Who Drops Out of School in South Africa? The Influence of Individual and Household Characteristics

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Abstract

This study examines the correlates of dropping out of school in South Africa. Data from a public-use sample of the 1996 South African census are used. Results were mixed, but suggest that both individual- and household-level attributes are important determinants of dropping out of primary and secondary school. Race, household size, female headship and the head’s level of education are also strong predictors of dropping out. The results also show that the selection process for staying in primary or secondary school appears to favor students from wealthier households.

Introduction

Besides problems of low enrollment and attendance, one of the biggest concerns for educational systems in Africa is their ability to retain students until they graduate from primary or secondary school. The problem of dropouts is disquieting to policymakers since it partly reflects the inadequacy of a schooling system in terms of either school quality or quantity. Failure to complete school is also associated with persistent poverty among certain segments of society. Although there is a growing body of research on the role of individual and household factors on children’s schooling in Africa, particularly studies on school enrollment and attainment, there have been relatively few empirical studies focusing on dropping out of school (Fuller et al. 1995; Fuller and Liang 1999; Lloyd et al. 2000). This is in spite of the fact that in many societies children who drop out before attaining functional literacy or completing any socially appropriate curriculum have a very large proportion of their life’s script written for them.

School dropouts are usually associated with chronically high unemployment levels, low earnings, and poor health outcomes (McNeal 1995; Pallas 1987; Rumberger 1987). Besides these individual-level consequences, school dropouts also impose serious constraints on national development by undermining national human capital development efforts (Chernichovsky 1985). Understanding the determinants of dropping out of school in South Africa is
important given the current national concerns about racial differences in educational attainment, earnings, health and occupational achievement (Townsend et al. 2002; Burgard 2002). Because of the public policy significance of school attrition and its associated consequences, this study explores the effects of a variety of individual and household background factors on one major indicator of failure – dropping out of primary and secondary school in South Africa. South Africa is a society undergoing rapid social, political and economic transformation since the collapse of apartheid in 1994. There is wide consensus in the country that improving the educational attainment of previously disadvantaged groups is a prerequisite for fostering social mobility and economic growth and reducing the inequitable distribution of societal resources. Although the country has attained almost universal education, school wastage, through dropping out, undermines efforts to achieve more than basic literacy since it is one thing to achieve universal education, and another to keep children enrolled in school. Thus, a study of the correlates of dropping out of school helps us identify obstacles to schooling. This knowledge base can then be used to formulate better educational policies.

This study also offers us the opportunity to find out whether factors such as female headship of households have any negative bearing on children’s schooling as evidence from Western countries such as the United States seems to suggest (McLanahan and Sanderfur 1994). Comparing children’s educational outcomes in South Africa with findings from other African countries may not lead to similar conclusions given South Africa’s history of racially based educational policies that differentially influenced schooling opportunities at the individual and community levels. From a racial stratification perspective, South Africa offers a very different social, economic and political context as compared to the rest of sub-Saharan Africa. Hence research on school dropouts will enhance our understanding of the complexities associated with the process of educational attainment in a racialized developing country (Burgard 2002; Mickelson et al. 2001; Buchmann and Hannum 2001). Numerous studies on education in South Africa have consistently shown that racial gaps in schooling exist. African and Coloured children tend to have poorer education outcomes than those of Whites and Asians (Lam 1999; Thomas 1996; Treiman et al. 1996). The country’s long history of racial segregation affected the schooling and social mobility opportunities of Africans, Coloureds and Asians differently when compared to Whites. Various apartheid governments determined, to a large extent, the process of educational attainment across racial lines through policies of unequal distribution of educational resources. Under apartheid, there were no compulsory school attendance laws for Africans. Consequently, African students have had a long history of dropping out of school (Nkabinde 1997). Thus, decisions to drop out of school in South Africa were not only influenced by individual- and household-level attributes, the larger socio-political environment played a major role as well. Some observers contend that the
different experiences of South Africa’s four main population groups are sufficient enough to have important consequences when predicting some of the causes underlying racial differences in school dropout rates (Case and Deaton 1999; Behr 1988).

