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POVERTY TRAPS AND SOCIAL EXCLUSION AMONG CHILDREN IN SOUTH AFRICA: SUMMARY REPORT

A REPORT TO THE SOUTH AFRICAN
HUMAN RIGHTS COMMISSION



SOUTH AFRICAN HUMAN RIGHTS COMMISSION

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POVERTY TRAPS AND SOCIAL EXCLUSION AMONG CHILDREN IN SOUTH AFRICA 2014

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INTRODUCTION

This summary report is based on a major study undertaken for the South African Human Rights Commission. The full report contains more detail on the methodologies used, detailed definitions of terms, a fuller literature review and the complete list of references. This summary report should thus ideally be read in conjunction with the full report.

South Africa has made considerable progress over the past two decades in reducing the extent of poverty and social exclusion and their effect on children. The country's political transition has fundamentally changed the context within which these conditions occur. The dismantling of apartheid has opened up society, giving most people the opportunity to participate in the labour market. It has given them freedom of movement to seek alternative economic opportunities, and offered them the opportunity to interact with policy processes and service delivery. Important social trends, such as rural-urban migration and a sharp decline in fertility, have also offered many people a better life. Total fertility (the average number of children likely to be born to women during their reproductive years if fertility in every age group remains at its current levels) has declined to 2.34, not far above replacement level, according to Stats SA's 2013 mid-year population estimates. As a consequence, women's options have expanded, their labour market participation has increased and fewer unplanned children have been born. Broad social changes such as urbanisation, higher educational attainment, increased labour market opportunities for women, and changes in relationship arrangements and expectations about fertility, have also contributed to the marked decline in fertility.

Under these new circumstances poverty has declined, particularly since 2000, and opportunities have expanded. The progress made in providing formal housing and municipal services, including water, electricity and sanitation, has fundamentally changed living conditions for large numbers of people, and has hastened the shift to modern consumer patterns. Importantly, educational expansion has meant that almost all children are now at school until at least the age of sixteen. The massive expansion of the grant system has improved the financial situation of millions of poor families in urban and rural areas and helped to reduce not only money-metric poverty but also hunger among children as reported in household surveys.

Nevertheless, twenty years into South Africa's democracy, race remains a powerful predictor of deprivation and, consequently, future deprivation for today's children. Despite remarkable progress in reducing the effect of deprivation for many of its poorer citizens, the country is still plagued by poor education quality, high levels of unemployment, particularly among its youth, and widespread dissatisfaction with the pace and quality of basic service delivery. The achievements, such as improved access to basic services, near universal school enrolment and the extension of the social grant system, have been almost overshadowed by the growing awareness and criticism of state inefficiency in the management of public spending. Despite government intervention in a number of forms over the past two decades, many children born to poor households continue to suffer the indignities of poverty, often including lack of access to adequate nutrition, clean running water or adequate sanitation. These factors reduce the likelihood of good health for poor children. Combined with poor quality schooling, the prospect of poor long term health reinforces a cycle of deprivation from which it is hard for current and future generations to escape. Two decades after the dismantling of apartheid, widespread inequality still exists in South Africa. The country's poverty is all the more glaring because it coexists with striking affluence and retains strong racial dimensions. While some children in South Africa live in relative luxury and have access to world class education and health services, others face threats to their development in the form of poor living conditions, poor nutrition and poor access to basic services.

The economy has not grown rapidly enough to draw the hoped for numbers of unemployed into the labour market, and those excluded are typically also marginalised in other ways, as they tend to be the rural, the uneducated, the women and the young. Many still remain outside the mainstream economy and society, and what they are most likely to have in common is a poor education: poor in terms of both level of attainment and quality. Surveys have shown that even a fairly high level of educational attainment is no guarantee of a strong enough base of literacy and numeracy for full engagement in a modern society. Those with weak education are excluded not only from many economic opportunities but also from full participation in society.

Children born into poor and socially excluded families are at high risk of being caught in a poverty trap. They have little chance of getting a good education, because the school system of most poor people is weak. When they leave school, the sluggish demand for unskilled workers means that few will find or hold a job, while those who do succeed will not be well remunerated or securely employed.

Other problems the new South Africa has still to overcome are crime, substance abuse, household violence, and abuse of women and children. Representative data are hard to come by, but the prevalence of these social pathologies is well documented in the press and official reports. According to the Victims of Crime Survey conducted by Stats SA in 2011, 23.2% of households said their children were prevented from playing in the area of their home because of crime, and 15.7% said that crime prevented them from allowing their children to walk to school (Stats SA, 2012). Altogether, 730 000 (5.4% of all households) had been victims of burglary and 200 000 of home robberies (1.5%). Household structures are weak: in 2011, only 46% of children under fifteen lived with both their biological parents, and more than 11% lived with neither biological parent.

Poor South African children, who are for the most part black or coloured and located in the historically disadvantaged part of the basic education system, are at risk of perpetuating the poverty cycle into which they were born. Despite South African education being prioritised by all governments since 1994 as the way for children to escape poverty, the 2007 Southern and Eastern African Consortium on Monitoring Education Quality (SACMEQ) survey revealed that performance differences between poor and rich South African children in reading and mathematics were much larger than between poor and rich children in other African countries. The data support the notion of two education systems operating in South Africa: one well-resourced and high-performing, serving mainly the richest quarter of children, and the other a low-performing system, inefficient at converting resources into academic performance, and serving the poor. Most of the differences between these two subsystems can be traced back to socioeconomic circumstances. Economic advantage or disadvantage determines not only which schools children end up in, but also how prepared they are physically, socially and cognitively for school and how well they fare as they progress through the school system. Because economic advantage is still highly correlated with race, most black and coloured children, because they have less educated parents with fewer resources, enter the school system with a significant potential academic disadvantage relative to their white peers.

While access to health services seems to have improved since the end of apartheid (approximately 90% of births take place in a health facility of some sort), the quality of these services leaves much to be desired. Maternal mortality has increased by 80% since 1990, while under-five mortality has remained at its 1990 level. The proportion of children below the age of five with vitamin A deficiencies doubled between 1994 and 2005, increasing their risk of disease (Berry, Hall and Hendricks, 2010). Furthermore, HIV and AIDS has left a large imprint on South African society in the form of many deaths and the resultant loss of family earnings, as well as children orphaned, morbidity and the need for large scale treatment of those living with HIV.

The purpose of this summary report is to describe and analyse the phenomena of poverty traps and social exclusion, conceptually and empirically, and make broad recommendations. Sections 1 and 2 present some background to the problem, drawing on the international and local literature, respectively. Section 3 adds new empirical content to elucidate the South African situation. Section 4 describes case studies of a range of interventions used elsewhere, mainly in Latin American countries, and two simulation exercises relating to social grants and school education. The report concludes, in Section 5, with recommendations relating to five areas. There are two major areas where progress has been inadequate, and these serve to limit the chances of many poor children of escaping from poverty, and contribute to the likelihood of being excluded from mainstream society and social processes. These are the poor educational foundation that from a very early stage leaves many children with little prospect of obtaining a proper education, and the weak social structures and associated problems of violence and abuse. The report makes broad recommendations for interventions in these two areas: for the former, improved early childhood development and a strengthened foundation phase in schools; for the latter, a strengthening of social welfare services.

1. The cycle of inherited poverty

It is now widely accepted that the poor are not homogeneous. Individuals and groups are poor in different ways and for different reasons. There is also greater recognition of the existence of poverty traps: combinations of influences that keep some people in a low state of wellbeing and are hard to overcome in the absence of interventions. A large body of literature on poverty attempts to explain theoretically why poverty persists, empirically investigates the causes, and recommends policy for preventing or ameliorating poverty traps.

Definition of 'poverty trap'

A poverty trap may be defined as "any self-reinforcing mechanism which causes poverty to persist" (Azariadis and Tachurski, 2005). An individual or group may be caught in such a trap by any of a variety of mechanisms. Poverty traps operate at various levels, affecting individuals, communities or even entire nations (Barret and Carter, 2013). The mechanisms that create these traps may be systemic (such as geographic factors) or specific to certain individuals and groups (discrimination, for instance). Often, similar individuals or households face divergent welfare outcomes.

How people fall into poverty traps

Traditionally, researchers have focused on the macro causes of poverty traps. Geographic characteristics, such as being landlocked, bad governance and insufficient capital have all been cited as causal factors at that level. More recently, research has also been conducted at the medium and micro levels (local regions, communities, households or individuals). Naturally, many of the macro mechanisms also operate at lower levels, yet it is possible that other factors are dominant at lower levels. For example, a geographic factor may perpetuate poverty at a regional level even though the broader economy is growing. Similarly, class, ethnicity or social networks may concentrate poverty in certain areas or groups. At the individual level, numerous mechanisms could be at work: childhood health may affect adult productivity, poor children tend to attain low educational levels, and the social and family environment may hamper the acquisition of skills and capabilities during childhood, which could in turn hinder cognitive development during critical and sensitive child developmental stages. Credit constraints may also trap households in poverty by preventing them from making high yielding investments in good quality education or childcare.

This report is about poverty traps that operate mostly at the micro to medium level and are amenable to intervention. It focuses on five areas – health, education, wealth and assets, social networks and family, and geography – which require intervention if South Africa's poor children are to escape the cycle of inherited poverty.

1.1 HEALTH

Poverty stricken households and individuals are at greater risk of contracting disease. Consequently, health problems lower the productivity of poor adults at work and children at school, reducing the adults' income and the children's prospects. Various studies bear out the negative long-term implications of early-life exposure to disease, and a report by the World Health Organisation has suggested that the strength of this linkage has generally been underestimated in the past. Preventative healthcare, improved hygiene practices and sanitation, and greater awareness of the implications of disease are thus all potential areas for anti-poverty intervention.

A second way that ill health can induce perpetual poverty is via nutrition deficiencies. An undernourished person cannot work as hard or productively as others, is consequently paid less and cannot afford proper nutrition, resulting in further undernourishment. Research using a formal model in which nutritional intake is measured using the body mass index (BMI) found that past and current undernourishment both affect an individual's capacity for work (Dasgupta, 1997). In particular, the first three years of life have a significant effect on the individual's mature physique (and thus capacity for work), implying that early deficits have long-term effects.

Undernourishment also has behavioural implications. Reduced food intake can cause poor people to conserve energy and reduce their work effort, and it can cause lethargic behaviour in children. Being less active and engaging less with their environments has a lasting effect on the behaviour of undernourished children. Cognitive ability is affected even more severely by undernourishment. Despite some doubt about the connection between nutrition and productivity and incomes in adults, there is considerable evidence of the importance of adequate nutrition for pregnant mothers and young children (Banerjee and Duflo, 2011; Strauss, 1993).

Whether health deficiencies are caused by disease or malnutrition, it is clear that policy interventions that improve children's health can dramatically increase their chances of escaping poverty.

1.2 EDUCATION

Education is often considered one of the principal mechanisms for promoting social mobility. As with poor health, a weak education system can lead to poverty traps. Two macroeconomic explanations for the role of education in sustaining poverty traps are low access to credit, which prevents poor households from investing in education, and the unavailability of higher returns to such investments to compensate for the smaller amounts poor people can invest.

There are many ways in which attaining educational success can become unequal. Inadequate preschool education may fail to overcome earlier developmental inequalities among children, and these may persist and cause greater inequalities later in life. The home environment is one of the most significant factors responsible for unequal learning outcomes. Performance at school is influenced by the education of the child's parents and by the child's

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predisposition to learn, which is partly a result of the educational expectations and norms in the home. The smaller vocabulary typical of poor households hampers learning, as does instruction in a language other than the child's home language.

Unequal nutrition and resources in schools, which vary significantly with children's socioeconomic background, may be another cause of inequality. The pattern of wealthier parents being concentrated in areas where good schools are situated, further reinforcing inequality in schools.

Curriculum content and subject choice have a strong influence on the ability of the poor to escape poverty. Children from higher social classes more often choose subjects that are valued by the labour market. Given the potential role of education in offering children a way out of poverty, it is important that the schooling system mitigate rather than propagate social inequalities.

1.3 WEALTH AND ASSETS

Asset accumulation may be what ultimately determines a household's ability to escape poverty (Naschold, 2013). The poor struggle to accumulate assets because they have little to save and little collateral against which to borrow. They therefore cannot make investments which could enable them to break out of the poverty trap. Poor households are unlikely to be able to invest in high quality childcare, good education or other developmental activities for their children. Economic shocks, such as the illness or death of a productive family member, or losses due to natural disasters such as fires, may push individuals into a state of poverty from which it is difficult to recover. Insurance against such shocks, and aid to recover from them, are therefore important policy considerations.

