.

†*t*-Statistics are presented below each coefficient in parentheses.

‡No members of the sample had degrees.

Table 4. Tests for changes in the returns to schooling estimates, by age cohort

Age cohort	1975		1985		*t*-Test for difference
	Coefficient	Standard error	Coefficient	Standard error	
20–29	0.049	0.0103	0.077	0.0091	2.07
30–39	0.053	0.0072	0.057	0.0071	0.40
40–49	0.048	0.0094	0.055	0.0087	0.54
50–59	0.028	0.0093	0.036	0.0102	0.59

Source: author's computations, BMR microdata sets, 1975 and 1985.
Notes: All regions and all sectors (except agriculture) included.

According to the Current Population Survey of 1985, unemployment rates varied from 14% (age group 20–24 years) to 6.3% (25–34 years), to 3.9% (35–54 years).[3] Hence the problem of bias owing to mismeasurement of the experience variable is likely to be most acute in the case of the youngest cohort, i.e. those between 20 and 29 years of age.

Assuming that the omission of unemployment caused negligible measurement error in the 1975 experience variables (because unemployment was low), the question is whether the omission of unemployment in the 1985 experience variables, and particularly in the experience variable of the 20–29 year age group, could have produced an upward bias in the schooling coefficients in 1985, leading us to believe that the returns to schooling had increased when they had in fact not done so.

Assuming the experience variable to be the only mismeasured one in each of the 1985 data sets, the direction of the bias in the schooling coefficients can be found from the covariance matrix of observations (Levi, 1973). The bias imparted to the variable of interest (in this case schooling) is: − (sign of the covariance of the observed values of the mismeasured variable and the variable of interest) * (sign of the coefficient on the mismeasured variable). The covariances were computed as 0.000046 (20–29 year-old sample), 0.000026 (30–39), 0.000039 (40–49) and 0.000059 (50–59). From Table 3, the coefficient on experience was positive in the 20–29 year-old sample and was negative in the three older samples. Hence, the mismeasurement of experience in 1985 imparts a downward bias to the coefficient on schooling in the 20–29 year-old sample, and an upward bias in the three older samples.

As is clear from Table 4, the coefficient on schooling in the 20–29 year-old sample increased considerably between 1975 and 1985, despite the downward bias which may have been present in the 1985 regression. In addition, the small increases in the schooling coefficients in the three older samples may have been due to the possible upward bias arising from the mismeasurement of experience in 1985. Hence, it is probable that if data sets were available which included more accurate measures of experience, the major contention of this section would be reinforced: that returns to schooling increased substantially only for the youngest cohort.

The difference between the youngest cohort and the others is of crucial importance to understanding the changes in the labor market between 1975 and 1985. It is not enough simply to note that discrimination eased, or that Africans won union rights, and so on. The explanation of the structural changes that overtook the labor market during the decade must confront the fact that there was more improvement in schooling returns for younger age cohorts than older ones.

With this in mind, it appears that there are two possible competing explanations for the change in education returns: cohort effects in the reduction of discrimination and changes in schooling quality. With respect to discrimination, it might be argued that younger workers benefited more from the relaxation of job reservation than older workers because the latter were less able to recover from the effects of past discrimination. If this was so, the educational investments of younger workers would earn higher returns. In support of this view, Moll (1991b) has presented evidence that discrimination against so-called colored workers in South Africa declined between 1970 and 1980, and that the decline was more marked for those in younger age cohorts (see also Knight and McGrath, 1987).

The second explanation for the increase in educational returns is a rise in the quality of education.

4. CHANGES IN THE QUALITY OF EDUCATION

To demonstrate a link between quality of education and returns to education, one would ideally include measures of schooling quality in the regressions. In South Africa, such expanded data sets are unavailable. Hence, this paper has a more limited purpose. The strategy adopted is (a) to show that the returns to education increased; (b) to show that the quality of education, according to certain input and output measures, increased in the relevant period; and (c) to infer, on the basis of studies in other developing countries (see the literature review above), that there is probably a causal link between improving quality of education and rising educational returns. Part (a) has been done above; parts (b) and (c) are attempted in this section.

The period under study is identified by successive averaging. The average age in the 20–29 year sample is 25. The representative person in the 1975 BMR survey did about 7.5 years in school and was halfway through his/her schooling at the age of approximately 11, i.e. in 1961. Similarly, the representative 1985 person did 8.8 years in school and was halfway done at 12 years of age, in 1972.[4] Hence, the schooling situation should be examined in the "average" years 1961 and 1972. I hypothesize that the quality of schooling received increased between these two dates (and their surrounding quinquiennia) in such a way as to make a difference in the 1975 and 1985 measured rates of return. Although it would be ideal to consider narrower age bands so as to have more precision in determining the years during which the schooling was done, the BMR sample sizes are too small to permit such a procedure.

