Who is out of school? Evidence from the Community Survey 2007, South Africa☆

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ABSTRACT

The South Africa Schools Act requires children to "attend school from the first school day of the year in which such learner reaches the age of 7 years until the last day of the year in which such learner reaches the age of 15 years or the ninth grade whichever comes first" (Republic of South Africa, 1996). In relation to this, this paper addresses three questions. First, to what extent has this legal requirement been met? Second, what are the trends in relation to achieving universal access to compulsory education? And third, what are the identifiable factors or characteristics of those learners of compulsory school age that are not attending? To address these questions, we have made use of the Statistics South Africa dataset, Community Survey 2007. Our analysis suggests that the size of the compulsory age population who are not attending school may be slightly higher than some government sources have suggested. The trend associated with access remains consistent, the only major change over the past 10 years is the improved level of enrolment of 6- and 7-year-old children. In terms of identifying the factors or characteristics of children who are not attending school, our analysis reveals that certain sub-populations have higher non-attendance ratios. Four broad, but interrelated factors may account for children not being in school, disability, family structure, i.e., not living with biological parents or grandparents, being eligible for, but not accessing social welfare and living in isolated communities. Race and gender are also significant factors, particularly for coloured males.

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1. Introduction

The South Africa Schools Act S 3(1) requires that all children "attend school from the first school day of the year in which such learner reaches the age of 7 years until the last day of the year in which such learner reaches the age of 15 years or the ninth grade whichever comes first" (Republic of South Africa, 1996). In relation to this section of the Act, this paper addresses three questions. First, to what extent has this legal requirement been met? Second, what are the trends in relation to achieving universal access to compulsory education? And third, what are the identifiable factors or characteristics of those learners that are not attending? To address these questions, we have made use of the recently released Statistics South Africa dataset, Community Survey 2007 (CS2007). The Community Survey has the advantage of providing current information (2007) and, on account of the sample size (over one million individuals enumerated), it can provide context-specific information. Our analysis of the dataset suggests that the size of the compulsory school-age population who are not attending school may be slightly higher than some government sources have suggested, but even these estimates may need to be reconsidered. The trend associated with access remains consistent, the only major change over the past 10 years is the improved level of enrolment of 6- and 7-year-old children. In terms of identifying the factors or characteristics of children not attending school, our analysis of the CS2007 dataset reveals that certain sub-populations have higher rates of non-attendance. These sub-populations include coloured boys, children whose parents, particularly mothers have died, children born outside South Africa, children that have moved in the past 5 years, children with disabilities and children living in some specific rural communities (particularly in the southern Cape and central Karoo.) The paper concludes with recommendations for further research to identify reasons why children in these vulnerable sub-populations are less likely to be enrolled.

2. Literature review

The right to a basic education is guaranteed in the Constitution of the Republic of South African [section 29(1)] since 1996. The South African Schools Act (1996) [section 3(1)] made it compulsory for all children to attend school from the first school day of the year

in which they reach the age of 7 years until the last school day of the year in which they reach the age of 15 or the end of Grade 9. This framework legislation embodies the South African government's commitment to the access goal in the 'Education for All' Dakar 2000 Declaration.

But how effective is the implementation of the policy of schooling for all in South Africa? According to the Department of Education (DoE) (2008), South Africa's schooling system has near universal enrolment, with a national gross enrolment ratio in 2006 of 98%; 102% in primary grades and 91% in secondary grades. The Cost of Education Report (Department of Education, 2003) puts the net enrolment rate (NER) at 97% for the compulsory education phase. Quantitative analyses undertaken by leading independent researchers confirm the findings of near universal access (Simkins, 2002). Lewin (2007) places South Africa in Group 1 in his typology of school access, that is a system with high participation rates at all levels. Shindler and Fleisch (2007), using 2001 enrolment data and 2001 census data, found that the NER at primary level was 92% and at secondary level, 61%. In addition Shindler (2008) found that 6% of children aged 7–13 years and 23% of children aged 14–18 years were out of school (Shindler, 2008, p. 236). Most recently, Branson and Lam (2009) using the National Income Dynamics Study have calculated school enrolment rates from 0.99 for 8-year olds, to 0.97 for 15-year olds. These estimates would place South Africa at or even above what Colclough and Lewin (1993) have suggested is the maximum feasible targets for middle income countries.

While the Department of Basic Education (DoE) (Department of Education, 2003, p. 13) argues that many of the out-of-school children and youth are out of school as a result of a disability, some non-governmental organisations and academics have argued that various economic and social barriers are keeping children out of school or making it difficult for them to keep pace with basic schooling. Evidence for this has come from studies (Anderson et al., 2001; Barbarin and Richter, 2001; Case and Deaton, 1999; Townsend et al., 2002) which have tried to establish the causes of non-participation in education. While based on a limited opportunistic sample, the Vuk'uyithathe Research Consortium study of out-of-school children (children who had dropped out of, or never attended schools) and out-of-age, primary-school learners (Porteus et al., 2000; Porteus, 2003) found that 19% of the sample comprised children who had never been in school, and 81% who had been to school but had dropped out. Important insights have also been gained from a Human Rights Watch research project. It collected data from farm schools in Mpumalanga, Free State and Limpopo in 2003 and documented cases where accessibility and availability of the right to education were being seriously hampered (Human Rights Watch, 2004). Like the Vuk'uyithathe study, the Human Rights Watch project identified poverty, lack of scholar transport and long distances to school, insecure labour and land tenure of parents, school fees, inadequate infrastructure and service provision, and limited secondary school options as factors affecting school children's access to and participation in education.