1.4 SOCIAL NETWORKS AND FAMILY

The environment a child faces during the first eight years of life is particularly important for developing skills and capabilities that influence life outcomes. Evidence from several independent child welfare programmes in the United States – such as the Perry programme – emphasises that educational outcomes of disadvantaged children improve when they are exposed to welfare interventions that aim to create an enabling environment at younger ages. An 'enabling environment' typically means the presence of both parents, adequate nutrition, material and time investments by parents in children, non-exposure to violence, and non-violent parental discipline. Stimulating social interactions, which play a vital role in a child's 'informal education' and help foster high aspirations, are also crucial. Parents play a central role, as they affect their children through genetic transfers and early development, influencing children's cognitive abilities and non-cognitive skills such as motivation, self-control and self-confidence. These abilities and skills are, in turn, associated with better labour market outcomes in adulthood.

Connectedness with the broader society also influences an individual's development. A strong social network fosters more opportunities for labour market access, sharing of certain duties, information diffusion and assimilation, and protection against economic shocks such as loss of resources. For this reason, marginalisation from society acts as a form of poverty. It may result in an exclusion trap, where an individual or group of households find themselves excluded from various activities considered 'normal' in broader society, such as having access to decent sanitation or participation in the formal labour market. Social exclusion is a dynamic process, meaning that exclusion from any

set of activities will most likely result in future exclusion from a larger set (non-participation in the labour market precludes, for example, engagement in leisure activities that are considered normal, but require financial resources). The immeasurable value of early intervention in children's welfare, and the possibility of them being excluded from social processes, make it imperative to create an inclusive environment for them at an early stage.

Single and financially constrained parents are at risk of social exclusion as they often cannot invest the time and money required to build social relations. Social exclusion may also result from fear of violence and maltreatment. Children in poor communities are often exposed to community violence, which may cause problems such as post-traumatic stress disorder, anxiety, depression, dissociation and substance abuse, all of which may be carried into adulthood. In addition, victims of violence often display reduced cognitive capacity. Maltreatment in childhood thus limits children's life chances, harms their social, emotional and cognitive development, and reduces their eventual earning prospects.

1.5 GEOGRAPHY

Poverty is often geographically concentrated. Regional variations in welfare within countries have been explained by factors such as road networks, private investment and provision of public services – areas characterised by low private and public investment are more likely to be poor. Migration can reduce poverty for some, but can also contribute to regional poverty traps, as regions become poorer when the more productive members leave. Some of these factors are also applicable to urban areas and neighbourhoods. Indeed, the 'neighbourhood effect' involves the interaction of a variety of poverty trap mechanisms. Crucially, behavioural choices of individuals may feed back into their neighbourhood and steer the area in a specific direction. A part of this process is the 'role model effect', where children imitate the behaviour of older community members, thereby sustaining behavioural patterns such as failure to complete high school, participation in crime, and substance abuse (Durlauf, 2003). The neighbourhood effect is also linked to the social network mechanism, as members of a poor neighbourhood are less likely to have social ties with members of better-off neighbourhoods. This inhibits information flows and interactions between poor and non-poor households.

The complexity of poverty traps

The mechanisms discussed above can operate in combination, raising mutually reinforcing barriers to an escape from poverty. For children in poverty, the interaction of all these disabling circumstances – inadequate healthcare and nutrition reducing their capacity to engage with the world; poor education generating a skills deficit; an unstimulating home environment limiting socio-emotional and cognitive development; social and physical exclusion from the activities of wealthier peers curtailing their aspirations and hopefulness; and low levels of wealth and assets impeding economic improvement in their circumstances – ensures that they have little chance of creating a more prosperous future.

2. Limited life chances and social exclusion among children in South Africa

The poverty trap literature is particularly relevant to post 1994 South Africa, where some of the racial and spatial dimensions of deprivation, entrenched by apartheid, continue to hold twenty years into democracy. Frustration

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at the slow pace of change has in recent years found expression in violent protests by communities dissatisfied with the lack of basic amenities. Together with high unemployment, especially among the youth, underinvestment in former non-white regions and neighbourhoods, and the low quality of education, this means that many South Africans do not have the same opportunities as the more privileged.

2.1 CHILD POVERTY AND POVERTY TRAPS IN SOUTH AFRICA

With the advent of democracy, South African officials urgently needed to understand the scale and depth of the country's poverty levels. Although there has been some disagreement over the extent of the changes (Meth, 2006), a strong body of evidence shows unambiguously that poverty levels have declined since 2000. In addition to favourable macroeconomic conditions that have boosted labour markets, much of the change has been attributed to the expansion of government social transfers, especially the Child Support Grant. But these transfers can only do so much – alternatives that can further reduce poverty without increasing pressure on the budget are required. To develop such interventions requires a thorough understanding of what keeps people poor in South Africa.

Four noteworthy studies of poverty in South Africa in the last decade have found rates ranging between 18% and 38%. Roberts (2001) classified 23% of households as chronically poor between 1993 and 1998 according to a poverty line of R237 per month (in constant 1993 rands). Carter and May (2001), using the same poverty line and data as Roberts (2001), found that 92% of chronically poor households in Kwazulu-Natal were stuck in a poverty trap and that 38% of all households were potentially trapped in poverty. Aliber (2003) estimated that in 2003 between 18 and 24% of households were chronically poor. Roberts (2001) and Aliber (2003) also found that, compared with non-poor or only temporarily poor households, chronically poor households were more likely to be rural, have lower educational attainment, be headed by a woman, contain disabled individuals, and contain more children.

Child poverty has attracted increased attention from officials and researchers in South Africa, as evidenced by, for instance, the promulgation of the Children's Act and the creation of child centred research institutions. The Children's Institute's most recent annual publication – 'The Child Gauge' – reports that 11 million South African children, or 65%, were deemed poor in 2010, a considerable improvement on the 2003 figure of 73%. Unsurprisingly, these rates vary widely by race and province, with the Western Cape having the lowest incidence of child poverty (31%) and Limpopo the highest (77%).

Poverty has also been found to be more severe among younger children. By decomposing child poverty into three age cohorts, Streak, Yu and Van der Berg (2009) found that poverty was highest in the youngest cohort (in this case ages 0–4). Leibbrandt et al. (2010) confirmed this finding (in their case for ages 0–10) and also noted that the percentage of poor children did not change significantly between 1993 and 2008, where it stood at 67%. They found that in 2010 approximately 48% of South Africa's children (9 million) were living in households with incomes below the poverty line, that child poverty rates were highest in the younger cohorts, that there was a stark difference between child poverty rates for different races, and that children living in the Eastern Cape, Limpopo or KwaZulu-Natal were far more likely to be poor than those living in the Western Cape or Gauteng.

2.2 A MULTIDIMENSIONAL APPROACH TO MEASURING SOUTH AFRICAN CHILD POVERTY

Although money-metric measures of child poverty are widely used to analyse child welfare, they have limited ability to take into account the general wellbeing of children. These measures can be supplemented with a multidimensional poverty index (MPI), which takes into account not just incomes but also other aspects of wellbeing, including non-material aspects such as hopefulness, and so can provide a more comprehensive measure of child deprivation. The MPI can also indicate the intensity of poverty.

The three MPIs derived in this report show that child poverty decreased slightly between 2008 and 2012. Using different weighting schemes and indices, the most important indicators of deprivation are identified. Indices one and two (which exclude labour market access and life satisfaction indicators) show that fewer than 6% of South Africa's children are severely poor in that they are deprived in more than half of the indicators included in the index. The biggest cause of deprivation for these children is lack of access to basic amenities such as sanitation, electricity and water. The third index (which includes indicators for labour market access, quality of education and life satisfaction) finds a far larger share of the country's children to be severely poor, approximately 23%. This index highlights access to good schooling and, for school leavers, access to the labour market, as areas where children are most deprived. A geographic breakdown of poverty reveals that rural MPI poverty is much higher than urban poverty, and that the provinces whose children have the highest levels of money-metric poverty also have the highest incidence of MPI poverty. Poor health, low attainment and quality of education, unfavourable location, lack of hope and lack of subjective wellbeing are all found to be important contributors to the degree of overall deprivation.

2.2.1 Health and nutrition

Two early childhood threats, inadequate nutrition and exposure to disease, can have severe consequences for later life.

HIV, which has a high incidence in South Africa, is a particularly strong predictor of poor life outcomes. It is most likely to affect households with low asset levels and low educational attainment (Ardington et al., 2012). HIV affects children directly, through mother to child transmission, and indirectly, through the incapacity and eventual death of adult household members who develop AIDS. Children who are born with HIV begin their lives at a great disadvantage – more than 50% of children under five who die in hospitals are infected with the virus. Reducing the rate of new infections and limiting mother to child transmission are clear policy imperatives. However, the effect on children does not end here: the inability of mothers to engage socially with their children because of HIV and AIDS induced morbidity can impede their children's socio-emotional development. Furthermore, HIV and AIDS have been associated with 'negative parenting', since infected parents often shift household duties and other responsibilities onto their children and also transfer onto them the psychological burden that accompanies terminal illness. AIDS-affected or orphaned children are furthermore highly likely to suffer social exclusion within their communities due to the stigma associated with the disease.

Malnutrition is a prevalent threat to child health and is among the top five causes of child mortality in South Africa (CoMMiC, 2012). Children who are malnourished before age two may be irreversibly damaged both physically

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and cognitively. Poverty induced undernourishment early in life is also associated with a higher risk of developing cardiovascular disease. On the positive side, there is evidence that grants have improved children's health by making better nutrition more accessible (Duflo, 2000). Taking a broader view, Faber and Wenhold (2007) argue that more focus should be placed on eradicating micronutrient deficiency, which is pervasive among South African children and often overlooked as a cause of malnutrition.

Four datasets (SANHANES2012, NIDS2008, DHS2003 and PSLSD1993) are available for analysing four facets of malnutrition (stunting, wasting, being underweight or overweight). The findings from these datasets vary considerably, especially when the racial and geographic dimensions of malnutrition are taken into account. This affects the reliability of the estimates and the trends over time. Nevertheless, several trends can be identified. Firstly, stunting has declined considerably since 1993 (when it was 30.3%) although the percentage remains high (26.4% in 2012), and it is far more prevalent in poorer households. The poorer provinces, unsurprisingly, have more stunting, but the datasets differ as to which are the most affected provinces: for the NIDS2008 data these are Limpopo (22%) and the North West (22%), while the Children's Institute found that it is the Free State (28%). A more convincing and consistent finding across all the datasets is that rural children are more affected by stunting than urban children. Secondly, the percentage of underweight children in South Africa declined from 1993 (20.0%) through 2003 (15.7%) and 2008 (11.2%) to 2012 (5.9%). Lastly, a similar trend exists for wasting, with the percentage of affected children declining from 1993 (13.6%) through 2003 (8.3%) and 2008 (7.4%) to 2012 (2.7%). The same broad geographic and racial patterns apply to underweight children and children suffering from wasting: poor provinces, rural areas and the black and coloured populations are more affected. The trend in the prevalence of overweight children is contrary to the other three, showing increases from 1993 (17.5%) through 2008 (18.7%) to 2012 (20.5%).

In addition to HIV and AIDS and malnutrition, the inadequacy of the public healthcare system and the associated generally low quality of health services in South Africa has been extensively studied. A long list of problems has been identified: staff and equipment shortages in clinics, poor health personnel performance and competence, unprofessional booking procedures, neglect of routine checks or screening, and cases where individuals were turned away and asked to return later. One survey found that some of the poorest individuals (roughly the poorest fifth) in South Africa are prepared to pay as much as R150 to see a private healthcare practitioner. This fact may be interpreted as a strong, and disturbing, sign of the poor quality of the public healthcare system.

A number of factors influence access to healthcare. As may be expected, medical aid membership is associated with higher income levels (72% of the highest income decile, compared with 0.5% of the poorest decile). Medical aid coverage is concentrated in urban areas, and only 10% of black households with children are covered, compared to 70% of white households. There is a stark contrast between medical aid coverage in male headed households with children, of which 18.8% are covered, and female headed households, of which only 6.2% are covered. Poor households may be unable to escape poverty when required to pay health costs. There is also evidence that health costs can affect income, as households can slip into poverty when faced with high health associated costs (McIntyre et al., 2006).