**Data and Methods**

This analysis is based on a 10 percent public-use sample of the 1996 South Africa population census. In this census, all persons aged 5 years and older were asked about the highest school they had completed and if they were presently attending school. In addition, these data contain items on disability, household structure, race and several important characteristics of the head of household. Despite their obvious advantage of providing large numbers of cases, these data do not provide information about school quality, individual preferences, and parental attitudes toward schooling or on academic performance. These variables are strong predictors of dropping out of school in many societies (Velez 1989; Ensminger and Slusarcick 1992). Census data also do not allow us to examine the impact of time-indexed circumstances on the odds of dropping out since the data capture individual- and household-level attributes at a given point in time (Haveman et al. 1991; Fuller et al. 1995). Another major problem of these data is that some of the educational categories used censor our observations. For example, we do not know if some of the children who were currently attending school dropped out at some later stage. We also do not know the final educational attainment of children who had dropped out of school at the time of the census (Anh et al. 1998). Thus, the data examined in this paper will address some but not all of the issues that explain why children drop out of school in South Africa.

We examine the effects of individual- and household-level factors on the likelihood of dropping out of primary and secondary school using logistic regression analysis. The analysis of dropping out of school is conditional on ever-attended school; hence the outcome variable is dichotomous (dropout vs. in school). A “dropout” is defined as any school-age child who at the time of the census was not currently attending school and who had not completed school. Any children who never attended school are therefore not included. It is possible that some children who had dropped out at the time of the census re-enrolled in school in the following year. If children were following the prescribed or expected ages at each school level, a 9-year old child in South Africa would have completed the first three grades of primary school (that is, grades 1 to 3). A primary school dropout is defined as any 9-14-year-old child who attained some primary school education but had dropped out of primary school, while a secondary school dropout is any 15-19-year-old who completed at least one year of secondary school but had dropped out. These variables were coded 1 if the student dropped out of school and 0 otherwise. At the secondary
school level, the children at risk of dropping out of school are those who attended at least the first year of secondary school. However, because the 1996 South African census asked highest level of school completed, one cannot capture children who dropped out of secondary school before completing the first year. Since children are expected to start secondary school at age 13 and to complete at age 17, the sample of secondary school dropouts is restricted to children aged 15-19 who completed at least one year of secondary school.

Given the importance of individual and household characteristics in determining schooling opportunities, we use children’s characteristics like race, age, gender, and disability status, while household characteristics include household structure and size, gender and level of school of household head, and household wealth. The use of household-level characteristics does not allow us to examine intra-household dynamics such as individual preferences that can affect schooling. In a limited way, type of place of residence and province are used to capture some aspects of community characteristics such as physical access to schools and the unequal distribution of other development resources that was created by the apartheid system. Besides these individual- and household-level characteristics, the likelihood of dropping out of school is also influenced by a weak demand for education, poor performance and by school- and community-specific factors. Children also drop out to enter the labor force or help at home, or as a result of pregnancy, poor health or diminished household financial resources (Hyde 1993; Lloyd et al. 2000). However, because of census data limitations, the analysis in this paper will not include such factors.

To control for the ability of households to invest in children’s schooling, we construct a household standard of living index ranging from 0 to 8. We used information on type of dwelling unit and ownership of a telephone, type of fuel used for cooking, heating and lighting, type of toilet facility and if the refuse of the household was removed by local authority at least weekly. The index was grouped into three categories using the 25th, 50th and 75th percentiles of all households. Households in the bottom 25th percentile are considered poor and those above the 75th percentile are considered to experience a higher standard of living. According to Filmer and Pritchett (1999), such an asset-based wealth index is a very good proxy for long-term accumulation of household wealth. In addition to this index, we also used information on whether a household had migrants and if the household received remittances to control for the ability of households to purchase schooling resources. Households were grouped into four categories:

i) households that did not have any migrants and did not report receiving remittances;

ii) households that had no migrants but reported receiving remittances (presumably from non migrant family members);
iii) households that had migrants and received remittances; and
iv) households that had migrants but did not receive remittances.

Given the prominent nature of employment-related migration in South Africa particularly among Africans, the presence of migrants and remittances could be strongly associated with children’s educational opportunities. Table 1 presents the descriptive statistics for the variables used in the analysis.