There is a growing literature on the impact of family structure on school enrolment. Some international research (Anderson, 2000; Anderson, 2005) suggests that poor families tend to be large and larger families allocate fewer resources for each child and by extension have lower school attainment. Maharaj et al. (2000), in a study that made use of the Project for Statistics on Living Standards and Development Survey (SALSS) and the 1996 School Register of Needs, have attempted to understand the relationship between household allocation of educational resources among children and school attainment. They found no evidence to support the prevailing assumption that households with fewer children allocate more resource towards their education, and by extension ensuring a more adequate education. Rather, their research suggests that children's enrolment and attainment are impervious to household size, even after controlling for race. There is very little variation in the enrolment by the number of school-aged children in the household. In terms of average number of grades completed they found that (with the exception of coloured families), schoolchildren from big families do just as well as children from small families.

Another component of the literature explores the impact of fostering on school enrolment. One of the unique features of the South African family, particularly Black and coloured families, is the large percentage of children that are fostered. One study in Cape Town (Anderson and Lam, 2003) found that among 10-year-old children about 19.9% of Africans lived with neither parent, compared with 10.7% of coloureds and 2.7% of Whites. Fostering in this context is not generally a legal status, but rather involves an informal arrangement of children living with relatives or grandparents. Maharaj et al. (2000) found that fostering does not have a negative effect on education either for the fostered children or for the biological children in the household with foster children. This study found that children in foster homes were not disadvantaged in terms of enrolment and patterns of promotion once there.

Zimmerman (2003), in writing about the Cinderella Effect, i.e., the relationship between child fostering and school enrolment, found that about 25% of Black South African children live with non-biological families. He found that these children are no less likely than others to attend school, and they tend to move from homes that have difficulty enrolling them in schools to homes that are more likely to do so. His data suggests that the impact of fostering is to reduce the risk of not attending school by up to 22%. In other words, the practice of fostering improves human capital investment.

Other researchers, however, have come to different conclusions. Anderson's (2005) study, published in the prestigious journal Human Nature, found that South African children living with biological parents have more money invested in them and have better schooling outcomes. The study used data from the 1995 October Household Survey and the Income and Expenditure Survey and examined data on 11,211 Black South African children. Anderson found that children living in households in which the adults are closely related to them would receive greater levels of investment and experience more positive outcomes. In terms of education outcomes, he found a positive association between relatedness in urban areas and the highest grade the child has completed. In another study, Anderson (2000) found that male partners and non-residential biological fathers spent less on their children's education than resident biological fathers. Sibanda's (2004) research findings line up with Anderson's conclusions. In his analysis of the 1996 South African census data, Sibanda found that primary-school-aged children living with non-relatives are significantly more likely to drop out of school compared to children that live with relatives or biological parents. Other research points to the impact of various adult configurations, i.e., two parents, two adults (with or without a biological links to children), single parent and non-biological guardians on schooling. On the question of parents in the household, Townsend et al. (2002), in their study of the Agincourt Health and Population Programme in a rural district of Limpopo, found that children in households with both biological parents generally have higher levels of schooling than those that have one or no biological parent in the household. Living in a household headed by a woman was not found to disadvantage children, and for some age–sex groups it may be an advantage.

A new direction of research on patterns of enrolment has emerged from studies of the relationship between social grants and school enrolment. While there is substantial international body of research that suggests strong positive relationships between social grants and school participation, particularly in Latin America (see Chapman, 2006), few studies (Williams, 2007;
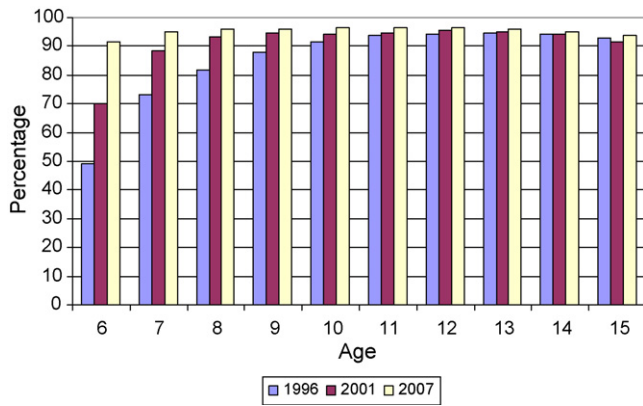
Fig. 1. Enrolment rates at educational institutions among the population aged 6–15, 1996, 2001 and 2007.
Note: The percentages for 2007 vary slightly from those published by Statistics South Africa, 2007.
Source: 1996 and 2001 from Statistics South Africa, 2007; 2007 based on own calculations of the Community Survey 2007.

Case and Menendez, 2007) have begun to explore that relationship within the South African context. Statistics South Africa (2009b), using the 2007 General Household Survey, found that for low earning households, children that receive a child support grant and children living in households that receive any social grant (e.g., old age or disability pension) are more likely to attend school than those who live in comparably poor households that do not receive grants.