Before examining the data, some comments on the South African schooling qualifications are appropriate. The first two years of school in South Africa are called Substandards A and B, and the following 10 years Standards 1–10. Standard 8 is also called the Junior Certificate and Standard 10, the Senior Certificate or Matriculation. A first class pass is one in which the student's overall score is 60% or more.

To test the hypothesis, several indicators of the quality of schooling are presented in Table 5. The output criteria (i.e. academic achievement) are discussed first. The percentage of Standard 8 passes who obtained a first class rose from six in 1961 to 15 in 1975; subsequently there was a sharp drop to only

two in 1980 and four in 1982 (column 2).[5] If the developing-country literature is to be believed, this improvement in outputs is likely to be rewarded in the labour market.

Similarly, the percentage of Standard 8 passes who attempted mathematics and passed rose from 18 in 1961 to 30 in 1975 (column 3).[6] I have not been able to locate any research on the labour market effects of subject choice, and in particular of the choice of mathematics, in less-developed countries. However, other considerations suggest that it is possible that there was a causal relationship between the increasing success in mathematics and the rise in educational returns. Mathematics is regarded as a difficult subject in South Africa; a pass in mathematics is usually taken by educational authorities as a signal of diligence or ability, or both. A matriculation pass in mathematics is a prerequisite for entrance to the science, engineering and medical faculties at most South African universities. High school teachers are rewarded financially if they can teach mathematics. It is possible that employers would reward a pass in Standard 8 mathematics in the belief that it denotes an ability to perform calculations, keep accounts, and the like.

In a similar vein, the percentage of Standard 10 passes who achieved Matriculation Exemption and a pass in mathematics increased from nine in 1961 to 19 in 1975. With the unrest following the Soweto shootings and the murder of Steve Biko, the percentage fell to 11% in the 1977 examinations. The political quiet of 1978 and 1979 enabled a recovery to 20% in the 1979 examinations. Then further disruption resulted in a drop to 8% in 1980 and 7% in 1982 (column 4).

These three columns then complete the major evidence, in terms of outputs, that schooling quality improved between 1961 and 1975. The percentage of Standard 6 students who passed the end-of-year examination was around 80 between 1961 and 1980 (Column 1). This measure does not reveal much because most overall pass rates in the lower standards are high anyway, allowing less scope for increases stemming from improvements in the quality of inputs and the like.

On the input side, per-pupil expenditures in 1985 Rands rose, with some fluctuations, from R87.5 in 1961 to R138 in 1975 and to R162 in 1980 (column 5). Some of the increase went into buildings and school supplies, but most went into salaries, which rose in real terms during the period. The pupil–

Table 5. Gauges of the quality of schooling of Africans, 1961–1982

	Output criteria				Input criteria			
		Per cent of Junior Cert. passes with		Per cent of Standard 10 passes with	*Per capita*		Unqualified secondary school teachers (%)	
Year	Standard 6 students who passed (%) 1	First class aggregate 2	A pass in mathematics 3	Matric. Exemption and maths 4*	school expenditures (constant 1985 R) 5	Pupil–teacher ratio 6	Including T'kei 7	Excluding T'kei 8
1961	82	6	18	9	87.5	58	6.5	—†
1965	81	16‡	—†	11	81.0	58	—†	8.8
1970	78	13	25	14	102	60	—†	5.4
1975	86	15	30	19	138	54	7.1	—†
1980	78	2	45	8	162	48	—†	13
1982	—†	4	76	7	199	42§	—†	13

*Construction: Column 4 = 100 * passes with Matriculation Exemption and mathematics/all passes with either School Leaving Certificate or Matric.
† Not available.
‡ Sixteen per cent here seems high; it may be because Transkei was omitted in 1965 but included in 1961 and 1970.
§ Data for 1985.
Sources: Columns 1–5: DBE and DET (various dates). Column 6: van Rensburg (1975), p. 19 (for 1961–1970); and CSS (1989) (for 1975–1982). Columns (7) and (8): Bezuidenhout (1989), Table 7.9, pp. 179–184. Transkei omitted after 1976, Bohputhatswana from 1978, and Ciskei from 1982.

teacher ratio may have risen slightly from 58 in 1961 to 60 in 1970, but then began a steady decrease to 54 by 1975 and 48 by 1980 (column 6). The percentage of teachers who were unqualified according to the Department's definition increased negligibly from 6.5 in 1961 to 7.1 in 1975 (column 7). It appears, however, that the position had deteriorated by 1980 (column 8).