Table 1: Means and Standard Deviations of Variables Used in the Analysis

<table>
<thead>
<tr>
<th>Racial Group</th>
<th>Africans</th>
<th>Coloureds</th>
<th>Asians</th>
<th>Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school dropouts</td>
<td>0.014</td>
<td>0.119</td>
<td>0.013</td>
<td>0.112</td>
</tr>
<tr>
<td>Secondary school dropouts</td>
<td>0.054</td>
<td>0.226</td>
<td>0.165</td>
<td>0.371</td>
</tr>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child’s gender</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.462</td>
<td>0.499</td>
<td>0.476</td>
<td>0.499</td>
</tr>
<tr>
<td>Female</td>
<td>0.538</td>
<td>0.499</td>
<td>0.524</td>
<td>0.499</td>
</tr>
<tr>
<td>Child’s disability status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No disability</td>
<td>0.911</td>
<td>0.285</td>
<td>0.957</td>
<td>0.202</td>
</tr>
<tr>
<td>Sight disability</td>
<td>0.037</td>
<td>0.188</td>
<td>0.010</td>
<td>0.099</td>
</tr>
<tr>
<td>Physical disability</td>
<td>0.018</td>
<td>0.133</td>
<td>0.018</td>
<td>0.134</td>
</tr>
<tr>
<td>Other disability</td>
<td>0.029</td>
<td>0.168</td>
<td>0.018</td>
<td>0.134</td>
</tr>
<tr>
<td>Relationship to head</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Child</td>
<td>0.394</td>
<td>0.489</td>
<td>0.392</td>
<td>0.488</td>
</tr>
<tr>
<td>Sibling</td>
<td>0.046</td>
<td>0.208</td>
<td>0.023</td>
<td>0.150</td>
</tr>
<tr>
<td>Grandchild</td>
<td>0.108</td>
<td>0.311</td>
<td>0.072</td>
<td>0.259</td>
</tr>
<tr>
<td>Other relative</td>
<td>0.039</td>
<td>0.193</td>
<td>0.047</td>
<td>0.211</td>
</tr>
<tr>
<td>Non-relative</td>
<td>0.018</td>
<td>0.132</td>
<td>0.031</td>
<td>0.172</td>
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<tr>
<td>Household size</td>
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<td></td>
</tr>
<tr>
<td>≤3</td>
<td>0.209</td>
<td>0.407</td>
<td>0.189</td>
<td>0.392</td>
</tr>
<tr>
<td>4</td>
<td>0.126</td>
<td>0.332</td>
<td>0.174</td>
<td>0.379</td>
</tr>
<tr>
<td>5</td>
<td>0.138</td>
<td>0.345</td>
<td>0.183</td>
<td>0.387</td>
</tr>
<tr>
<td>6+</td>
<td>0.525</td>
<td>0.499</td>
<td>0.452</td>
<td>0.498</td>
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<tr>
<td>Type of place</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0.566</td>
<td>0.496</td>
<td>0.843</td>
<td>0.364</td>
</tr>
<tr>
<td>Rural</td>
<td>0.434</td>
<td>0.496</td>
<td>0.157</td>
<td>0.364</td>
</tr>
<tr>
<td>Gender of head</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.551</td>
<td>0.497</td>
<td>0.722</td>
<td>0.448</td>
</tr>
<tr>
<td>Female</td>
<td>0.449</td>
<td>0.497</td>
<td>0.278</td>
<td>0.448</td>
</tr>
</tbody>
</table>
**Results**

**Dropping out of Primary School**

To what degree do individual- and household-level characteristics determine who drops out of primary school in South Africa? Addressing this question requires estimating a series of nested models as shown in Table 2. We begin by estimating the independent effect of race (Model 1). The advantage of presenting nested models is that one can assess changes in the significance and magnitude of the effect of race as we add different variables to the baseline model. Thus, the full model allows us to assess the effects of race on school dropout net of the child’s other individual-level attributes as well as household characteristics and type and place of residence. Although race is likely to interact with several variables and to exert its influence on dropping out indirectly by affecting socioeconomic characteristics of individuals, households...
and communities, there is no denying that race itself is an important individual-level attribute in South Africa. Therefore it is useful to examine its independent effect and then add controls for other determinants of dropping out in Models 2 and 3. In subsequent analyses, we present separate models for each racial group as a way of controlling for bias introduced by the race variable and also to see if the individual- and household-level attributes have different effects across race. The second and third models incorporate individual and household level characteristics. The goal of these models is to examine how a series of covariates attenuate the association between race and dropping out of school or how gaps in children’s schooling opportunities are generated. Because of very few cases of school dropout among Asians and Whites at the primary school level, the analysis of dropping out at this level is restricted to Africans and Coloureds only.