3. Research method

The Community Survey 2007 was conducted by Statistics South Africa in February 2007. The sample was a two-stage stratified cluster sample design involving the drawing of the enumeration areas within municipalities in the first stage and drawing on dwelling units within selected enumeration areas in the second stage. Of a total 79,466 enumeration areas, 17,098 were sampled. The sample size comprised 949,105 individuals from 246,618 households (Statistics South Africa, 2009a). The community survey collected socio-economic data for individuals and households. The survey contains detailed information on enrolment in educational institutions and education attainment for all household members, along with data on variables such as earnings, employment, access to social grants, disability and health.

One concern with the survey is the reliability of the information provided for Whites and Indians. An initial assessment suggested that they were over-represented in the out-of-school category. In this regard the database was then cleaned to reflect White and Indian children as attending school where the data indicated that their highest grade of education attained was within 2 years of the appropriate grade. Where this was not or the child was indicated as never having attended school, these children remain in the database as not attending school. Consequently, despite the acknowledged questionable statistical status of the White and India data, after cleaning the data there was still enough information on which to base comment and we are confident of the statistical utility of the data set.

Descriptive and analytical analyses were done on the data and tabulated to show the extent of children aged between 7 and 15 who are out of school. A number of variables were investigated in this regard: age, gender, race, the province where the child was born and currently lives, whether the child receives a social grant, whether the child has a disability, relationship to head of household, highest level of education of the head of household, type of electricity and water source of household.

Table 1
Attendance at educational institutions among the population aged 7–15, 2007.

Age	Attending	Not attending	Total	% Attending	% Not attending
7	993,155	51,632	1,044,786	95.1%	4.9%
8	958,688	42,150	1,000,838	95.8%	4.2%
9	991,580	39,263	1,030,844	96.2%	3.8%
10	950,617	34,666	985,283	96.5%	3.5%
11	933,446	34,002	967,448	96.5%	3.5%
12	949,613	36,809	986,422	96.3%	3.7%
13	933,173	38,843	972,016	96.0%	4.0%
14	939,136	46,580	985,715	95.3%	4.7%
15	938,178	62,125	1,000,302	93.8%	6.2%
Tot 7–15	8,587,585	386,069	8,973,654	95.7%	4.3%

Note: All the statistics are statistically significant at 0.001.

Table 2
Children that have never been to school by age.

Age	Never been to school
7	14,897
8	7,385
9	5,592
10	4,573
11	5,165
12	5,730
13	5,130
14	4,794
15	4,686
Total	57,952

Note: All the statistics are statistically significant at 0.001.

4. Results

4.1. Prevalence of children not attending school

Participation in the education system is very high. In 2007, almost 96% of children of compulsory school age were attending an educational institution (see Table 1). There was an improvement in the participation rate of children in each age cohort between seven and 15 years of age since 2001. The biggest increase was among 7-year olds: between 2001 and 2007 the percentage of 7-year olds attending school increased from 88.4% to 95.1%, an increase of almost seven percentage points. The phasing in of a reception year (Grade R) has seen a huge increase in the participation rate of 5- and 6-year olds. The increase in the participation rate of 6-year olds was also a result of the dropping of the age of entry into primary school to 6 years old in 2004 (Fig. 1).[1]

While the participation rate of children who fall into the compulsory school age was very high, there are still large numbers of children of compulsory school age who were not attending schools. For example, it can be deduced from Table 1 that 4.9% of 7-year olds and 4.2% of 8-year olds were not attending school despite the fact that they were subject to compulsory education. Even if allowances are made for children starting school late, there were still 3.5% of 10-year olds, 3.5% of 11-year olds and 3.7% of 12-year olds who were not enrolled in school in 2007. In total, just over 386,000 children aged seven to 15 years (or 4.3% of all children aged seven to 15 years) were not attending an educational institution in 2007.

While over 386,000 children in the compulsory school band reported not being enrolled in school, the number of children who had never been to school was extremely small at less than one

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[1] In terms of an amendment (RSA, 2002) to the age-grade regulation, from January 2004 children who were 5 turning 6 before 30 June could be admitted to Grade 1. Despite the lowering of the age at which children may begin school, 7 years old remains the age at which compulsory schooling begins.

Table 3
GER by level of education: 1994, 1997, 2002, 2006.

	Primary	Secondary	Total
1994	122	84	–
1997	125	90	111
2002	105	81	95
2006	102	91	98

Source: 1994 data from Bot and Shindler, 1997; 1997 data from Perry and Arends, 2004: 309; 2002 data from DoE, 2004: 7; 2006 data from DoE, 2008: 6.

percent of all children between the ages of 7 and 15 (see Table 2). This suggests that most of the 386,000 or so children not attending school would be going to school but late or enrol but drop out for various reasons. It seems likely that a high proportion of those children aged seven who are not enrolled in school, are likely to enrol in school late.

4.2. Trends over time

Table 3 shows the trends in primary and secondary age enrolment rates over the past decade. From a longer term perspective, various researchers have shown that there has been a slow-down in enrolment due to several factors: a decline in fertility rates since the late 1970s (Simkins, 2002, p. 1); primary enrolment reaching a natural saturation point (Perry and Arends, 2004, p. 304); the stabilisation of school enrolment after a massive influx of previously excluded learners that occurred during the period of transition to democracy in the early and mid-1990s (Shindler, 2005, p. 41); and the implementation in 2000 of a policy to reduce under-age enrolment in Grade 1 and high repetition throughout the public school system (DoE, 1998a,b).