Numerous policies have been put in place to address the immediate causes of malnutrition, such as inadequate dietary intake or exposure to disease, following the government's commitment to target pregnant woman, infants and young children for nutritional intervention. The integrated nutrition programme (INP), which covers a range of

nutritional interventions, is one example. Several interventions related to nutrient enhancement have also been undertaken, including the fortification of all wheat flour and maize meal products with eight different vitamins and minerals since 2003, the mandatory iodisation of salt, and the provision of vitamin A supplementation. Nutritional supplements, particularly iron, are also being provided to pregnant women.

Maternal health and nutrition play an important role in the health and development of children. Undernourishment among pregnant women has consequences such as underweight or premature babies, with an increased likelihood of stillbirths, stunting of the child by age two, mortality among children under the age of five, and HIV transmission between mother and baby. A positive recent trend is that the proportion of young women (aged 15 to 29) who are underweight declined substantially between 2008 and 2012 in comparison to the 1998 figure.

Breastfeeding, and particularly exclusive breastfeeding, is often promoted in developing countries as it reduces exposure to contaminated food and decreases mortality among newborns and the incidence of infectious diseases. High HIV rates in South Africa imply a trade-off between the benefits of breastfeeding and the possibility of HIV transmission from mother to infant. However, there is evidence that babies of mothers who receive anti-retroviral treatment and breastfeed exclusively are at a very low risk of HIV transmission. Therefore, exclusive breastfeeding for the first six months is often promoted. In practice, exclusive breastfeeding rates are very low in South Africa compared to other developing countries. This is partly attributable to a lack of childcare facilities in the workplace, a lack of breast pumps and refrigeration methods and limited knowledge of the benefits of breastfeeding. Exclusive breastfeeding may also not take into account the daily routines of mothers from lower socioeconomic groups. The INP policies aimed at nutrient supplementation, such as vitamin A and iron supplements, are especially advantageous for the growth of children who have not been breastfed.

The Strategic Plan for healthy nutrition for mothers, newborn and infants has identified a number of priority interventions, such as the promotion of early and exclusive breastfeeding, supportive visits by community health care workers within a week after birth, and the introduction of complementary feeding practices at the correct time for infants. Women are also secondary beneficiaries of the Infant and Young Child Feeding Policy, which promotes skin-to-skin contact between mother and infant and immediate breastfeeding. Strategies to deal with severe malnutrition have contributed to a reduction in infant mortality. There are also policies which focus specifically on young children. For example, Early Childhood Development programmes have led to the construction of facilities which provide a useful institutional platform for nutritional intervention, but unequal access to these facilities has limited its success.

2.2.2 Education

The unequal provision of education under apartheid has persisted beyond the transition to democracy and continues to contribute to inequalities in the school system and schooling outcomes, despite the new government's considerable channelling of resources into education. Poor quality education is unquestionably a poverty trap mechanism. Socioeconomic position at birth still largely determines the quality of education a child will receive and his or her subsequent prospects in the labour market. Differences in outcomes are vast: the likelihood of a child from a poor socioeconomic background reaching matric by age 19 or 20 is 17%, compared to 88% for a child from a more privileged household.

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During apartheid, schools were segregated by race, with black schools receiving less funding and support. To rectify this imbalance, the post-apartheid government has increased education funding with every budget. It has been estimated that the poorest 40% of households receive 49% of education spending, mainly because poorer households contain more children. However, there remains a large quality divide between the former white and black parts of the schooling system. Former black schools are less likely to have access to electricity, running water or working toilets. They have more children per teacher on average than former white schools (34 as opposed to 24). They are also less efficient in their use of their available resources: the number of teachers who cover the prescribed subjects is much lower than is the case for former white schools (26% compared to 75%).

Several other factors are also responsible for differences in outcomes: teachers' content and pedagogical knowledge, the availability of textbooks, teacher discipline and school management. Outside the school system, the mother's level of educational attainment has consistently been found to determine children's outcomes. In addition, higher educational attainment by a child's mother increases the likelihood that the child will enter tertiary education. Apart from these indirect effects, the mother's education has a direct effect on outcomes via household income. Interestingly, it has been found that the younger the adults in the household, the higher the likelihood of higher educational attainment by the children in the household. Then there are several factors which prohibit children from a poor socioeconomic background from gaining access to good schools: poor children often live further away from good schools, good schools often charge higher fees, these children often receive less support from their parents and they are less exposed to English. Teen pregnancy is associated with lower educational attainment as well. But Ardington et al. (2011) argue that pregnancy is not necessarily a signal of inherent poor capacity and that childbearing teens should be encouraged to continue their education.

The inferior outcomes in the South African schooling system may be gauged not only by comparing former non-white schools to their privileged counterparts but also by international comparison. Former white schools have been found to perform at the international mean while former black schools performed at less than half that level (Reddy, 2006). South African children achieved the lowest scores in two separate international tests, as reported by Van der Berg et al. (2011). South African schools have higher levels of repeated grades than their international counterparts, but repetition rates vary by race: only 27% of black children in a recent sample advanced three grades over a three year period, while the figure was 34% for coloured children and 84% for white children (Lam et al, 2011). South Africa's poor international performance could be explained, in part, by the fact that income levels are lower than in more developed countries. However, South Africa also fares badly in comparison with other African countries that are as poor or poorer.

2.2.3 Social and family effects

Social and family structures are fundamental in the creation and perpetuation of poverty. Three ways in which they affect children are the composition of the household, household fragmentation, and social exclusion. The composition of a household determines a child's early environment and opportunities and affects financial and non-financial investment in the child. Larger households are less likely to be socially mobile because they generally have more children and therefore fewer resources per child.

Household fragmentation due to either absent parents or orphaning has a negative effect on a child's development. Orphans are often part of households that are less likely to have access to electricity and sanitation, and where expenditure per household member is lower, which translates into lower educational outcomes. Female headed households are also likely to have lower incomes and consequently have fewer resources to invest in child development. The mechanisms through which these factors affect children include psychological trauma (for orphans), lower investment in child development activities and loss of parental involvement. The statistics for South Africa are demoralising: only one third of children live with both biological parents, and 24% are deprived of both. There are racial and provincial patterns: 28% of black children live with both biological parents compared to 81% of white children, while for the two richest provinces (the Western Cape and Gauteng) the figure is more than 50% compared to a national average of 33%, and 22% for the Eastern Cape. These figures are suggestive of, among other things, the effect of the migrant labour system and influx control on household composition. This system created a spatial mismatch between job seekers and employment opportunities and meant that aspirant workers were forced to engage in circular or temporary migration. These patterns have continued, with an increase in migration even being reported for the period 1993 to 2002, exemplifying the difficulty of changing structurally entrenched societal patterns.

Social exclusion was discussed briefly in Section 1. This phenomenon includes deprivation of economic activity and social relationships. Under apartheid, many South African citizens were actively excluded according to race – formally restricted in their access to public services, private enterprise and the labour market and limited in their spatial mobility. Despite the post-apartheid government's attempts to ensure equality for all, patterns of exclusion have persisted, as exemplified by the unequal distribution of income. A major source of exclusion is inequality of access to certain services, including access to safe drinking water on site and decent sanitation, exposure to early childhood development services, health insurance and health services, quality education and communication and media resources. Once again, children's degree of access to these services and opportunities varies significantly by socioeconomic background. A feeling of dissatisfaction with life appears to emerge at a relatively young age among deprived children and in a recent survey many deprived children said they were 'hopeful about the future' only some of the time, rarely, or never.

Additional sources of social exclusion in South Africa are the lack of opportunity to engage in social activities and fear of personal crime and violence. In South Africa, inadequate protection services mean that children may be exposed to or become victims of violent or sexual crimes. Exposure to violence in their communities may cause high levels of psychological distress. Because children who witness violence are more likely to engage in antisocial behaviour during adolescence and adulthood, community violence has negative feedback effects which perpetuate trauma and induce violent behaviour. As a result, neighbourhoods with high rates of violent behaviour can impede child development.

Violence and crime are also widely known to be associated with alcohol abuse. But the negative effects of alcohol already begin in utero. One pertinent example is the case of farm workers in the Western Cape, who were historically compensated (in part) with alcohol. This practice is now outlawed, but it generated patterns of alcohol abuse which remain prevalent. Consequently, Western Cape farming communities are among the most severely affected by foetal alcohol syndrome (FAS) in the world. FAS has adverse physical, cognitive and behavioural effects and is usually associated with lifelong learning disability. Fortunately, interventions have been shown to ameliorate

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to some degree the learning deficit induced by the disorder. The prevalence of FAS, notwithstanding the historical context, may also be a reflection of poor parenting practices.

Child neglect and parental irresponsibility manifest in several types of damage to children in South Africa. The number of child maltreatment incidents in South Africa is high in comparison with international figures, and a recent HSRC (Human Sciences Research Council) survey found that officials and academics believe that the public in general do not appreciate the seriousness of the problem (Makoae, Roberts and Ward, 2012). Poverty is itself known to be a cause of harmful behaviour perpetrated by adults against children, as the frustration of being unable to improve one's living standards finds an abusive (emotional or physical) outlet – often directed at the closest and easiest target: children. Traditional gender roles and customs relating to punishment and attitudes to family 'meddling' may accommodate the adverse behaviour. Negative parenting practices are also apparent in instances of divorce or partnership dissolution. Attitudes to child maintenance have been found to be generally negative, with dissolution of a partnership often resulting in one of the parents (typically the father) cutting off support to the other parent and strained relationships between parents and children (Khunou, 2012). Data for a sample of 1557 Johannesburg children show that 23.6% of those surveyed received no financial support from their fathers during their first five years.

2.2.4 Geographic location

A spatial pattern of poverty, as a result of past segregation policies, is glaringly evident in South Africa. Child poverty is heavily concentrated in particular regions and municipalities. In particular, the provinces which contain the former homelands and are largely rural have the highest levels of poverty. Data from the 2007 Community Survey indicates that 64.5% of children in Limpopo lived in poor households while the figure for the Eastern Cape was 62.6%. The lowest figures were for Gauteng (33.4%) and the Western Cape (25.3%) – provinces that inherited no part of the former homelands and contain large urban centres. The province with the highest percentage of poor children is the most populous – KwaZulu-Natal – followed by the Eastern Cape.

The large differences in labour market and other opportunities between different regions are reflected in migration patterns we can observe if we compare the 2001 Census and the 2007 Community Survey data. The Eastern Cape is a dominant 'sending' province and the Western Cape and Gauteng are 'receiving' provinces. These migration patterns have potentially negative implications for the sending regions, particularly if those who choose to leave are also the most productive members of that community. Another problem is that adult household members, fathers in particular, often engage in migrant labour, leaving behind children who then must contend with their adverse circumstances without the support of a father.

3. Analysing social mobility and poverty traps

This section presents a deeper analysis of the constraints faced by children in South Africa and the extent to which these affect their futures. It analyses the characteristics linked with chronic poverty and distinguishes the households most at risk of being caught in a poverty trap from those that are merely temporarily or 'transitorily' poor. It identifies the characteristics most associated with chronic or 'structural' poverty and highlights opportunities for policy intervention. Strong themes emphasised here are the spatial patterns of poverty and the importance of education

as a mechanism for saving children from poverty traps. It will be difficult to break free of the inertia resulting from the historical roots of the problems. Section 3.2 provides further analysis of the implications of the highly unequal geographic patterns of poverty before presenting a closer look at the depth of the learning inadequacy in the South African education system.

3.1 LIFE CHANCES AND SOCIAL MOBILITY

To examine the causes of persistent child poverty and discover which children are falling behind and how they are affected by poverty trends, a framework developed by Carter and May (2001), that categorises households as 'structurally' poor and 'transitorily' poor, is employed here. Using data from the NIDS survey, and restricting the sample to households that contained children younger than 18 in 2012, new estimates are derived showing the extent of structural poverty in South Africa.

Using a R575 per capita monthly household income as the poverty line, it is found that more than 62% of children lived in poor households in 2008, a percentage which decreased to 51% in 2012. Per capita household income was used in this part of the research as there are reasons to believe that expenditure might have been underreported in the NIDS dataset. To decrease the effect of measurement error, households were only classified as moving out of poverty if the per capita household income crossed the poverty line and the household's real income increase between the two periods exceeded 10%. Altogether 41% of children remained poor for the period 2008 to 2012 and were therefore labelled as chronically poor, while 26.5% were in a non-poor household for this period. Children who made the transition out of poverty (poor in 2008 and non-poor in 2012) constituted 20.5% of the sample, and children who fell behind 11.7%.