The odds ratios presented in Table 2 clearly show that race is a strong predictor of dropping out of primary school in South Africa. Model 1 shows that in the absence of any controls, the odds that African children are going to drop out of school are 1.4 times as great as those of Coloureds. When we control for the child’s gender, age and disability status (Model 2) the African disadvantage still persists. However, when we control for a series of household-level covariates like household structure and size, head’s level of education, the household’s standard of living, and place of residence, the African disadvantage disappears. In Model 3, the odds of dropping out of primary school among Africans are not statistically significantly different from those of Coloureds net of other effects.

As for the effects of the other individual- and household-level covariates, models 2 and 3 show that girls and children with physical and other disabilities are statistically significantly more likely to drop out of primary school than children without any disabilities. The significant effect of age indicates that a child’s odds of dropping out increase with age. A child’s relationship to the head of household is also a strong predictor of dropping out. Grandchildren are significantly less likely to drop out of primary school as compared to the children of the head while non relatives are 3.4 times more likely to drop out.
Table 2: Estimated Odds Ratios for the Logistic Model of Dropping out of Primary School for All Racial Groups: Children Aged 9-14, South Africa 1996

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>(1) Baseline</th>
<th>(2) Individual controls</th>
<th>(3) Household level controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s race [Coloured]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African</td>
<td>1.39***</td>
<td>1.38***</td>
<td>0.95</td>
</tr>
<tr>
<td>Child’s sex [Male]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.89***</td>
<td>0.88***</td>
<td></td>
</tr>
<tr>
<td>Child’s disability status [No disability]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sight disability</td>
<td>0.83***</td>
<td>0.88***</td>
<td></td>
</tr>
<tr>
<td>Physical disability</td>
<td>2.44***</td>
<td>2.26***</td>
<td></td>
</tr>
<tr>
<td>Other disability</td>
<td>1.72***</td>
<td>1.69***</td>
<td></td>
</tr>
<tr>
<td>Child’s age</td>
<td>1.07***</td>
<td>1.07***</td>
<td></td>
</tr>
<tr>
<td>Child’s relationship to head [Child]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grandchild</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other relative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonrelative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household size [≤ 3]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.81***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.74***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6+</td>
<td>0.77***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head of household’s sex [Male]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head’s education [No schooling]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>0.86***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some secondary</td>
<td>0.55***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>0.52***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migrants and remittances [No migrants, no remittances]</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No migrants, receives remittances</td>
<td>0.78***</td>
<td></td>
<td></td>
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<tr>
<td>Migrants, receives remittances</td>
<td>0.50***</td>
<td></td>
<td></td>
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<tr>
<td>Migrants, no remittances</td>
<td>0.74***</td>
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<td></td>
</tr>
<tr>
<td>Household standard of living [Low]</td>
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</tr>
<tr>
<td>Medium</td>
<td>0.87***</td>
<td></td>
<td></td>
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<tr>
<td>High</td>
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<td>Type of Place [Urban]</td>
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<tr>
<td>Rural</td>
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<td></td>
</tr>
<tr>
<td>Province of residence [Gauteng]</td>
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<td></td>
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</tr>
<tr>
<td>Western Cape</td>
<td>0.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>0.87***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Cape</td>
<td>1.29***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free State</td>
<td>0.70***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KwaZulu Natal</td>
<td>1.12*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North West</td>
<td>0.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>0.76***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Province</td>
<td>0.59***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2 Log-Likelihood</td>
<td>64689.42</td>
<td>64491.54</td>
<td>62921.45</td>
</tr>
<tr>
<td>Number of cases</td>
<td>451,264</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P<.05; **p<.01; ***p<.001  Note: Reference categories are shown in brackets
Children living in large households are less likely to drop out than children living in a household with three or fewer members. Some studies in Africa have documented positive effects of household size on children’s educational outcomes (Gomes 1984; Chernichovsky 1985). This could be because other household members either substitute for child labor or contribute some of their earnings to educating younger members of the household. Living in wealthier households or where the head has more than primary schooling also significantly reduces the likelihood of dropping out. Children from households that have migrants and that receive remittances are 0.5 times less likely to drop out of primary school as those from households with no migrants and no remittances. In a country where labor migration has been a dominant force for over a century, remittances sent to households of origin have the potential to increase investments in children’s schooling directly through the payment of school fees and through the purchase of school inputs like uniforms and books. Remittances also have the potential effect of increasing the amount of discretionary time that children have. This reduces the direct trade-off between time invested in schooling and work. Consequently households that receive remittances might not rely heavily on child labor, thereby reducing the likelihood that children might be pulled out of school to help their families in some labor intensive areas such as farming and caring for young children. Type and place of residence are also significant determinants of school dropout. Rural residence increases the odds of dropping out of primary school. The provincial odds ratios reveal that children living in provinces like KwaZulu Natal and the Northern Cape are significantly more likely to drop out than children living in Gauteng Province.