This high rate of learner enrolment has ensured that despite poverty and the impact of HIV/AIDS, access to education in South Africa, particularly in primary education, is extensive. In 2006 the gross enrolment ratio[2] (GER) in primary schools was 102% (DoE, 2008, p. 6). While the primary school GER was much higher in earlier years (125% in 1997), this was not the most efficient access owing to the large number of under-age learners entering Grade 1 and then many repeating this grade until they were old enough to go onto Grade 2. The implementation of the age-grade admission policy in 2000 (DoE, 1998b), which stated that learners must turn seven in the year that they enrol in Grade 1,[3] assisted in normalising Grade 1 enrolment, resulting in the GER in Grade 1 dropping from 166% in 1997 (Perry and Arends, 2004, p. 309) to 118% in 2006 (Calculated from DoE, 2008, p. 13).

As the age-grade regulations also provided for age-grade norms for all the school grades, including secondary school grades, and also aimed to reduce excessive repetition throughout the grades, the regulations also had an impact on participation in secondary schools. After reaching a peak in 1997, the GER for secondary schools dropped to 81% in 2002 but rose to 91% in 2006.

With the normalisation of enrolment, the enrolment rate has remained relatively constant over the past decade. There has, however, been a promising increase in enrolment in younger

Table 4
School attendance by province (age 7–15), 2007.

Province	Attending	Not attending	Total	% Not attending in the Province	% of total children not attending school
Eastern Cape	1,418,245	67,634	1,485,879	4.6%	17.5%
Free State	465,424	14,487	479,911	3.0%	3.8%
Gauteng	1,338,352	64,658	1,403,010	4.6%	16.7%
KwaZulu-Natal	2,018,478	98,016	2,116,494	4.6%	25.4%
Limpopo	1,163,019	37,755	1,200,773	3.1%	9.8%
Mpumalanga	713,006	23,635	736,641	3.2%	6.1%
North West	547,890	28,410	576,300	4.9%	7.4%
Northern Cape	176,912	10,456	187,367	5.6%	2.7%
Western Cape	746,259	41,019	787,278	5.2%	10.6%

Note: All the statistics are statistically significant at 0.001.

Table 5
Enrolment in six metropolitan municipalities.

Metro	Attending	Not attending	% Not attending
Cape Town	479,269	26,690	5.3%
Ekurhuleni	358,037	12,953	3.5%
eThekwini	538,840	25,299	4.5%
Johannesburg	468,543	25,385	5.1%
Nelson Mandela Bay	151,343	7,265	4.6%
Tshwane	302,178	14,846	4.7%
Total/average	2,298,211	112,439	4.7%

Note: All the statistics are statistically significant at 0.001.

children, particularly those aged 6 and 7 years, mainly a result of the implementation of a compulsory school age and the phasing in of Grade R in the year before children enrol in Grade 1 (Fig. 1).

4.3. Factors associated with not presently attending an educational institution

One of the more interesting findings emerging from the CS2007 is the uneven patterns of non-school attending children between provinces. There is considerable variability with the Free State having a low proportion (only 3%) of children reported not attending an educational institution compared to almost double that proportion in the Northern and Western Cape (5.6% and 5.2% respectively) (see Table 4).

This is consistent with earlier findings (see Shindler and Fleisch, 2007) which also observed that the relative wealth of the provinces appears to be inversely related to the proportion of children out of school. The three wealthiest provinces, i.e., Gauteng, the Northern and Western Cape have high proportions of children out of school and the poorer provinces of the Limpopo, the Free State and Mpumalanga record very low proportions of children out of school.

The proportion of compulsory age children out of school, is higher in the six metropolitan municipalities than the national average (4.7% compared to 4.3%) with Johannesburg and Cape Town each showing over 5% of children not attending school (Table 5).[4]

A disaggregated geographical analysis, while too small to make statistically valid inferences, may suggest important insights into localised patterns of compulsory school enrolment. An examination of the characteristics of the 25 local municipalities (Table 6)

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[2] Gross enrolment ratio (GER) measures enrolment, regardless of age, in a specific level of education as a proportion of the appropriately aged population for the given level of education. For the purpose of this paper, 7–13 years is used as the appropriate age for primary school, 7–15 years for basic or compulsory schooling, 14–18 years for secondary schooling and 16–18 years for further education and training.

[3] The age requirements for admission to an ordinary public school (DoE, 1998a,b), which was implemented in 2000, stated that the statistical norm per grade was the grade number plus 6, making, for example, 7 years the appropriate age for Grade 1, 15 years the appropriate age for Grades 9 and 18 years the appropriate age for Grade 12.

[4] It has been suggested that the marginally higher out-of-school rate in metropolitan areas might be related to children needing to supplement family income through street hawking as is the case in India and Brazil. More evidence needs to be gathered from urban centres to better understand the phenomenon. It is equally plausible that the higher out-of-school rate might be influenced by the proportion of foreign-born learners in urban centres.