To determine which children were structurally poor and which were not, a money-metric poverty line was first defined (to classify their current state in each year as poor or non-poor) and a basic 'asset threshold' derived that is consistent with the poverty line. This asset threshold, or asset poverty line, is the combination of assets that yield household income (referred to as 'productive assets' in the full report) which is exactly equal to the money-metric poverty line for that period. By combining the information on a household relative to these two poverty lines (money-metric and asset), each household can be assigned one of four statuses in any period. A stochastically non-poor household lies above the money-metric poverty line but below the asset poverty line in a period: therefore, such a household's income is high for that period, but given their assets they are expected to be in poverty. Conversely, a stochastically poor household is observed to be poor yet it possesses the productive means for sustaining a higher level of wellbeing, and is expected to be non-poor in the future. A structurally non-poor household is classified as non-poor by both poverty lines, while a structurally poor household is classified as poor by both poverty lines. Households may also be classified as dynamically poor, if their long term income (conditional on their current assets and optimal accumulation behaviour) is less than the discounted present value of future money-metric poverty lines. These households are stuck in a poverty trap: their asset levels are too low to enable sufficient asset accumulation to be upwardly mobile. An 80% confidence level was used around each predicted poverty index to account for measurement error. Using this method, 39% of the children in the sample were found to be structurally poor during the period 2008 to 2012 and were therefore in a poverty trap, while 25% were structurally non-poor. Of the remaining sample, 15% of the children were structurally upwardly mobile and 6% of them were structurally downwardly mobile.

As expected, the initial conditions in the households of children diverged depending on whether the household was in structural or stochastic poverty. The households of children who were in structural poverty were significantly poorer in terms of asset ownership, income and expenditures. These children lived in more crowded conditions and in younger households with more children and pension-age individuals. Their household members are less educated and less likely to be employed and the mothers of these children had less education on average. Consequently, it is not surprising that such children were more likely to be stunted, to report being hungry and to have repeated a grade. All these factors affected the household's average satisfaction with life, which was significantly lower than that of households that were stochastically poor. Children in structurally poor households were also less likely to move out of poverty. This fact, together with the fact that structurally poor households experienced an increase in pension-age members during the period studied, indicates that a particular kind of household structure may be correlated with the poverty status of a household.

Exploring the possible causes of poverty dynamics, it was found (in line with much other research) that the returns to education are larger for each additional year attained (convex). In fact, there only appear to be positive returns after attaining a threshold level of seven years of education. Mother's education was important in determining the likelihood that a child will attain seven years of education, independent of the household's income. The importance of education as a driver of structural poverty has also been observed in other data sources. The results also show that the asset index of the last period is highly significantly correlated with positive income change.

3.2 GEOGRAPHY AND POVERTY

As has been mentioned above, past policies of racial segregation and skewed resource allocation created striking racial and locational differences in poverty. This section considers the various factors that predispose households to social exclusion, how these differ between the provinces, how these differences influence migration patterns and the effect of these patterns on the demographic profile of provinces.

3.2.1 Measures of deprivation by region

Many studies attribute increases in poverty over time to the changing family structure in the same period, with particular emphasis being placed on the high poverty risk associated with female-headed households. In 2007, just over 50% of children lived in female-headed households and the poorer provinces have the highest rates of such households. The regional distribution of employed household heads is also skewed towards the more affluent provinces.

Employment opportunities are largely determined by the strength of the local labour market and by individual characteristics such as education and experience. Poor regions are not only human capital deficient because the underlying education production processes are weak, but also because returns to education differ dramatically by region. These differences encourage younger, more educated adults to migrate to more affluent regions. Migration appears to have a positive effect on household wealth: an analysis of a Kwazulu-Natal panel survey yielded evidence that households that have migrated tended to improve their welfare status.

From a policy perspective, attempting to restrict migration would be tantamount to condoning current race-biased opportunity differences across provinces. One alternative would be to foster opportunities outside of provincial

capitals and metropolitan areas, but attempts to influence geographic patterns of growth have not fared well internationally and are even more difficult where aggregate growth is weak. A more pragmatic approach may therefore be to better accommodate rural-urban migrants in urban areas so as to maximise the individual gains that can be derived from migration.

3.2.2 Health and education profile by province

There are marked provincial differences in children's exposure to the risk factors associated with poor health. Firstly, access to decent sanitation is unequal. Unreliable or delayed sewage disposal, combined with poor access to clean water presents substantial risks to children's health. Piped water within 200 metres of a residence reduces susceptibility to waterborne disease and saves households travel time. While children in affluent provinces with large urban centres have near universal access to nearby piped water, more than 40% of children in poorer and mainly rural provinces do not. Secondly, child health can be affected by indoor air pollution. The use of biofuels for cooking and heating is particularly toxic in the small, badly ventilated homes of the poor. Children's exposure to toxins often leads to acute and sometimes chronic respiratory illness such as pneumonia and can increase their likelihood of developing lower respiratory tract diseases as much as fourfold. It is estimated that 14% of deaths among children under five in South Africa can be attributed to indoor air pollution (Barnes et al., 2009).

Access to education differs only slightly between rich and poor households in South Africa. Just over 95% of children living in rich households were enrolled in 2001 compared to slightly fewer than 91% of children in poor households. However, this does not mean equal access to education of uniform quality. There is some evidence that geography does matter for education quality: Gustafsson and Taylor (2013) examined the effect of 2005 provincial boundary changes on mathematics results in 158 schools in South Africa between 2005 and 2012. They found that schools that were switched from North West to Gauteng improved their results dramatically. The authors attribute the improvements to a different administrative dispensation making these schools' use of budgets, time and human resources more efficient.

3.2.3 Policy responses to the geographic concentration of poverty

The geographical concentration of poverty and poor access to services is inextricably linked to the centrally imposed human location and relocation policies under pre-1994 governments. Under apartheid black people not born in urban residential areas were denied the right to settle there permanently, entrenching the legacy of migrant worker arrangements where workers in towns were temporary migrants with families in the homelands. The geographical segregation policies were particularly gender-biased against black women, who were refused urban residential permits unless they were married to an employed person or employed themselves. The homelands endured severe underinvestment in economic infrastructure, which coupled with poor quality of education and poor access to market institutions, condemned many of the inhabitants of these areas to poverty. Although migration may provide some families a means of escaping poverty, it contributes to the persistence of poverty-creating factors in the sending regions.

It is with this context in mind that the post-1994 government's policies have been geared towards the development of South Africa's marginalised rural areas. Between 1994 and 2009, government focused on four key areas to be

addressed to develop rural areas: Redesigning local government in the former homelands and commercial farming regions, facilitating resource shifts to rural areas, land reform and supporting the development of emerging black farmers, and protecting farm worker rights. New municipalities were established to oversee areas not previously under local government, but they faced serious backlogs in municipal infrastructure and service delivery, whilst attracting and retaining local government skills remained a serious problem. Despite resource shifts to poorer municipalities, differentials in service delivery between municipalities in more rural and more urban provinces are still quite large and persistent. Many individuals in these regions remain dependent on government assistance. Land reform measures were not as successful as anticipated and the benefits to small-scale farmers in the former homelands have been negligible. The research findings highlight the plight of rural small-scale farming in the former homelands and perhaps serve as an indication that escaping poverty through education is the strategy that households and government should pursue most vigorously.

3.3 INSURMOUNTABLE LEARNING DEFICITS

It is possible to construct learning trajectories of South African children by using objective measures of achievement at multiple points in the education system. Grade 3 level performance can be determined from the Grade 3 Systemic Evaluation mathematics test. The average numeracy score for each child was determined using only Grade 3 level questions: this score was then used to calculate the percentage of children performing at the grade appropriate level. Children were classified as performing at the grade appropriate level if they achieved an average score of 50% or higher. The distribution of mean Grade 3 performance was then disaggregated by socioeconomic quintile (one of five groups into which a population is divided) into the wealthiest 20% (Quintile 5) and poorest 80% (Quintiles 1 to 4). The majority of the poorest 80% were one and a half standard deviations below the 50% threshold. Even in the richest quintile, who performed substantially better, only slightly more than half (51%) performed at the grade appropriate level. Given the strong association between socioeconomic status and geographic location, it is not surprising that these inequalities also extend to differences in provincial performance. At the country level, less than one in five (16%) of Grade 3 children performed at the Grade 3 level. It is therefore evident that large learning deficits already exist by Grade 3. Unfortunately, the origins of these learning deficits are less clear, and without longitudinal data it is not possible to investigate them. It is possible to address a related question, however, and that is whether learning deficits grow or shrink as children progress through the school system.

To gain more insight into learning trajectories, the performance of the richest 20% of the children was assumed to be the 'grade-appropriate level' and their progress to reflect the 'on-track' trajectory required to reach matric performing at a Grade 12 level. The difference between this 'benchmark trajectory' and those of other children by level of income was then calculated and converted into grade-level equivalents. It should be noted that the 'benchmark trajectory' is a lower bound estimate of curriculum mastery, as some children from wealthier homes will not be performing at this level. Two trajectories were drawn: one for the richest 20% and one for the poorest 80%, as there is reason to believe the performance of the poorest four quintiles is very similar.

The trajectory lines show that there already exist large differences in performance (approximately three grade levels) by Grade 3 and that by the time children enter Grade 9 this performance gap has grown to about four grade levels. The linear trend in performance between these two groups suggests that if the same number of poorer children in

Grade 9 continued schooling until matric, they would be functioning at approximately 4.5 grade levels lower than their more affluent counterparts. However, a substantial number of children drop out between grades 9 and 12.

Previous research has shown that the low quality of education in South Africa acts as a poverty trap because weak educational outcomes lead to poor labour market prospects and hereditary poverty (Van der Berg et al., 2011). The findings discussed in this section suggest that the root cause of these weak educational outcomes is that children are acquiring debilitating learning deficits early on in their schooling careers and that these remain with them and grow over time. Because they do not master elementary numeracy and literacy skills in the foundation and intermediate phases, these children are precluded from further learning and from engaging fully with the grade-appropriate curriculum.

4 Policy experiments

4.1 THE CASE FOR INTERVENTIONS TO ALLEVIATE CHILD POVERTY

The case for policy interventions to alleviate child poverty can be made on equity and efficiency grounds. Cunha et al. (2005) argue that the returns to human capital investment or remedial intervention are greatest when they are undertaken at the earliest stages possible. Policies aimed at keeping children out of poverty traps must therefore aim to intervene at the early stages of the lifecycle. This literature is not new and officials in many developed countries have long heeded its advice. Experiments such as the Perry programme in the United States in the 1960s have demonstrated clearly that early intervention in children from disadvantaged backgrounds yields long term gains for beneficiaries. More recently, several developing economies have implemented large scale anti-poverty programmes that specifically target outcomes for children. There is now a large corpus of tried interventions and accompanying evaluations that officials and researchers can draw on to determine the viability and effectiveness of a given intervention. Some of these results are presented here, after which a simulation exercise is undertaken to determine the potential effects of the expansion of transfers to poor households and improvements in the quality of education.

4.2 POLICY INTERVENTIONS FOR IMPROVED WELLBEING

Anti-poverty interventions have been implemented by supplying beneficiaries with conditional cash transfers (CCTs), unconditional cash transfers (UCTs) or in-kind transfers (IKTs). Among the largest of these is the PROGRESA/Oportunidades (hereafter PROGRESA) programme introduced in Mexico in 1998. As part of the programme, payments of around 22% of the eligible group's average household consumption expenditure were made to mothers in each beneficiary household every second month, conditional on participation in a set of activities related to child development. For households with children aged 0 to 23 months, the conditions included immunisation and periodic visits to clinics where nutrition is monitored, nutrient-dense supplementation is provided and parents are educated on ensuring health and good nutrition for their children. In the case of children aged 2 to 5, all but the immunisation conditions applied. Pregnant women were also required to undergo prenatal care from health clinics. All adults in beneficiary households were furthermore required to participate in annual information sessions during which instruction relating to health, hygiene and nutrition was provided by trained medical personnel (Gertler, 2004).

An impact evaluation of the programme revealed that children benefiting from PROGRESA were, on average, between 22.3% and 25.3% less likely to have been reported as being sick in the last four weeks (Gertler, 2004). The study also found that children in the treatment group were on average one centimetre taller than those in the control group. Treatment children were also 25.5% less likely to be anaemic than children in the control group. PROGRESA has further been found to be effective in lowering the poverty head count, reducing the incidence of child labour and improving the quality of caloric intake in beneficiary households (measured by the diversity in food consumption) (Fiszbein and Schady, 2009).