In order to arrive at a more detailed and clearer understanding of the correlates of dropping out of school in South Africa, we re-estimated the odds of school dropout by running separately full multivariate models for each racial group. Table 3 presents odds ratios for these logistic regression models. Column 1 presents the results for African children and column 2 for Coloured children. Among Africans and Coloureds female children have significantly lower odds of dropping out of primary school than male children. This is in contrast to findings from most parts of sub-Saharan Africa or Asia where it has been established that discrimination against girls at the household level is likely to lead to their higher odds of dropping out of primary school (Sathar 1993; Lloyd and Blanc 1996). Being physically disabled or having some other type of disability is positively associated with the likelihood of dropping out of primary school.

Table 3 also reports the effects of children’s living arrangements on schooling. Living with a head of household who is a non relative significantly increases the probability of dropping out. Among Africans, nonrelatives are 4.1 times more likely to drop out of primary school as compared to the children of
the head of household. A possible explanation for this finding could be that because of kinship distance, these children are subject to less strict parental controls and supervision than children living with their parents (Astone and McLanahan 1991). It is also possible that intra-household allocation of schooling resources could be biased against distant relatives or non-relatives. With respect to siblings of the head, the results show elevated risks of dropping out. In contrast, grandchildren were only 0.93 times less likely to drop out as the children of the head of household. Among Coloureds, only non-relatives have significantly higher odds of dropping out of school as compared to the children of the head of household.

Living in larger households seems to significantly decrease the likelihood of dropping out among Africans only. In a study of family size and educational attainment in Kenya, Gomes (1984) reported that larger households served to increase children’s schooling. Thus, it is possible that in most African households, older siblings and other adults in the household contribute to intra-household resources that are then used to finance children's education thereby reducing the likelihood of school dropout. Other covariates in the model show discernible effects on the likelihood of dropping out of school. Children who live with educated heads of households are far less likely to dropout than children living with a head with no schooling. Table 3 also illustrates the implications of living in a household with migrants that may or may not be receiving remittances. The two models show that African and Coloured children residing in households that reported that at least one member of the household was a migrant worker and that also received remittances were 52 percent and 9 percent less likely to dropout of primary school respectively than children living in households without migrants and not receiving any form of remittances. A household’s standard of living is also a significant predictor of dropout. A child’s chances of dropping out of primary school are much lower if the child lives in a wealthier household. Besides having favorable financial resources, sociologists often argue that children from well-to-do households are more often socialized into intellectual activities at home. This cultural capital is usually translated into better educational outcomes. Conversely, a lack of cultural capital is thought to discourage students from staying in school (Bourdieu 1973; Kalmijn and Kraaykamp 1996).
Table 3. Estimated Odds Ratios for the Logistic Model of Dropping out of Primary School for Separate Racial Groups: Children Aged 9-14, South Africa 1996

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Population Group</th>
</tr>
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*P<.05; ** p<.01; ***p<.001                  Note: Reference categories are shown in brackets
The type and place of residence are also important predictors of dropping out of primary school. African children living in rural areas are 1.2 times more likely to drop out compared to children living in urban areas. African children living in the Northern Cape, KwaZulu Natal and the North West provinces had significantly higher odds of dropping out of primary school than children living in Gauteng province. Limited schooling opportunities in these areas could be behind the high likelihood of dropping out of primary school among Africans. Among Coloureds, rural residence is associated with lower odds of school dropout while the provincial variable shows no effect.