Table 6
Enrolment in 25 local municipalities with the highest percentage of children out of school.

Local municipality	In school	Out of school	Total	% Out of school
NW: Molopo	849	156	1005	15.5%
WC: Laingsburg	511	74	586	12.7%
NC: Renosterberg	1457	210	1667	12.6%
EC: Kou-Kamma	6611	946	7557	12.5%
EC: Camdeboo	6915	872	7787	11.2%
WC: Cape Agulhas	4101	478	4579	10.4%
LIM: Musina	8108	929	9037	10.3%
NC: Ubuntu	2864	319	3183	10.0%
KZN: UPhongolo	30,546	3360	33,906	9.9%
WC: Hessequa	5072	541	5613	9.6%
WC: Bergrivier	6308	654	6962	9.4%
KZN: Impendle	9033	930	9963	9.3%
NC: Siyancuma	6282	630	6912	9.1%
EC: Sunday's River Valley	5331	518	5849	8.9%
WC: Mossel Bay	14,426	1352	15,779	8.6%
NW: Kgetlengrivier	6404	576	6981	8.3%
KZN: Kwa Sani	2587	231	2818	8.2%
EC: Baviaans	2172	193	2365	8.2%
WC: Theewaterskloof	11,810	1039	12,849	8.1%
EC: Inkwanca	2395	211	2606	8.1%
KZN: Endumeni	9506	834	10,341	8.1%
EC: Ngqushwa	15,650	1369	17,019	8.0%
NW: Ventersdorp	6284	535	6819	7.8%
KZN: Okhahlamba	33,580	2842	36,422	7.8%
NW: Mamusa	5548	456	6004	7.6%

EC, Eastern Cape; KZN, KwaZulu-Natal; Lim, Limpopo; NC, Northern Cape; NW, North West; WC, Western Cape.
Note: All the statistics are statistically significant at 0.001.

with the highest percentages of children out of school shows some revealing trends. More than a quarter of these municipalities are located in rural parts of the Western Cape either along the Southern Cape coast and in the Karoo. Six municipalities are located in the Eastern Cape with two in the Karoo region (Kou-Kamma and Camdeboo). Three are located in the Northern Cape in similar rural farming areas. While more research is needed to explore the specific reasons for the high proportion of children out of school in these municipalities, it seems plausible that the

Table 7
Percentage enrolment by sex and race, 2007.

Sex	Race	Attend	Not attend
Male	Black	95.5	4.5
	Coloured	93.2	6.8
	Indian/Asian	98.8	1.2
	White	98.8	1.2
Female	Black	95.7	4.3
	Coloured	94.3	5.7
	Indian/Asian	98.4	1.6
	White	98.9	1.1

Note: All the statistics are statistically significant at 0.001 level.

explanation may be related to child labour on the farms, the closure of farm schools (Human Rights Watch, 2004) and possibly high rates of foetal alcohol syndrome (Rosenthal et al., 2005).

In some instances, there are specific historical reasons for the high proportion of children not enrolled. For example, the Molopo Local Municipality in the North West, with the town of Pomfret at its centre, is home to large number of former 32 Battalion soldiers and their families who are Portuguese speakers (Mail and Guardian, 2007). This displaced group have recently been threatened with forced relocation. It is likely that a very high proportion of the children from this community are not enrolled in the local public schools.

4.4. Individual and family factors

Table 7 suggests that both sex and race are significant determinants of school attendance for coloured boys. For children of compulsory school-going age, coloured boys are significantly more likely to not attend school compared to Blacks, Whites and Indians. While not as likely as their male counterparts, coloured girls are more likely than Black girls to not attend school.

What other individual and family characteristic might explain why children do not attend school? For example, to what extent is disability a factor that contributes to compulsory school-age children not attending school? Approximately 1.9% of the total compulsory school-age population are described as having some

Table 8
Personal and family characteristics of children not in school, 2007.

	Attending	Not attending	Grand total	% Not attending school	% of those who are not attending school
Total children 7–15 years of age	8,587,585	386,069	8,973,654	4.3%	–
Disability	130,118	36,960	167,077	22.1%	9.6%
No disability	8,457,467	349,110	8,806,577	4.0%	90.4%
Receiving social grant	3,411,367	124,055	3,535,422	3.5%	32.1%
Not receiving social grant	5,176,218	262,014	5,438,232	4.8%	67.9%
Piped water from access point outside yard	1,914,909	90,398	2,005,307	4.5%	23.4%
Piped water inside dwelling	3,195,827	133,816	3,329,643	4.0%	34.7%
Piped water inside yard	1,848,071	80,596	1,928,667	4.2%	20.9%
Other water access[a]	1,628,778	81,259	1,710,037	4.8%	21.0%
Electricity for lighting	6,607,473	274,877	6,882,350	4.0%	71.2%
Other type of fuel for lighting[b]	1,980,112	111,193	2,091,305	5.3%	28.8%
Both parents alive	6,411,883	259,005	6,670,888	3.9%	67.1%
Mother alive, father dead or status not known	1,400,984	75,263	1,476,247	5.1%	19.5%
Father alive, mother dead or status not known	323,645	18,405	342,050	5.4%	4.8%
Both parents dead or status not known	451,073	33,397	484,470	6.9%	8.7%
Born in South Africa	8,528,784	375,732	8,904,516	4.2%	97.3%
Born outside South Africa	47,682	5,842	53,524	10.9%	1.5%
Place of birth unknown or unspecified	11,119	4,496	15,615	28.8%	1.2%
Have not moved in last 6 years	7,398,792	334,278	7,733,070	4.3%	86.6%
Moved in last 6 years	1,188,793	51,791	1,240,584	4.2%	13.4%
Not one person in the household is employed	4,607,850	216,458	4,824,308	4.5%	56.1%
At least one person in the household is employed	3,979,735	169,611	4,149,346	4.1%	43.9%