Another CCT, *Familias en Accion* (FA), instituted in Colombia in the year 2000 and largely modelled on PROGRESA, also showed positive effects. Consumption, for instance, increased by 19.5 percentage points in the treatment group relative to the control group. Consumption of nutrient-dense (such as protein rich) foods was found to be considerably higher among enrolled households. The programme was also found to be effective in incentivising health clinic visits. The proportion of enrolled families with children under 4 who visited health care centres at a specified frequency was more than double that of control households. Together, the effects in terms of higher quantity and quality of caloric intake, as well as more visits to child care clinics, are likely to lead to improved child health outcomes in the treatment control group. A long term study of the effects estimated that children benefiting from the programme were from 4 to 8 percentage points more likely to complete high school than children in a control group (Baez and Camacho, 2011).

UCTs have also been found to have beneficial effects on child development. South Africa's Child Support Grant (CSG) is one such intervention. Agüero, Carter and Woolard (2006) estimated the CSG's effect on early life (defined as 0 to 3 years) by using a standard measure of nutritional status (height-for-age indicator scores) to compare children with different lengths of exposure to the programme. Their analysis therefore uses the fact that some children would have benefited from the CSG throughout the first three years of their lives while others, though eligible, might not have benefited because they did not receive the grant for the whole of this period. Using data from Kwazulu-Natal, they found significant improvements in nutritional status among beneficiary children who had had longer exposure to the CSG. They estimated that children exposed to the programme would be, on average, 3.5cm taller in adult life than they would be without the transfers. Furthermore, the effect would be greatest for children who first enrolled in the programme at age 12 months or younger. They also estimated that every rand spent on the CSG would yield an increase in the future earnings of beneficiary children of 1.6 to 2.3 rand due to the increase in labour market prospects (Agüero, Carter and Woolard, 2006).

Coetzee (2013) extended the preceding evaluation by considering all children enrolled in the programme and using data from a national survey (NIDS). She also found that receipt of the CSG had a positive effect on children's nutritional status, although a smaller effect than reported in the previous study. Positive results were also reported in an evaluation commissioned by the South African Department of Social Development, indicating that children benefiting from the CSG were 7.7% more likely to be undergoing growth monitoring. Positive effects on health were also found, with children who received the CSG from birth being 9 percentage points less likely to be ill than children who enrolled later (Heinreich et al., 2012).

While cash transfers have the benefit of being relatively simple to implement and, in the case of UCTs especially, carry a minimal administrative burden, they also have some disadvantages. An obvious concern is that how the cash

gets spent is at the discretion of the recipient, who may choose not to spend it on goods and services that promote child development. In-kind transfers try to mitigate this problem by directly providing specific goods or services. The Programa Nacional Wawa Wasi in Peru in 1993 was introduced with the stated objective of promoting 'actions oriented towards generating favourable conditions for the optimal development of children below the age of four, especially those at risk' (Cueto et al., 2009). Under the programme, community childcare centres were established in poor neighbourhoods and staffed with local caregivers who were vetted by local communities and trained by programme officials to provide childcare as well as various other early child development services. Positive effects of Wawa Wasi are reported by beneficiary mothers in follow-up interviews, including better hygiene practices, and the observation that beneficiary children displayed greater confidence and independence than children not exposed to the programme.

Chile's 'Know your Child' programme, or 'CASH', is an early childhood development programme that has been found to have a positive effect on later learning. What is unusual about the programme is that the publicly funded part of the interventions is largely focused on training mothers, who in turn form small preschool groups in the local community, in which publicly funded educational materials are used. A rotational approach is followed, so that virtually all mothers of the targeted children receive some training in early childhood development methods. In Chile the model was created to provide early childhood development services for sparsely populated areas where the normal model of stand-alone preschool institutions run by professional teachers was not feasible. It is possible that the model may be practical in other contexts too, for instance where the key problem is a lack of trained educators. Those involved in the programme argue that training mothers is particularly valuable as this helps to bridge the usual divide between the institution and the home, as the mothers are involved in both. A useful South African example of this 'cascade model' is the Philani Mentor Mothers Project, which has been shown to substantially reduce malnutrition within participating households (Le Roux et al., 2010, contains the results from the randomised control trial evaluation).

4.3 EARLY CHILDHOOD DEVELOPMENT STRATEGIES

The value of early childhood development (ECD) for social development and for combating poverty is large, according to the available empirical evidence. The National Development Plan proposes a few broad strategies towards achieving better early childhood development, but the policy debates in this area are still very much alive and many policies and strategies need still to be produced. This section compares Brazil's policies and practices with that of South Africa, in order to identify risks and opportunities.

South Africa has come far with its Grade R policy. The aim of this policy was that 90% of appropriately aged children should be in school-based Grade R, with special attention paid to making ECD more accessible to the poor by prioritising public funding. Access to Grade R has grown from 300 000 in 2003 to over 735 000 in 2012. There is now consensus on the need for greater focus on its quality and not simply access to Grade R.

Enrolment levels for children aged 0 to 5 in South Africa are very similar to those of Brazil, which in turn has a high level of enrolment for 0 to 2 year olds compared to the average for countries of the Organisation for Economic Cooperation and Development (OECD). The cross-country comparison suggests that the actual age at which children enter primary schooling is about right. South Africa's enrolment rates for children aged 2 and under (20%) are considerably higher than both Brazil's (9%) and Chile's (2%).

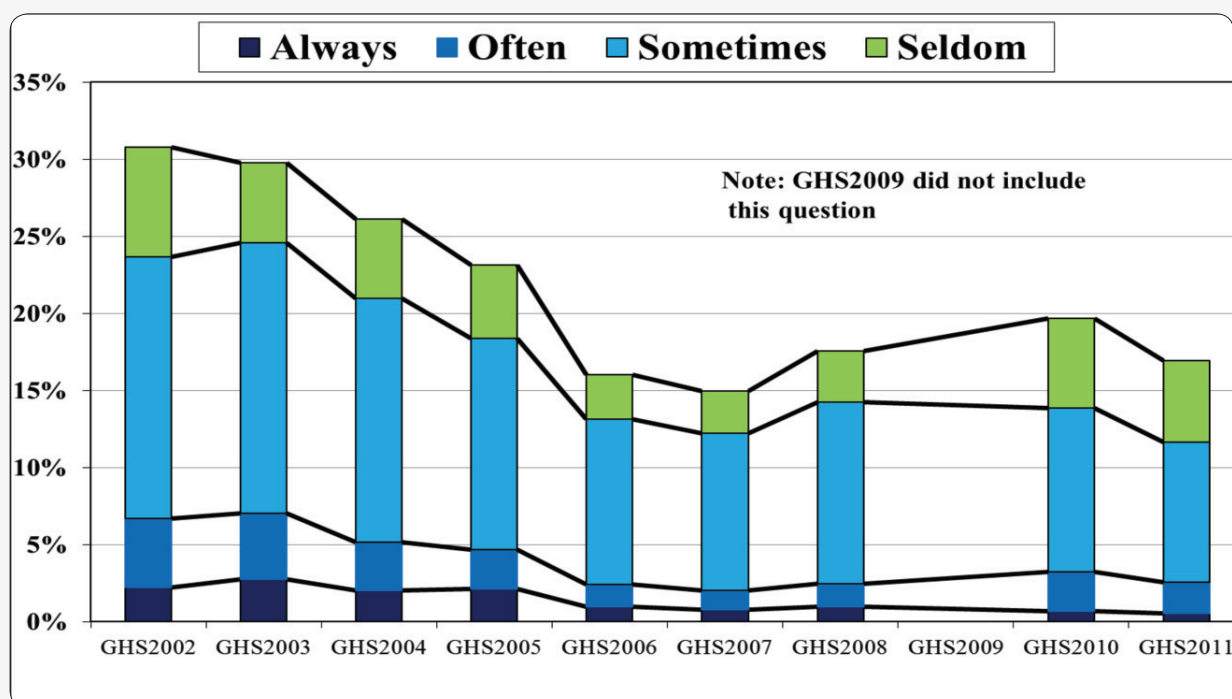
Brazil experiences resource and capacity constraints similar to South Africa. Its preschools are considerably larger than South Africa's, which raises the question of whether this country's preschools are large enough to maximise access to scarce resources, such as good teachers and information and communication technologies (ICTs). South Africa's preschools fare worse than Brazil's against several resource indicators, including access to electricity, the pupil-teacher ratio and the level of professional training of teachers. However, South Africa does better in getting children into school earlier. Although on average children enter school earlier in South Africa than in Brazil, there is far more variation in the age-of-entry in South Africa than in Brazil. For instance, while 15% of 'first series' (or 'second year') children in Brazil are of an age that lies outside the most common 18 months (1.5 years), the figure for Grade 1 in South Africa is 32%. This raises questions about whether age-of-entry practices should be more consistent across schools and ECD facilities in South Africa. The South African situation could be the result of insufficient clarity about ideal ages at various stages of the preschool cycle. In Brazil (and Chile) this is much clearer, with the Brazilian policy drawing clear distinctions between when children should be in crèches and when they should be in preschools.

4.4 SIMULATING THE EFFECT OF IMPROVING CHILD GRANTS

South Africa's Child Support Grant was the major factor in the observed decline in money-metric poverty between 2000 and approximately 2010 (Leibbrandt et al., 2010; Van der Berg et al., 2008). Simulations show that the approximately two million jobs that were created in the period up to 2008 would not have affected poverty greatly, as most of those jobs went to those first in the job queue based on their education, skills and experience, and these were mostly members of households that had already been non-poor to start with. On the other hand, the grants had an unambiguous benefit in terms of money-metric poverty: even if there had been no targeting, the marked expansion of grant income would have affected poverty dramatically. Thus, even if the R18 billion expansion of grants between 2000 and 2004 had been equally distributed to every person in the country, i.e. if it had been untargeted, this amount of about R400 per capita in 2000 rand terms would have meant that households falling within R400 per capita below the poverty line would have been moved across the line, i.e. out of poverty. Because of its large magnitude, such an increase, equally distributed, would have decreased poverty from 39% to 34% at a poverty line of R3000 per capita in 2000 rand values (Van der Berg et al., 2008). So even under this extremely conservative assumption, that there is absolutely no targeting of the grants, grants would have decreased poverty greatly. Allowing for the fact that there is in fact fairly good targeting, the grants would have had an even greater effect on poverty. That is why there appears to be unanimity among researchers that poverty declined between 2000 and the global recession starting in 2008, with the expansion of the Child Support Grant being the major factor behind this.

Figure 4.1 shows that reported hunger among children declined strongly between 2002 and 2007, though this effect was reduced after the world recession. Nevertheless, it appears that 2.4 million fewer children went hungry in 2008 than in 2002, and the most likely reason for this was the expansion of the Child Support Grant. This effect was also, at least in relative terms, largest among the poorest. However, further expansion of the grants cannot be considered a realistic long term strategy to deal with poverty, because of fiscal constraints (the money for paying the grants has to come from economic activity, which would therefore also first have to expand), and because the danger of perverse behaviour incentives becomes greater when grant values rise.

FIGURE 4.1: Reported frequency of hunger among children in the General Household Surveys, 2002 to 2011



In all grant systems there are errors of exclusion (poor people who do not benefit) and errors of inclusion (non-poor people who do benefit), as targeting can never be perfect. The means test and its application often play an important role in this regard. Also, some errors of exclusion (poor people not receiving the grants) may derive from administrative impediments (including lack of identity documents), information problems, and costs associated with distance and the time required for applying. Such problems are likely to be more prevalent among poor people, especially those socially excluded. Overcoming these problems is essential for reducing such social exclusion, both to provide additional financial resources and to better integrate some socially excluded households into the community.

Simulating the effect of various grant scenarios on poverty experiences is difficult because of two data problems. Some surveys greatly under-capture grants and are thus not useful for this purpose. The alternative data source, the General Household Survey (GHS) of 2012 that is used in the simulation exercises here, is prone to under-capture income and thus to exaggerate grant eligibility. Moreover, it is impossible in the GHS to distinguish the income of the caregiver and spouse (often the parents) of the child from those of other household members, so the whole household's income is considered, while the means test only considers the income of the caregiver and spouse.