**Dropping out of Secondary School**

Table 4 presents the results of a nested set of logistic regression models predicting dropping out of secondary school. The baseline model only contains dummy variables for the child’s race. Because there were enough cases of school dropouts at the secondary school level among Asians and Whites, the race variable now has four dummies: Whites, Africans, Coloureds and Asians. The odds ratios presented in Model 1 indicate significant disadvantages for Coloured and Asian children. African children are surprisingly 77 percent less likely to drop out of secondary school than Whites. This African advantage is indeed an unexpected finding given the history of South Africa’s segregated educational system. The significantly lower odds of dropping out among Africans and the higher odds of dropping out among Coloureds and Asians persist after we control for the child’s gender and disability status (Model 2). Adding controls for household background, type of place and province of residence further reduces the likelihood of secondary school dropout among Africans while maintaining significantly higher odds of dropping out among Coloureds and Asians (Model 3). The full model also shows that girls are more likely to drop out of secondary school compared to boys. This high dropout risk could be linked to social opportunity costs. In a study of why girls leave school earlier than boys in Botswana, Fuller et al. (1995) argued that girls are more likely to leave school because of the need to minimize social opportunity costs associated with prolonged schooling such as marriage and childbearing. Children who are other relatives or non relatives of the head of household are more than two times as likely to drop out than children of the head. The size of the household continues to be positively related to children’s schooling since children from larger households are significantly less likely to dropout than children living in household with three or fewer members. Living with heads who completed secondary school or in households with higher standards of living also significantly reduces the likelihood of dropping out.
### Table 4: Estimated Odds Ratios for the Logistic Model of Dropping out of Secondary School for all Racial Groups: Children Aged 15-19, South Africa 1996

<table>
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<tr>
<th>Independent variables</th>
<th>(1) Baseline</th>
<th>(2) Individual controls</th>
<th>(3) Household-level controls</th>
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<td>0.67***</td>
<td>0.49***</td>
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<td>2.80***</td>
<td>1.91***</td>
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<td>1.50***</td>
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<td>1.00</td>
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<td>1.91***</td>
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<tr>
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Note: Reference categories are shown in brackets

\(*P<.05; \ **p<.01; \ ***p<.001\)

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<td>0.53***</td>
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-2 Log-Likelihood: 92151.44 16655.66 3617.47 8746.02
Number of cases: 252,495 23,550 7,413 20,615

*P<.05; ** p<.01; ***p<.001 Note: Reference categories are shown in brackets
In Table 5, race-specific models are considered. The patterns of results are not necessarily similar for Africans, Coloureds, Asians and Whites. For instance, the effects of gender show that African and Coloured girls are significantly more likely to drop out of secondary school than boys. Among Asians and Whites, the gender differences are not significant. Higher odds of dropping out among African and Coloured females at the secondary school level could be linked to early family formation (Sibanda and Zuberi 1999). When we consider the effects of disability, we find that the odds of dropping out are significantly higher among children with physical disabilities among Africans, Coloureds and Whites. Children with sight disabilities are surprisingly significantly less likely to drop out among Africans only as compared to children with no disabilities.