Note: All the statistics are statistically significant at 0.001 level. All data subcategories are significant at the 0.001 level.
[a] Other water access includes borehole, spring, dam/pool, river/stream, water vendor, rain water tank and other.
[b] Other sources of fuel for lighting include gas, paraffin, candles, solar and other.

Table 9
Family structure and percentage of children enrolled, 2007.

	Attending	Not attending	Total	% Not attending school	% of those who are not attending school
Son/daughter of the head of the household	4,967,415	191,969	5,159,384	3.7	49.7
Grandchild/great grandchild of head of household	2,524,034	109,253	2,633,287	4.1	28.3
Adopted son/daughter of head of household	120,199	8,070	128,269	6.3	2.1
Head/acting head of the household	19,633	3,628	23,261	15.6	0.9
Brother/sister of head of household	219,263	14,448	233,711	6.2	3.7
Brother/sister-in-law of head of household	24,427	2145	26,573	8.1	0.6
Non-related person to the head of the household	29,984	2898	32,882	8.8	0.8
Other relative to the head of the household	540,768	42,654	583,422	7.3	11.0
Stepchild of the head of the household	94,662	4762	99,424	4.8	1.2

Note: All the statistics are statistically significant at 0.001 level.

type of disability (about 167,000 children) (Table 8). Of these, 22.1% are not attending any educational institution. Put another way, of the 386,000 children that do not attend school, 36,960 or 9.6% have some type of disability. While a very substantial portion of children who do not attend school are disabled, the number is substantially lower than that inferred in the Cost of Education study (DoE, 2003).

The Community Survey 2007 data indicates that social grants influence patterns of attendance. Almost forty percent of children indicate that they receive a social grant. In this group of children, the rate of attendance is 96.5%, significantly higher than for the population as whole and particularly when compared to those children who do not receive a social grant. However, with other indicators of poverty, i.e., those children aged 7–15 who live in households where piped water is accessed outside the yard, outside the dwelling or other water access, there is little difference between these disadvantaged children's attendance at school and the population as a whole. Similarly there appears to be little difference in attendance patterns between households that have no person in the household in employment and those households with at least one person employed. The one exception is for children (23% of total 7–15-year olds) living in households who use fuels other than electricity for lighting, which suggests either or both very poor or rural households. In this instance, these children from households without electricity are more likely (5.3%) than the average child not to attend school.

While poverty as measured in household goods, access to services or employment status, is not necessarily a major factor, whether a child has parents who are living is very significant. For children who reported that their mother was dead or her status unknown or both parents were dead or their status unknown (about 826,520 children or 9% of the total number of children aged 7–15 years) the likelihood of these children not attending school is substantially higher than average. For maternal orphans 5.4% were out of school and for double orphans this rose to 6.9%. This finding confirms Case and Ardington's (2006) study on the negative impact of parental death on school enrolment.

While the proportion of children that are reported to have been born outside South Africa or where the place of birth is either unknown or unspecified is small at less than 1% of children of school going age (69,139 children), these children are by far the most likely not to be attending school. More than one in 10 foreign-born children are not attending school and more than a quarter of children whose place of birth is not known are not attending school. The latter is undoubtedly the most vulnerable group of children, those children living in households in which the principle caregiver is not aware of some basic information about the children in their care.

Approximately 57% of all children aged 7–15 live with parents and a further 29% live with grandparents or great grandparents (Table 9). Not controlling for any other variable, these children are less likely than average to be not attending school (3.7% and 4.1%

respectively). Children who are the heads of their households (about 23,000) are far more likely not to attend school (15.6%). A far larger group of potentially vulnerable children are those living with a relative who is neither a parent nor grandparent (583,422 children). Not controlling for other factors, for this group of children the chances of not attending is far higher than that of children living with biological parents. Similarly, living with a brother-in-law or sister-in-law who is the head of the household also increases the chances of not attending school (8.1%). Although living with a relative other than a parent or grandparent means a child is more likely than average not to attend school, living with a non-relative who is the head of the household further decreases the chances of attending school (8.8%). The CS2007 results thus are consistent with Anderson's (2000, 2005) findings that living with a biological parent or grandparents improves education outcomes, and Case and Ardington's (2006) findings about the impact of child headed households on continued enrolment.

The data was analysed in a regression model in order to understand the impact of the various variables on the probability of a child attending school. As a result of the dependent variable and most of the independent variables being categorical (either attending or not attending school, either receiving a social grant or not, etc.) a linear probability regression model was used. This yields the percentage increase or decrease in the probability of a child attending school or not. It should be noted that in a linear probability model the R-square is not used as a test of the goodness of fit of the model and as such is not used to indicate the extent to which the combined variables are explanatory. This is done, rather, by summing the coefficients of relevant variables. The results of the regression analysis in Table 10 indicate the increase or decrease

Table 10
Regression model for predicting non-attendance.