The figure of 10.99 million grants captured in the GHS data is quite close to the 11.30 million paid out in December 2012, according to the South African Social Security Agency, SASSA (2012). A substantial number of children who appear to be eligible do not in fact receive the grant. If the data were accurate, that would be an error of exclusion

amounting to one quarter of eligible children. However, the GHS greatly under-captures incomes. Whereas the poverty headcount, at a poverty line of R636 per capita in 2012, is estimated at 39% in Income and Expenditure Survey (IES) for 2010/11, it is estimated to be 49% in the GHS, just one year later, because the GHS under-captures income. So eligibility, and thus errors of exclusion, is overestimated. On the other hand, for the same reason errors of inclusion are underestimated.

If the errors of exclusion as determined from the GHS data are nevertheless taken at face value, the cost of eliminating them by paying the 3.1 million additional grants would be R10.5 billion, i.e. a very substantial sum. (In 2012 grant values were R280 per child per month.) The effect would be to reduce the poverty rate in the GHS 2012 data from 48.8% to 47.1%, and the poverty rate among children even less, from 60.3% to 59.6%. Proportionately, the effect is slightly lower among the poorest.

There are some who advocate far higher grant values. Indeed a doubling of grant values, while also ensuring that all who are eligible according to the GHS data receive the CSG, would reduce poverty far more, to 37.8%, i.e. a further 9.3 percentage points. The effect on children would be even greater. However, the cost would be astronomical, R53 billion more than the present amount, and 46.9% of children would still remain below the poverty line. Moreover, any possible perverse effects of grants, which are contained when grants are relatively small, would increase greatly with any major increase in grant values.

In conclusion, although there is probably scope for improving grant administration and the interface with beneficiaries in a way that will enable poor people who are eligible to obtain such grants to obtain them more easily, the effect on poverty numbers is likely to be relatively small, and a substantial increase in grant values does not appear viable. Nevertheless, improving grant access for the eligible is important and thus receives further attention in the policy recommendations.

4.5 SIMULATING THE EFFECT OF IMPROVING EDUCATION IN EARLY GRADES

South African educational performance is abysmal and most children from disadvantaged backgrounds perform far below what can be expected from a well-performing school system. To put that in perspective, in SACMEQ tests in Grade 6 in 15 countries in southern and eastern Africa, South Africa's performance is on average weaker than that of a number of much poorer countries, including Tanzania, Kenya and Swaziland. Moreover, children from poorer South African schools lag more than a year behind equally poor schools in the average SACMEQ country.

The weak performance of the bulk of the school system at earlier grades is a significant cause of poor performance in matric, with poor children being especially prone to drop out earlier or to fail matric. Only about one in ten children in the bulk of the school system – the three poorest quintiles of schools – eventually reach matric and then achieve a 'bachelor's pass' (formerly called a university exemption), and only 40% achieve any matric pass. At the same time, good matric performance and access to and success at university are crucial for labour market prospects. The typical matriculant who does get a job earns one quarter more than someone who only passed Grade 9, and a graduate earns three and a half times as much as someone who has only matric. Academic skills are richly rewarded in the labour market, and also increase the probability of getting a job.

While a good education is crucial for success in the labour market, the prospects of a good education for the poor are slim. In this way the school system perpetuates inequality in learning outcomes, rather than overcoming it. The rest of this section illustrates this using data from the 2012 Annual National Assessments (ANAs) and then uses this same data to simulate what could be possible if learning outcomes for the poor could be improved in the early grades.

The part of the educational system that formerly served largely white and Indian children performs far better on international tests (Reddy et al., 2012). The full report provides evidence that non-over-aged white and Indian children can be regarded as a norm group whose performance in Grade 8 is roughly in line with that of countries that performed near the international mean in TIMSS (Trends in Mathematics and Science Study), such as the United Kingdom, Australia or New Zealand. Using this norm group's performance as a benchmark, the performance of all children in the ANAs at different grades can be evaluated in all the ANA tests. (In TIMSS, the low international benchmark is set at 420, i.e. 80 points below the international average, which is also approximately the average for the norm group.)

In the bottom three quintiles of the school system, the number of children who are not over-aged and who perform within one or two standard deviations of the norm group's average drops steeply across the grades (Table 4.1, Column 3). Between Grade 1 and Grade 4 this proportion roughly halves, and thereafter fluctuates at low levels. The number in Grade 9 (around 288 000) is only slightly above the quarter of a million children in these three poorer quintiles of schools who passed the matric examination in 2013. Presumably most of those who passed matric are drawn from this group of children. The numbers that are not over-aged and perform at most one standard deviation below the norm group falls across the grades, so that those achieving this benchmark in Grade 9 are just over one quarter of the Grade 1 number. The 120 993 children (Table 4.1, Column 1) in Grade 9 from poor schools who are not over-aged and perform within one standard deviation of the norm group, and thus above the low international benchmark, are presumably largely the source of the 48 000 matric students in these schools who achieve university exemptions (bachelor's passes).

Grade	Above or not more than one SD below norm group	Between one and two SD of norm group	Total: Within two SD of norm group
Grade 1	454 131	109 936	564 067
Grade 2	310 244	126 804	437 048
Grade 3	244 431	110 863	355 294
Grade 4	173 781	107 586	281 367
Grade 5	150 509	110 692	261 201
Grade 6	156 858	145 155	302 013
Grade 9	120 993	166 783	287 776

Source: Own calculations from ANA 2012

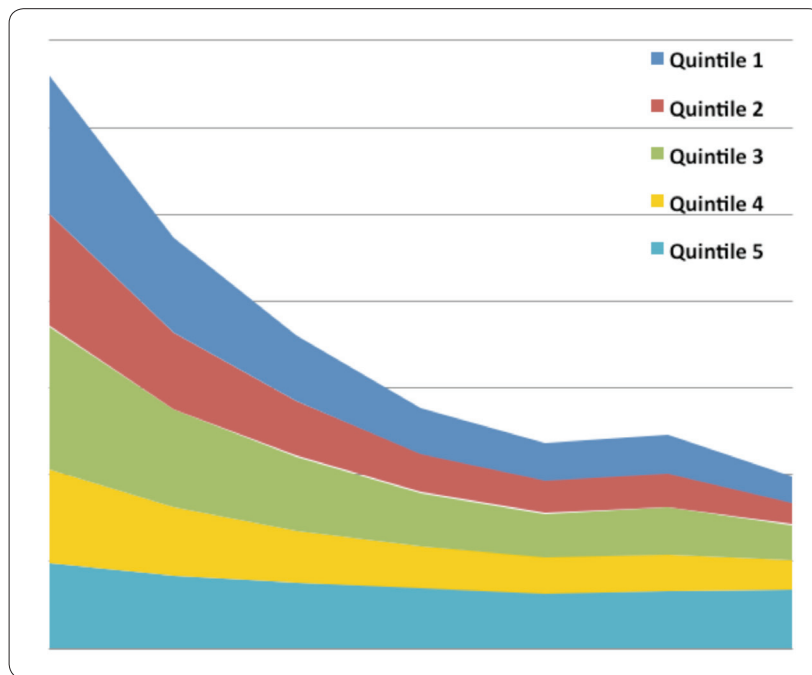
Thus it becomes clear that, for a large proportion of South African children, the chances of acquiring the skills required to function effectively in a modern economy and labour market, and thereby avoid a poverty trap, have

already been strongly eroded in the primary school phases. Although this relates to mathematics, a statement by Trong (2010) regarding the Grade 4 PIRLS (Progress in International Reading Literacy Study) assessment is useful to consider: that children who do not reach even this low benchmark by the fourth grade are at serious risk of never learning how to read.

Ranged on an international scale, it appears that children who wish to achieve university exemptions (a 'bachelor's pass') need to be close to the international norm and thus the norm group; it is likely that they would be drawn from those who are within less than one standard deviation of such a norm, judged by their Grade 9 performance.

Figure 4.2 starkly shows that the number of children who are not over-aged and who perform within one standard deviation of the norm group falls sharply through the primary and secondary grades. Most worryingly, this drop is at its steepest in the poorest schools, quintiles 1 to 3.

FIGURE 4.2: Number of non-over-aged children performing within one standard deviation of the norm group by grade and quintile in ANA Mathematics, 2012



Source: Own calculations from ANA 2012

Table 4.2 presents the same data as in Figure 4.2, but in addition shows that the 'retention rate' or the number of non-over-aged children meeting this performance criterion in Grade 9 is on average only 30% of the number of Grade 3. Particularly pertinent to this report are the large differences in retention rates, ranging from 19% and 20% in the bottom two quintiles of schools to 69% in Quintile 5.

Table 4.2: Number of non-over-aged children performing within one standard deviation of the norm group by grade and quintile in ANA Mathematics, 2013; and matric exemptions and passes by quintile, 2013

Grade	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total
Cohort size entering school	227 906	182 223	228 917	147 001	126 072	912 119
On track: Children not over-aged and performing within 1 SD of grade norm:						
Grade 1	160 055	129 391	164 685	108 034	97 468	659 633
Grade 2	109 182	88 526	112 536	78 852	83 471	472 567
Grade 3	75 472	64 297	85 290	60 720	74 408	360 187
Grade 4	53 616	44 527	61 608	48 256	69 413	277 420
Grade 5	43 455	38 622	49 703	42 133	63 012	236 925
Grade 6	44 033	39 410	54 233	42 870	65 197	245 743
Grade 9	30 615	25 549	41 319	33 685	67 176	198 344
On track in Gr4 as % of cohort	24%	24%	27%	33%	55%	30%
On track retention from Gr1 to Gr9	19%	20%	25%	31%	69%	30%
Grade 12 (ignoring age):						
Attain bachelor's pass	21 068	26 931	30 408	26 225	55 181	159 813
Attain any pass	74 537	87 482	91 312	67 107	95 895	416 333
Conversion rate: bachelor's passes as % of Gr4 number	39%	60%	49%	54%	79%	39%

Source: Own calculations from ANA 2012; Matric data from DBE, 2014. 2013 National Senior Certificate Examination – Technical Report. DBE: 72, Table 15. Note that about 5% of students in the matric results could not be allocated to quintiles.

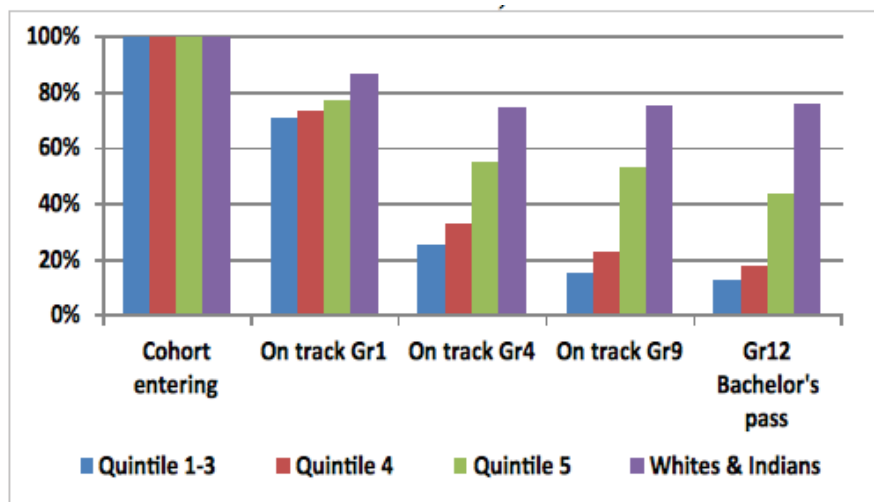
The final row of Table 4.2 offers another way to think about the relationships between the numbers in this table. This 'conversion rate' simply reflects the number of bachelor's passes as a percentage of the Grade 4 children who are not over-aged and perform within one standard deviation of the norm group. This ratio again varies across the quintiles, but even the bachelor's passes produced by the richest and most successful quintile, Quintile 5, are only 79% of the number of non-over-aged children performing above the low international benchmark, i.e. within one standard deviation of the norm group. Thus, to take Quintile 1 as an example, one can see that it is imperative that schools in this group improve the conversion rate, which is half that of Quintile 5, but even more imperative is that these schools sharply increase the number of children who are on track to perform, i.e. who by Grade 4 have not fallen behind in terms of having repeated and who are still performing above the low international benchmark, i.e. within one standard deviation of the norm group. To put this in perspective, the performance improvement required to double this number would mean that those currently scoring 35% in ANA 2012 mathematics would have to achieve 50% on the same test. That requires considerable improvement, but is not impossible if the necessary attention is given to that goal.