When we look at the effects of a child’s relationship to the head of household, we notice that grandchildren are significantly less likely to drop out among Africans and Coloureds. The results across all four racial groups also show that there are negative effects on school continuation if a child is a relative or non relative of the head of household holding other variables constant. The pattern of effects for household size is generally similar for all races. With the exception of households that have six or more members among Coloureds, Asians and Whites, household size does not increase the risk of dropping out. Children living in female-headed households are significantly less likely to drop out only among Africans. Among Coloureds and Asians, the odds of dropping out are 1.3 and 1.5 times as great as those of children living in male-headed households respectively. A possible explanation for this finding could be due to the buffering role of remittances—a phenomenon that is closely linked to the relationship between male labor migration and female headship among Black South Africans. For several decades, labor migration has been a household portfolio diversification strategy where male migrants working in mines, towns or farms would remit a share of their income back to their families (Posel and Casale 2002). Since the results in Table 5 show that African children residing in households that have migrants and receive remittances are 69 percent less likely to drop out than children living in households without migrants and remittances, it is possible that remittances attenuate adverse economic effects typically associated with female headship that are common in Western societies such as the U.S. (Shaw 1982; Velez 1989). Studies on educational attainment in South Africa have shown that female headship does not necessarily disadvantage the family economically since these families are more likely to receive remittances (Townsend et. al. 2002; Fuller et al. 1995).

The patterns of effects for head’s education are not consistent across racial groups. Among Africans, living with a head who completed more than primary schooling significantly reduces the likelihood of dropout. Among Coloureds and Asians, the odds of dropping out are significantly lower if the head completed secondary school. Among Whites, it is surprising to note that living
with heads who had primary or some secondary schooling significantly increases the likelihood of dropping out. The household’s standard of living is significant only for Africans and to some extent Coloureds. Children from more affluent households are less likely to drop out of secondary school than those from poorer households. With the exception of Whites, rural residence is a strong predictor of the likelihood of dropping out among all racial groups. African and Asian children living in rural areas have odds of dropping out about 1.3 and 2.3 times as great as those for children living in urban areas. Among Coloureds, rural residence significantly reduces the odds of school drop out. Lastly, we find different patterns across race when we examine the effects of province of residence. Among Africans, children living outside Gauteng Province generally tend to have statistically significantly lower odds of dropping out. For Coloureds and Asians, only children living in the Western Cape and Free State provinces have odds of dropping out that are significantly larger than those for children living in Gauteng.

Conclusion

This study has shown that various individual- and household-level characteristics are important determinants of dropping out of school in South Africa. Household size, female headship and the standard of living are overwhelmingly strong predictors among Africans and Coloureds. As expected, the selection process for staying in primary or secondary school generally appears to favor students from wealthier households while the buffering effect of larger households appears to be stronger among Africans than other groups, at both the primary and secondary school levels. This finding is consistent with findings from other studies in sub-Saharan Africa that have highlighted the general lack of resource dilution effects as a result of larger household sizes (Gomes 1984). In addition to these household attributes, this study has also shown how race, gender and disability affect the likelihood of dropping out. A rather surprising finding is the advantage enjoyed by African children as compared to Whites at secondary school level. Given the size and relative poverty of their households, one would have expected African youth to be disproportionately drawn out of secondary school early to enter the labor force in order to contribute to the financial needs of their families. Some researchers have argued that because various apartheid policies began to be dismantled as early as the 1980s, thereby narrowing racial differences in occupational status and income, it is possible that racial gaps in educational attainment began to narrow well before the collapse of apartheid in 1994 (Treiman et al. 1996; Hindson 1991; Thompson 1990).

This study has also shown that when we run separate analyses for each racial group in South Africa, the patterns of the effects of various background factors on school dropout are mixed. For instance, we observed that a child’s gender is
a strong predictor of dropping out among Africans and Coloureds only. A child’s age and disability status are also strong predictors of school dropout across race. On the other hand, the effects of household standard of living or province of residence are not overwhelmingly strong predictors of dropping out among Whites and Asians. These mixed results could be an indication of how the various racial groups in South Africa responded to macro structural educational opportunities that were set under apartheid.

An equally important question considered in this study is whether primary school dropouts differ in their individual and household background characteristics from those who drop out at the secondary school level. The findings seem to suggest strongly that a similar set of factors determine who drops out at both levels of schooling. The findings from this study also question the universality of findings from other racially stratified societies such as the United States. For instance, in contrast to findings from the United States, large household size and female headship are not significantly associated with poor educational outcomes among economically deprived racial groups in South Africa. What this implies is that not all large households or female-headed households are economically disadvantaged. Remittances from husbands working elsewhere and support from other family members (through resource pooling) could be offsetting the negative effects traditionally associated with female headship and household size.

References


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