Variable	Coefficient	t-Value
Age		
Omitted value: 7 years old		
8 years old	−.008	−29.26
9 years old	−.012	−44.73
10 years old	−.017	−59.26
11 years old	−.018	−64.01
12 years old	−.018	−64.08
13 years old	−.017	−60.51
14 years old	−.016	−53.95
15 years old	−.003	−10.10
Sex		
Omitted value: male		
Female	−.002	−15.96
Relationship with head of household		
Omitted value: son/daughter		
Head or acting head	.101	75.94
Husband/wife	.715	158.07
Adopted son/daughter	.013	22.07
Stepchild	.001	9.69

Table 10 (*Continued*)

Variable	Coefficient	*t*-Value
Brother/sister	.026	59.90
Grandchild/great grandchild	−.006	−36.29
Son/daughter-in-law	.074	52.36
Brother/sister-in-law	.039	31.44
Other relative	.027	95.83
Non-related person	.033	29.78
Highest level of education of head of household		
Omitted value: secondary not complete		
No education	.027	125.46
Primary incomplete	.016	84.82
Primary completed	.007	26.03
Secondary completed	−.007	−28.54
Tertiary degree/diploma	−.019	−46.96
Province		
Omitted value: Limpopo		
Western Cape	.025	79.33
Eastern Cape	.012	45.03
Northern Cape	.025	50.39
Free State	−.0001	−0.36[a]
KwaZulu-Natal	.012	49.95
North West	.017	51.20
Gauteng	.019	72.03
Mpumalanga	0.0006	2.33[a]
Place of birth		
Omitted value: in South Africa		
Outside South Africa	.076	85.90
Not known	−.041	−10.01
Unspecified	.266	149.52
Disability		
Omitted value: no disability		
Have a disability	.183	369.80
Social grant		
Omitted value: receiving a social grant		
Not receiving a social grant	.017	104.15
Not known	.046	95.74
Mother or father dead or whereabouts unknown		
Omitted value: both parents alive		
Mother dead or whereabouts not known	.006	22.64
Father dead or whereabouts not known	.008	44.11
Type of lighting and water in the home		
Omitted values: electricity and water in the home		
Lighting not electricity	−.010	−52.73
Piped water inside yard	.006	26.17
Piped water outside yard	.006	23.95
Other water access	.005	23.25
Income[b]	−7.46e−09	−24.17
Constant	.022	60.82
Number of observations = 8,911,626[c]		

[a] Not statistically significant.

[b] Income data is reported by StatsSA to be unreliable since it generally does not include child care grants but may include other social grants such as old age pensions. An attempt was made to clean this data by including old age pensions into household income but the value of this data remains doubtful. In addition, the household income data does not include remittances.

[c] The *R*-squared is typically not used in a linear probability model as an indication of the goodness of fit of the model or the strength of the explanatory variables.

in the percentage probability of a child not attending school over the "omitted variable".

The results of the regression are similar to the descriptive analysis. In the case of the child's age for example; 8-year olds are 0.8% less likely to be out of school than 7-year olds and females are 0.2% less likely to be out of school than males.

The most vulnerable children to being out of school are those who are the head or acting head of the household where the probability of being out of school is 10% more than a child who has their mother or father as the head of the household. Children with a disability have an 18.2% greater probability of being out of school than children with no disability. Children not receiving a social

grant have a 1.7% greater probability of being out of school. While the provincial variation in school attendance is noticeable with most provinces having between a 1% and 2% greater probability of children not attending compared to Limpopo, living in the Western and Northern Cape increases the probably of not attending school by 2.5% respectively. The probability of attending school increases with increasing levels of education of the head of household with the probability of not attending school being 2.7% higher if the head of household has no education than if they have incomplete secondary schooling.

There are a number of factors which have a surprisingly low impact on whether a child attends school or not. These include whether either a mother or a father is dead or their whereabouts not know and whether the house has electricity and location of the nearest source of water. While household income was included in the regression analysis and is statistically significant, it appears to have no impact on whether a child attends school or not. Although the data is statistically significant, it is problematic because it does not include childcare grants or remittances and, consequently, the household income factor should be treated with some caution. The education level of the head of household and whether the child receives or does not receive a social grant may be a better proxy for income. However, this issue would need further investigation as the General Household Survey, which is conducted annually by Statistics South Africa, shows that "not enough money" is among the more commonly reported reason for children aged 7–15 being out of school (in 2007 this applied to 21% of out of school 7–15-year olds, while 22% reported being out of school as a result of illness and 22% as a result of being to young) (Statistics South Africa, 2008).