Figure 4.3 summarises some of the figures presented in Table 4.2, but in addition also shows the progressions for whites and Indians as an indication of the stark differences in performance across the system. The percentage of children entering school who are broadly 'on track' in Grade 1, defined as performing within one standard deviation of the norm group and not being over-age, is already considerably lower than the percentage of those entering school, especially in the poorest three quintiles. It is possible that this Grade 1 test is not the most accurate measure because of the difficulties of testing at such a young age, but even if one considers the Grade 2 performance, it is clear that a substantial proportion of children in the poorest schools are already lagging behind at the beginning of primary school.

The next decline is that between Grades 1 and 4. Once again, it is apparent that there is a considerable drop in the numbers of those who are on track between these grades. This makes it clear that the largest erosion of the base from which success, in terms of passing matric and continuing to tertiary education, should spring, takes place in poor schools in the early phases of the primary education system, if not before.

There is still further erosion between Grade 4 and Grade 9, and then again between Grade 9 and Grade 12. The extent of this erosion is smaller, however, as most of the erosion of the base has already taken place by Grade 4.

FIGURE 4.3: Numbers on track in various grades in ANA Mathematics 2012 and number of bachelor's passes in 2013 relative to the size of the entering cohort for various groups (entering cohort set to 100)



Source: Calculations for Table 4.2

If we look at the chain from birth to successful completion of matric with good labour market prospects, it is useful to think in terms of the links that broadly follow the school phases:

- Birth to entry into school
- The foundation phase
- The intermediate phase
- The further education and training phase.

The data reported here suggests that the reasons causing children attending poor schools to lag behind others can be found in the home environment and the weak performance in the foundation phase. Undoubtedly, that is where the focus of attention should be: to give children the grounding that will enable them to achieve greatly improved results at the end of school, with more school leavers equipped to enter universities and the labour market with a solid school background.

The main recommendations in Section 5 for the field of education derive from the simulations that have been described in this section.

5 Policy options

5.1 CURRENT IMPLEMENTATION FAILURE AND ADMINISTRATIVE INCAPACITY

The declines in measured poverty observed in South Africa between 1994 and 2010 must be viewed in the context of benign global and local economic conditions during most of the first decade of this century. Favourable economic conditions saw the country embark on its longest sustained period of growth on record, which facilitated an increase in the number of employed by 2.7 million between 2002 and 2008. Persistent high economic growth meant that greater state revenues were available for social transfer payments that contributed greatly to reduced poverty. Efficient government departments such as the South African Revenue Service and the National Treasury ensured optimal revenue collection and higher expenditure allocations that were largely pro-poor. Viewed in this way, the present and future challenges to state directed welfare improvement are all too clear. Economic conditions, both local and globally, are less accommodative following the 2008 international financial crisis. South Africa is furthermore perceived as a 'high-risk' investment destination. Locally, worker relations do not seem set to improve and perceptions of corruption have been elevated, reducing trust in government. As a result of these and other circumstances, growth projections for the economy as well as government revenue are low. Further welfare improvements thus can no longer depend on greater revenue collection and allocation but will rather have to be realised through efficiency enhancements within spending departments.

Government spending departments are notoriously inefficient. Despite annual budgetary increases, implementation failure still persists in a number of key areas such as basic education and basic service delivery. While there have been substantial shifts in resources to poorer schools, and a focus on pro-poor social spending in various forms since the 1980s and particularly the 1990s (Van der Berg and Moses, 2012), South Africa still performs poorly when it comes to important growth drivers such as public education and health services. Evidence suggests that state capability, particularly in poorer provinces, is partly to blame for these poor outcomes. In particular, researchers have suggested that it is the poor management of resources rather than the amount of resources invested that is at the centre of dysfunction in the public education and health sectors, implying that increasing implementation capacity is the way to boost state performance.

The education system offers an illustration of how more effective administrative management in a government department can demonstrably produce better results, and that what a provincial department of education does, partly through its district offices, can measurably enhance the quality of education. A study by Gustafsson and Taylor (2013) exploits a 'natural experiment', the 2005 provincial border changes, to observe the performance of a group

of transferred schools. The study found that the Grade 12 performance of 29 schools that moved from the North West to Gauteng improved considerably, suggesting that these schools benefited from the administration of their new province. Interviews revealed that the schools that were transferred benefited from more textbooks and videos of science experiments after they were transferred. But an unanswered question is how Gauteng has apparently been able to maintain better levels of resourcing. Also, very different practices and work cultures seem to exist in the district offices of the two provinces. In Gauteng, district officials are reportedly proactive, visit schools frequently and put pressure on principals and teachers to achieve better results. They also listen to school staff and take care of funding and procurement matters efficiently. North West district offices are reportedly less responsive. Further evidence of differences in institutional quality between the two provinces emerged from a Department of Basic Education survey (DBE 2013a), indicating that school principals in North West are among the most dissatisfied in the country with the quality of district support. In contrast, Gauteng's principals are exceptionally satisfied with the support they receive from districts, particularly for the provision of educational materials.

What this natural experiment shows is that administration can make a difference to service delivery, and that it differs in important ways across the system. Improved service delivery, independent of budgetary constraints, can make a major difference to the situation of children caught in poverty traps and suffering from social exclusion.

5.2 POLICY RECOMMENDATIONS

The analysis presented in this report makes it clear that South Africa has made remarkable progress in reducing the extent of poverty and social exclusion, and their effect on children. As mentioned in the introduction, the country's transition has changed the social context within which these conditions occur. At the political level, the dismantling of apartheid has opened up opportunities for the majority of the population to participate more fully in society, including full participation in the labour market. Important social trends such as rural-urban migration and rapid fertility decline have also given many people new opportunities. Improved formal housing and municipal services provision have enhanced the living conditions of large numbers of citizens. Educational expansion has ensured that most children attend school until at least the age of sixteen. The massive expansion of the grant system has been a vital source of income for many poor families and has decreased both money-metric poverty and hunger among children.

However, many still suffer the double fate of the poverty trap and social exclusion. Although the acceleration of economic growth has decreased poverty and expanded opportunities, many of the unemployed have still not been drawn into the labour market, and those excluded are typically also marginalised in other ways. They are often the most poorly educated, still outside the mainstream, excluded not only from many economic opportunities but also from full participation in society.

Children born into such families are most likely to be caught in a poverty trap. The poorly functioning school system leaves them with few opportunities to get a good education. When they leave school they are unlikely to find or to hold a job, and if they do find one it is not likely to be well paid or secure.

Compounding these problems are the social pathologies that the new South Africa has yet to overcome: crime, household violence, abuse of women and children, and substance abuse.

It would be possible to make many policy recommendations for the broad spectrum of interventions that attempt to deal with these problems. However, in many cases the problem lies not with the policies, but with poor implementation and the weak accountability structures, incentives and organisational framework that hinder implementation. It was considered, therefore, more useful in this report to focus on only a few major problems and interventions. The sections above have dealt with poverty traps amenable to intervention and focussed on those that operate at the micro to medium level, with special attention to five areas – health, education, wealth and assets, social networks and family, and geography – where an enabling environment could help children escape inherited poverty. These are dealt with in the policy recommendations below.

5.2.1 Improving health and nutrition

Access to health services has improved considerably, but the quality of health care and the efficiency of the health services leave much to be desired. This is part of the major service delivery problem that plagues South Africa's public services.

Many of the concerns about health outcomes for poor children have their origin in other areas. Good sanitation, clean water, proper housing and adequate nutrition and good nutrition practices are all essential for children's health. Much attention is being paid to housing and physical infrastructure, but obstacles to implementation impede progress. The need for such infrastructure, with consequences for children's health, is particularly urgent in many rural areas. Problems that affect children are interrelated: inadequate provision of clean water and sanitation for early childhood development (ECD) facilities not only damages children's health but also impedes their education.

Child nutrition has benefited from the National School Nutrition Programme that is now reaching most schools. ECD facilities also offer feeding to children, but the food provided is often nutritionally deficient. The Department of Social Development needs to consider ways to improve and monitor the quality of food provided to young children at these facilities.

Nutrition outside the facilities is also still a major problem. The generally low prevalence and short duration of breastfeeding in South Africa, despite its known benefits, requires more attention. There has been mixed success in attempts to encourage exclusive breastfeeding up to six months. A scheme described by Bland et al. (2008) showed that offering mothers more information and support could have a significant effect on rates of exclusive breastfeeding. The scheme used trained lay counsellors and was therefore affordable. Along similar lines, but targeted at improving the nutrition of young children, the projects described in the Latin American case studies and the Philani Mentor Mothers Project discussed in Section 4 above suggest that such information and support can improve the nutritional choices mothers make, and thus the health and wellbeing of babies and toddlers. Scaling up of such approaches should be explored and tested.

It is difficult to implement nutritional interventions for young children not attending ECD facilities. The expansion of the child support grant (CSG) has clearly helped to reduce child hunger, but hunger levels are still too high and the quality of nutrition requires more attention. Again, information campaigns may be an important way of dealing with aspects of this problem.

5.2.2 Improving educational foundations

The poor educational foundation that traps many poor children in poverty, from as early as the end of the Foundation Phase in school, is the most pressing problem to be addressed in education. In many respects, solving this problem is also the most important long term solution for eradicating poverty and ensuring social mobility that will enable children to rise above the economic circumstances that they were born into.

Any intervention to improve education in South Africa needs to occur as early as possible in a child's life. Many poor children start with a severe disadvantage because they do not receive sufficient social, emotional and cognitive stimulation in early childhood. They then enter primary schools that are mostly unable to equip them with the skills needed for success in life, or to make up for the large learning deficits they have already accumulated.

When faced with limited resources (both physical and human) and a choice of where to intervene in the schooling system, the advice from both the local and the international literature is unequivocal: the earlier the better. Focus should be on the pre-school years and the primary grades not only because underperformance is widespread in these phases but also because remediation is most possible and most cost effective when children are still young. The human brain is most malleable in early childhood and thus particularly susceptible to benefit or harm. This should be an area of focus as the cumulative negative effects of learning deficits (particularly for vertically integrated subjects like mathematics) make full remediation impossible if the intervention is too late (i.e. in high school). Nobel Laureate Professor James Heckman summarises these arguments succinctly:

Policies that seek to remedy deficits incurred in early years are much more costly than early investments wisely made, and do not restore lost capacities even when large costs are incurred. The later in life we attempt to repair early deficits, the costlier the remediation becomes. (Heckman, 2000: 5)

The simulations in Sections 4.4 and 4.5 above strongly suggest that these problems caused by the low quality of education provided to the poor emerge very early, and by Grade 4 (when the Foundation Phase has just been completed) the base of children who are ready to cope with the higher educational phases successfully has already been deeply eroded. Though problems in educational quality do not end at the lower levels, it is here that educational quality deficits must first be tackled. Two areas for intervention are recommended: improving ECD interventions to deal with school readiness, and strengthening the Foundation Phase in schools.

Educational interventions: Early childhood development and school readiness

Community-based ECD facilities have expanded dramatically with the extension of government subsidies to such facilities. However, these facilities do not address child needs in the very early stages, the 'first 1000 days' (including the period in the womb) that are regarded as so crucial for early physical, emotional and cognitive development. Government is currently still working at finding appropriate institutional mechanisms for assisting with development in this critical period. Nutritional support for pregnant mothers and children is important, but it is not clear how to provide it. Child grants help to reduce the financial burden of children, but cannot ensure that parents spend the money well in terms of child needs. Information campaigns about nutrition and child development remain immensely important. The further development of policy in these areas remains a priority.

The following are some recommendations for ECD facilities:

- Strengthen basic monitoring of preschools to support both planning and implementation. Such basic monitoring is particularly weak in South Africa, for instance compared to Brazil. No clear plans appear to exist to deal with this situation, yet it needs to be dealt with urgently as basic monitoring systems are a prerequisite for equity, transparency and effectiveness in the ECD sector. New systems need to be designed with a careful consideration of their costs relative to what they deliver and how they can build on or extend existing systems.
- Expand preschool coverage, while paying sufficient attention to quality. Enrolment levels of children in ECD facilities are relatively high. However, the available data suggest that the quality of inputs, as well as educational, health and social outcomes require special attention. Formulate policies in clear and practical terms. The Department of Basic Education's release in 2013 of an official draft curriculum for children under the age of 5 is a major step forward. However, policies on ECD remain unclear and fragmented, according to government's own reports. For instance, policies on how to distinguish the resourcing, nomenclature and learning aims of the different levels of preschool are non-existent or not sufficiently clear. Take notice of innovative ECD delivery approaches, including strategies for supporting parents directly. As indicated by the NDP, innovation is important. Here South Africa could learn from non-traditional models of ECD aimed at educating parents themselves in how to ensure that young children develop as they should at the preschool stage.