Thus, between the early sixties and the early seventies per-pupil expenditures increased, while the pupil–teacher ratio and the per cent unqualified teachers remained about the same. The evidence is somewhat ambiguous. At least it seems possible to conclude that input quality did not diminish during the period, and may have increased. As has been stressed above, it is not possible to include these input measures in the wage regressions because the data sets required are not available. The international literature can be of some assistance here. A causal link between improved educational spending per pupil and improved market rewards has been demonstrated often in other developed and developing countries. Hence, it is likely that the increased *per capita* spending and the increase in schooling returns are causally related. On the other hand, there is little in the literature to suggest that class size influences subsequent market rewards. Hence, the small increase in the pupil–teacher ratio in South Africa between 1961 and 1970 probably had no discernible effect on subsequent labour earnings.

To summarize: the available evidence on African schooling indicates a noticeable improvement in academic achievement and possibly also an upgrading of schooling inputs between the early sixties and the early seventies. On the basis of the international literature on quality of schooling and subsequent labour market earnings, it is probably safe to infer that these improvements in schooling quality helped to produce the observed increase in schooling returns.

5. CONCLUDING REMARKS

This paper has shown that the returns to schooling of young African males between 20 and 29 years of

age increased from 4.9% to 7.7% between 1975 and 1985, while the returns enjoyed by older African males improved negligibly if at all. Two major competing explanations were offered: that the quality of schooling had improved and that there were cohort effects in the decline of discrimination. The paper then concentrated on the quality of schooling issue.

Evidence was presented suggesting that an improvement in the quality of education of Africans between the early sixties and the early seventies is partly responsible for the rise in education returns. During this period, academic achievement at the Standard 8 and 10 levels improved and per-pupil expenditures rose, while the qualifications of teachers and class sizes remained much the same.

There were widespread school boycotts, frequently accompanied by police brutality and killings, in 1980, 1981, 1984–1986 and 1989–1990. The percentage of Standard 8 passes in the first class category fell from 15% in 1975 to 2% in 1980. The percentage of Standard 10 passes with Matriculation Exemption and a pass in mathematics fell from 19% in 1975 to 8% in 1980. It seems that the high levels of anxiety produced during the disruptions submerged those forces making for gradual improvements in academic achievement. During the 1980s, there were reports of increasing disorganization, corruption and teacher demoralization in the black schooling system.[7]

The consequences of the breakdown of African education will be serious. If the findings of this paper are accurate, the breakdown of the educational system between 1980 and 1990 is likely to depress schooling returns for the affected cohort to the old level of 4.9%, or less. *Ceteris paribus*, wages of young African workers will be lower. The African/white wage ratio, which increased steadily between about 1973 and 1985, may begin to fall back.

NOTES

1. So-called colored, Asian and African people. Colored (or mixed-race) people numbered some 3 million, whites 5 million, Asians 800,000, and Africans 19 million, in the total enumerated 1985 population of about 28 million.

2. Diplomas here are post-school qualifications, typically taking 2 years at a technikon (a technically-oriented institution of learning). Degrees typically take 3 years and are granted by universities.
3. Own computations from RSA (1989), Table 2.1.8 (economically active population) and Table 2.5.6 (unemployment).
4. Average years of schooling for the older cohorts are as follows. In 1975: 7.0 (30–39), 6.2 (40–49), 5.0 (50–59); in 1985: 8.1 (30–39), 7.4 (40–49), 6.3 (50–59).
5. The question arises whether the improvement in the 1960s and 1970s was due to ever easier evaluation standards. Unfortunately, the literature on "grade inflation" in South Africa is non-existent. Two points may be cited in support of the maintained hypothesis that the evaluation standards did not vary importantly, and that the improvement in results in the 1960s and 1970s was due to the quality of instruction received. (a) The Standard 8 and 10 examinations were national examinations, thereby eliminating possible grade inflation arising from competition among schools. Of course the national authorities might have subconsciously permitted themselves to grade more leniently as time passed; but their stated intention was to apply an unvarying standard. (b) Some people in South Africa believe that if there is a bias in the results, it is a *downward* bias. Mathonsi (1988), for example, argues that Standard 10 results were deliberately depressed so as to keep blacks in the working class.
6. The further rise to 45 in 1980 and to 76 in 1982 can be discounted because it reflects the substitution of mathematics for arithmetic.
7. For example, "Schools open for ten days . . . but no teaching yet", *Weekly Mail* (19–25 January 1990); "Breakdown in school discipline 'at many schools'", *Argus* (7 December 1989); "This is how easy it is to stroll into an exam room and read the papers . . .", *Weekly Mail* (8 December 1989).

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