5. Conclusion

What does the Community Survey 2007 contribute to our understanding of trends in school attendance? First, the CS2007 provides us with a good estimate of the size of the group of children of compulsory school age who are not at school. While there continues to be some concerns about the inconsistencies in the data for White and Indian children, the number of out-of-school compulsory school-aged children is around 386,000. Second, the CS2007 shows that enrolment rates have remained relatively constant in the past 10 years, with some promising changes to enrolment for younger children, particularly 6 and 7-year olds. Third, the Survey provides us with an opportunity to understand the characteristics or profile of children who are out of school. While the 386,000 appears to be a large number, this amounts to 4.3% of children of compulsory school age, which is at levels assumed to be "good" by international standards. Furthermore, the number of children who have never been to school at all is relatively small at around 58,000 (or less than one percent of the compulsory school population) and 31% of these are 7 years of age and presumably most will enrol at school in the next year or two. In other words, almost all children have had, and/or will have, some exposure to schooling.

That said, 386,000 children aged 7–15 out of school is still a significant number of children who are not in school. Wilson (2004) has argued that the reason that many of these children are not attending school is because of government policy that requires parents to pay school fees if they do not qualify for an exemption from paying school fees. However, the evidence does not support this. First we know that at least 60% of children of compulsory school age currently attending an education institution live in families that are poor (Fleisch, 2008). That would suggest that poverty alone is unlikely to explain why children are not in school. This conclusion is supported by our analysis which does not reveal a statistically significant relationship between a range of poverty indicators and not being in school.

If poverty by itself is not necessarily a barrier to access, then what other factors might explain why it is that some children are not in school. Hunt's (2008) comprehensive review of the international evidence on why children drop out of school describes a multiplicity of reasons or causes. These include household income and limitations placed by household finances, both for direct and indirect costs of schooling; it includes the impact that specific financial shocks have on children dropping out. They also include the need for child labour and how formal and informal labour impacts on children's attendance at school. The international research also suggests that migration, both intra- and inter-country movement, can and does constrain children's access to schooling. The research also suggests that non-economic factors such as orphanhood and fostering often restrict children's access. Health and health-related problems for children and families are also barriers. These range from children's disabilities, to pregnancy and chronic illness of adults and other family members which may be contributing factors that explain why children of compulsory school age are not in school. The literature also identifies gender, rural and urban locations, stigmatized groups and social and political conflict as all context-specific factors that might explain why children are not in school.

But what does the evidence from South African tell us? Using the CS2007, we are able to show two things. First, we can identify the factors that are statistically correlated with children not being in school. And second, and possibly more important, we are able to establish the degree or extent to which each of the factors could explain the magnitude of the out-of-school problem. The South African evidence suggests that at least four broad, but interrelated factors may account for children not being in school. The first is disability, whereby children with various kinds and varying degrees of disability are not enrolled and may never attend schools of any kind. Second, family structure makes a difference. Children living with biological parents or grandparents are far more likely to be in school, even controlling for other circumstances of their families, than children living with other relatives, with siblings, with people that are not relatives or are themselves the head of their household. The third group are children living in households that are eligible for social grants but are not receiving them. These are children that are outside the welfare safety net. They may not necessarily be disabled or living in a stressed family structure, but their mothers or grandmothers have not been able to access basic state resources. Finally, there is a geographic and racial characteristic to the pattern to exclusion, with a disproportionate number of coloured males living in small towns, many of which are in the Southern Cape and central Karoo not enrolled in school. Together the picture of who is not attending is complex, but to characterise them as those living on the margins or fringes of the social order is probably correct. To be poor in South Africa may mean exclusion from the mainstream of the economy, but it does not mean exclusion from access to basic state services like enrolment in schooling or accessing social grants. The children not attending are not only likely to be living in households that are excluded from participation in the mainstream economy, but are on the margins or fringe of state services. They may also be on the margins and fringes of households, in which other children, the sons, daughters, grandsons and granddaughters receive more favourable treatment.

While much has been learned about education access in South Africa using the Community Survey 2007, the analysis presented in this paper suggests areas for further future research. First, the characteristics of children out of school need to be explored in much greater depth. It would be very valuable to learn more about how geographic, migration and family background factors interact resulting in children not going to school, going late or dropping out before the end of the compulsory phase. The results of the Social Surveys project on the barriers that the youth face to accessing education may provide invaluable clues. While focusing on older children, the data from this study will provide insights and reasons for youth leaving school.

What is to be done? How might policy be made to more precisely 'fit' the realities of non-attendees? Would alternative strategies such as alternative or non-formal schooling address South Africa's out-of-school population? While the number of out-of-school children between the age of 7 and 15 is small at only 4.3% of this age cohort in the population, the fact that they are most likely to be from very marginalised groups makes it very difficult and expensive to provide education for them. That said, to address the needs of these marginalised children, the state might consider the following options. First, review the provision of, and access to, specialised education services in rural communities. At the same time, more assertive campaigns need to be launched to address the stigma of children with disabilities. Second, provincial departments of social development need to recognise and provide special support for children living in households headed by adults other than parents and grandparents. Children in these households are likely to be more vulnerable to exploitation and exclusion from school. Third, poor households that are eligible for state assistance but do not receive it, need special assistance. This may require an interdepartmental initiative including Home Affairs, Education and Social Development. Finally, we need to know a great deal more about the specific reasons why children are disproportionately out of school in some of the countries rural communities. If the reasons are linked to closure of farm schools, then meaningful alternatives need to be explored. It may be useful to explore policy options from Latin America, Asia and other parts of the African continent when considering strategies to address the South African situation, an appropriate follow-up topic for this paper.

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