Available online at www.sciencedirect.com
SCIENCE DIRECT®
Economics of Education Review 24 (2005) 213–233
Economics of Education Review
www.elsevier.com/locate/econedurev

Race, equity, and public schools in post-Apartheid South Africa: Equal opportunity for all kids

Futoshi Yamauchi[a,b,c,*]

[a]International Food Policy Research Institute, 2033 K Street, NW, Washington, DC 20006, USA
[b]Foundation for Advanced Studies on International Development (FASID), Tokyo
[c]National Graduate Institute for Policy Studies (GRIPS), Tokyo

Received 28 July 2003; accepted 25 March 2004

Abstract

This paper examines dynamic changes in educational quality and equity differences between Black and other population groups in post-Apartheid South African public schools, using the ratio of learners to educators in each school, available from the School Register of Needs, 1996 and 2000. The analysis incorporates school or community-level unobservables and the endogenous movement of learners. This paper shows that (i) the learner–educator ratios significantly differ between formerly Black and White primary and secondary schools in 1996 and 2000, and (ii) in the dynamic adjustment of educators in response to changes in learner size in this period, there are significant differences between formely Black and non-Black (White, Coloured and Indian) primary schools. The opportunities for education quality in public schools are still unequal between Black and White children even after the abolition of Apartheid, and given that school quality affects returns to schooling and earnings opportunities in labour markets, the inequality causes income inequality between Black and White. Our empirical result calls for stronger policy intervention to support Black schools and children in South Africa.

JEL classification: I21; I28; I31; J71; J78

Keywords: Quality of education; Race; Poverty; Apartheid; South Africa

1. Introduction

In the transition from Apartheid to a democratic society in South Africa after the first democratic national election in 1994, the government promised to provide equal opportunities for education to all racial groups and regions (Republic of South Africa 1996a,b). However, as reported in *Education Atlas of South Africa* (Bot, Wilson, & Dove, 2000), there still exist wide variations in major indicators on educational quality across regions. Given the clustered spatial distribution of racial groups in the country, it is not difficult to infer variations in educational opportunities among children across different population groups. In this paper, I use a recently available South African school census data from 1996 and 2000 to assess variations in educational quality across former population groups of public schools and dynamic changes in post-Apartheid South Africa.

*International Food Policy Research Institute, 2033 K Street, NW, Washington, DC 20006, USA. Tel.: +1-202-862-8103; fax: +1-202-467-4439.
E-mail address: f.yamauchi@cgiar.org (F. Yamauchi).

0272-7757/$ - see front matter © 2004 Elsevier Ltd. All rights reserved.
doi:10.1016/j.econedurev.2004.03.012

It has been increasingly recognized both inside and outside South Africa that under Apartheid regime over which Black population had no control, Black schools, e.g., those in formerly home-land were totally inferior in terms of funding conditions compared to White schools (Crouch, 1996; Kriege, Cairns, Makalima, & Scott, 1994; Marais, 1995). Differences in school conditions between Black and non-Black schools determined those in student achievement, particularly exam scores in numeracy (Case & Deaton, 1999). Unless the government actively strengthens its support to former Black schools in budget and personnel allocation in order to narrow the Apartheid-created differences in educational quality, a vicious cycle of poverty and low-quality education will persist in the long run. That is, children who cannot receive a sufficiently high quality of education are less likely to be engaged in regular employment and therefore be more likely to remain in low income class (e.g., Case & Yogo, 1999). Since they cannot afford to live in well-off residential areas (in many cases, former White areas), which normally have high-quality schools, they are likely to stay in areas with low-quality schools. When high residential rents prohibit access to better schools, this cycle will persist in the long run, potentially becoming a crucial determinant of the long-term poverty trap for Blacks in the country.

To study gaps in educational quality across population groups, I focus on the ratio of learners (i.e., students) to educators (i.e. teachers and other staff)—the learner–educator ratio (LER)—from two school censuses, School Register of Needs (SRN) 1996 and 2000. In 1995, the government reached an agreement that the ratios of 40 to 1 and 35 to 1 were to be achieved for primary and secondary schools, respectively, in the next five years. Therefore, LER can provide a good indicator not only of the distribution of education quality but also of the government's policy interventions toward educational equity.

Recent qualified empirical works show significant effects of LER and class size on student achievement, although the literature as a whole contains some ambiguity (Hanusheck, 1998). The difficulty in identifying the causality arises from potential endogeneity in learner size[1] and unobserved fixed component specific to school and community, which is likely correlated with school inputs. For example, Lazear (2001) argues that the effect of LER on student achievement could be empirically ambiguous because of (often unobserved) heterogeneity in students' quality, that is discipline. In his model, the optimal size of class (i.e., LER) increases if students' discipline improves, since the probability of disruption in a classroom decreases. To avoid such a correlation between LER and unobservables, recent studies use exogenous variations (changes) in LER and class size to identify the effect on student achievement (e.g., Angrist & Lavy, 1999; Case & Deaton, 1999; Hoxby, 2000; Krueger, 1999). In these studies with exogenous variations in LER, the effect is found to be significant. In the context of South Africa, Case and Deaton (1999) shows that among Blacks in Apartheid who were prohibited to choose schools, LER has a significant effect on student achievement particularly in numeracy, while it is not significant among Whites.

Table 1
LERs in 1996 and 2000 by population groups

	African	White	Coloured	Indian	New schools
Primary school					
LER 1996	36.211	26.151	28.736	27.753	39.673
LER 2000	31.465	25.790	29.996	32.806	40.833
Secondary school					
LER 1996	31.975	22.329	23.196	23.415	38.145
LER 2000	31.052	24.203	30.157	30.447	35.996

Sample means are shown by population groups.

Table 1 compares means of LERs by population groups in both 1996 and 2000. A striking fact in the table is that the gap between formerly Black and White schools had not been narrowed during the period. Formerly White schools maintained its superior situation in the post-Apartheid period. Though more detailed statistical analysis is in Section 4, the difference between Black and White schools seemed quite persistent and stable.

The LER gaps can have some long-term implications. For instance, school quality matters in subsequent labor market outcomes (Card & Krueger, 1996; Case & Yogo, 1999, Dustman, Rajah, & Soest, 2003). Based on Case and Yogo's estimate of the impact of LER on returns to schooling investments, for example, the marginal effect of LER on rate of return is around −0.002. The mean gap of LERs between formerly Black and White primary schools: 10.060 in 1996 (Table 1) is equivalent to 0.0201 reduction in the rate of returns. The reduction is substantial because the average rate of return is 0.089 to 0.094 for men of age 24–28 in 1996. Thus, we can imagine that the inequality in educational opportunities (i.e., gaps in LER) is transformed in the inequality in labour market earnings opportunities in South Africa.[2]

[1]High levels of LERs are partly attributed to high-grade repetition rates in South Africa. However, those who have repeated grades are likely to transit to labour markets (Yamauchi, 2003, using KwaZulu-Natal Income Dynamics Study).

[2]In South Africa, Yamauchi (2003) shows that grade repetition increases the probability of transition from school to labour market and that it adversely affects the employment probability particularly for men. Other conditions being equal,