The relatively rapid roll-out of the Grade R programme and community-based ECD has contributed to widespread concern about the low quality of learning and teaching in both these parts of the system, and especially in schools and facilities that serve poor children. The findings and recommendations emanating from research for the National Treasury (2008), the Gauteng Department of Education (2009), the Eastern Cape Provincial Department of Education (2008) and the SAIDE Grade R research project (2010) all point to issues of this nature.

Research suggests that two key quality dimensions need attention. The first is teachers: their training, quality and support, their qualifications and the pedagogical rigour of these, and their knowledge of how young children learn and how to facilitate this. In interviews with teachers, Excell (2011) found that few practitioners had a proper understanding of how to optimise children's learning through a play-based approach. Opportunities for in-service training should be increased, focussing on providing teachers with practical strategies for supporting early learning and opportunities to see and practice best teaching methods. This needs to be supported with ongoing on-site mentoring. There is a need for evidence-based early childhood educational content in all ECD qualifications. Finally, encouragement, both pecuniary and non-pecuniary, should be given to retain teachers and practitioners in Grade R or in ECD.

The second quality dimension that needs attention is practical curriculum guidelines and standards, and teachers' knowledge and understanding of these. Ongoing structured curriculum support for teachers is recommended with regard to the implementation of the prescriptions of the Curriculum Assessment Policy Statement (CAPS), in Grade R, particularly with practical ideas on how to achieve the stipulated learning outcomes. Although physical factors, such as cleanliness and a safe environment, are already assessed in the formal registration processes for community-based preschools, the focus on children's development and learning should be increased. An assessment of 70 preschools in five provinces found such a lack of educational materials that ECD practitioners did little more than look after the children (De Witt, 2009).

Common tools should be developed to assess children's language, literacy and mathematics development in ECD and Grade R, in order to track progress in learning outcomes. Indicators and measures of quality need to be established for centres that can also be used in monitoring such centres. Cognitive testing before Grade 1 is complex (it often needs to be individualised) and it is therefore not yet desirable to expand the ANA or similar testing to Grade R or ECD centres. However, systemic testing of a large enough sample of children to draw conclusions about performance and progress would be a big help towards improving the quality of early learning in both ECD centres and Grade R, and in particular overcoming the learning deficits that many children already have when they enter Grade 1.

Finally, support should be given to strengthening the role played by home learning environments, including awareness-raising campaigns to assist parents in supporting early learning. A practical step would be to make storybooks in all the country's official languages more widely available.

Educational interventions: Foundation phase

To focus attention on the Foundation Phase, a small set of clearly understandable and measurable goals should be developed and then widely disseminated to parents, teachers and government officials. These goals should focus on the basic learning outcomes that every child should master, with clear age- or grade-related benchmarks defining when children should reach them. To provide one example, Brazil's Ministry of Education has the following core education goal for primary schooling: 'Teaching all children to read and write by the end of the third year of basic education at the latest' (MoE Brazil, 2012:4). Given its multiplicity of official languages, South Africa could add 'in their mother tongue' to the above goal. Local and international evidence shows that the acquisition of early literacy skills is fundamental for further learning and thus a wise overarching goal for the Foundation Phase. Furthermore, the ability to read is relatively easy to assess and, since the reported adult literacy rate in South Africa was 89% in 2009/10 (UNDP, 2011), most parents, even if poorly educated, should be able to monitor whether their children can read. An important reason for setting and publicising such a goal is to bring parental and teacher expectations in line with the grade-appropriate minimum standards. The 500+ page CAPS document for the Foundation Phase can be overwhelming for teachers and it would be unreasonable to expect most parents to read or understand the full document. Setting simple measurable overarching goals provides a focus for interventions, initiatives and parent-teacher interactions.

Thus it is recommended that South Africa adopt a single central goal for the Foundation Phase, which should be that every 10 year old child should read fluently in their mother tongue. This should be widely propagated through the media and public awareness campaigns, perhaps in a more succinct version: Every child should read. Every child and parent should be able to demand this as a right from the school system, and the focus of all activities in schools and the administration of schools should be to ensure that this right is fulfilled. This does not mean that other important goals of the Foundation Phase, including numeracy or the acquisition of English, should be neglected, but simply that this is a central goal that everyone can agree on and that is essential for reaching other educational goals.

In practical terms, this should entail that principals and teachers focus attention on achieving this learning goal by the end of the Foundation Phase. This should be part of the instructional leadership expected of every primary school principal, who should report quarterly to both the authorities and parents on progress in this regard. The monitoring activities of the provincial Departments of Education should be focused on the same goal. The workbooks that have

been introduced to monitor coverage of the curriculum have thus far not been used to monitor such coverage at all. It is imperative that provincial departments understand this to be a central priority, and that they and the provincial Ministers of Education report annually on the progress towards achieving the goal that every child should read.

5.2.3 Increasing wealth and assets

Government has gone a long way towards providing a social safety net for the poor through the expansion of a strong means-tested unconditional social grant system. This system is regarded as one of the major reasons for the decline in child poverty since 2000, as is also reflected in the decline in child hunger. Despite this system, pockets of severe poverty still exist. The analysis in Section 4.4 above of the child support grant (CSG) indicates that errors of exclusion are not an important reason for the persistent levels of poverty, and that further expansion of the grant system, given realistic budget constraints, does not seem a viable way of lowering poverty levels further.

The simulation in Section 4.4 relating to the CSG was undertaken in part because of a concern that lack of documentation and other administrative obstacles may be responsible for errors of exclusion in the CSG, i.e. that eligible children do not receive the grant. This could be expected to affect particularly the youngest children. The survey data proved insufficiently detailed to draw any conclusions with certainty, although it appears that the extent of this problem is not widespread. However, to ensure that the right to social security of the poor is upheld, it is important that administrative obstacles in the application process for grant receipt be eliminated. An important area that requires attention in this regard is the system of birth and death registration and provision of identity documents. These processes should be streamlined to make it easier for poor people to access the social grant system.

5.2.4 Strengthening social networks and family

Central to many of the problems noted in this report are weak social structures and associated problems of violence and abuse. The important role of social networks and of parenting is well established, but in policy terms these are not areas where there are clear policy instruments available to deal with such matters.

It is important to consider initiatives that can challenge social norms in the case of absent fathers. Action in regard to maintenance payments may be a start, but is unlikely to have the desired effect if it focuses mainly on payments and does not have a more encompassing message. Failure to pay maintenance is merely a symptom of a much larger malady.

On a related matter, the high prevalence of maltreatment of children in South Africa – which is more widespread in poorer communities – may in some cases be symptomatic of parents neglecting their responsibility to ensure a safe and enriching environment for the development of their children's social and cognitive skills. Although conclusive data to support this conjecture are not forthcoming, suggestive evidence for it manifests in several other ways. Most basically, the institution of child protection laws and services (which largely emphasise protection as opposed to prevention) was aimed at enforcing accountability (Makoae, Roberts, and Ward, 2012). A survey of various public administrators and academics conducted by the HSRC (Human Sciences Research Council) also reflected a disturbing view of the South African public's attitude to child maltreatment (Makoae, Roberts and Ward, 2012). In answer to the

question, 'How seriously does the general public perceive child maltreatment?', only 42% of respondents answered that it is generally viewed as serious and 51% believed that the general public perceived child maltreatment as 'usually not preventable'.

The Children's Act of 2005, that came into force in 2010, was an institutional response to the urgent need to deal with the problem of the maltreatment of children. Converting it into practice requires various instruments, including social welfare services. These are discussed below.

Expanding the scope and reach of social welfare services

One of the central budgetary shifts observed since the political transition is the strong growth of spending on social welfare. This has been largely the result of an expansion of the social grant system. In contrast, social welfare services have been relatively neglected. These services are funded at a provincial level and entail both services offered by the state and those that are run by private welfare and non-profit organisations. It is the latter that have been particularly underfunded since the transition, despite the pressing need for welfare services. Reasons for this include a reduction in the flow of funds from international donors, low levels of local private funding, and limited provincial and national government subsidies. Provincial social development departments have also not been well funded and have thus tended to use their available funds mainly to fund their own work rather than to subsidise private welfare organisations to deliver services.

Thus private welfare organisations have been operating within constrained budgets, and they can usually offer only low salaries to social workers and administrative personnel. The problem of the low supply of social workers is now being addressed through improved funding, but this does not deal with the underlying causes of the situation. As a consequence, welfare organisations' activities have been curtailed. Those best able to overcome the budgetary and staffing problems have either been those best organised or those who can most draw on volunteers. These volunteers are often people from middle class backgrounds who have a strong social commitment and private resources. Poorer people can seldom afford to spend much time on such work. This leads to a situation where the availability of welfare services is much greater where the network of volunteer workers and existing organisations is stronger. In practice, this is largely in urban areas, particularly in the large cities, when it is rural areas that have the greatest need for welfare services. Moreover, the high compliance costs, in terms of conditions and reporting, associated with subsidies from provinces means that this source of funding is unattractive or simply unattainable for many private welfare organisations.

A stronger long term funding dispensation for welfare services is therefore recommended. This would mean that the network of social and community workers active in rural areas could be expanded and institutional facilities, as provided for in the Children's Act, could be fully provided and funded. This is in line with the recommendations of the Fiscal and Financial Commission (FFC, 2013), as reflected in their report on The provision and funding of child welfare services in South Africa, released in September 2013. The report highlights the low financial provision made by government to child welfare services, which amounts to R5.7 billion in 2013/14 compared to an estimated need of at least R12.9 billion for a low-level implementation of the Children's Act. The report also points to the vast disparities in funding of welfare services, with the per child expenditure in Kwazulu-Natal in 2011/12 of R81 being only one-fifth of that in the Northern Cape, at R412 per child.

But as decisions on the funding of welfare services are largely taken at a provincial level, and as these services have to compete with other provincial budget priorities, their funding will remain under threat. Two steps are recommended:

- Strongly support the FFC's recommendation, that the Department of Social Development should apply norms and standards for provincial departments in funding and providing welfare services for children. This could eventually be supplemented with norms and standards for the allocation of at least a minimum number of social workers or auxiliary social workers to magisterial districts, based on their population size and perhaps also poverty criteria, to ensure that sufficient resources are provided to expand the reach and coverage of welfare services.
- Pay a conditional grant to provinces for funding a minimum number of social workers or auxiliary workers, both in their own employ and in private welfare organisations subsidised by the state, to undertake the work provided for in the Children's Act. These social workers would also work with communities and families in strengthening parental roles and helping to prevent rather than simply deal with the consequences of weak parenting and abuse of children.

5.2.5 Overcoming geographic difficulties

It is extremely difficult to change the spatial pattern of activities in a fundamental way in a national economy, the more so in an economy that is not growing very rapidly. Thus it is unlikely that any attempts to shift economic activities closer to the rural poor would bear fruit, and the cost is likely to be high. That means that a closer match between the location of jobs and the labour force would have to come about through migration.

Though jobs cannot be taken to the population on a major scale, it is essential that government service provision should target the population, wherever they may be. This means that schools, clinics, hospitals, housing, water, sanitation and electricity should all be provided even to the poorest, and even in deep rural areas. This requires that government efforts at reaching into these areas should continue, and in particular that the support to municipalities to provide such services should continue at a national level and with support from the national treasury, as is currently the case. More can and should be done to provide adequate municipal services to all citizens, including the poor.

5.2.6 In conclusion

There are many areas for potential intervention, only some of which have been covered in this summary report. The interested reader is referred to the full report for greater detail on the issues discussed here. There are many areas of concern when it comes to children being caught in poverty traps and excluded from mainstream social and economic life, but two in particular stand out: weak education and poor parenting. Addressing these problems should be a central concern in order to provide more of the country's children with a way out of inherited poverty and towards a more prosperous future.

5.3 SUMMARY OF POLICY RECOMMENDATIONS

Contained in the narrative of the previous section are a number of specific policy recommendations. These are listed here to provide a succinct overview. More details on the reasoning behind these recommendations can be found in Section 5.2, but also elsewhere throughout this report.

POLICY OPTIONS

GENERAL:

Recommendation 1: Accountability structures within government institutions require greater attention to improve the capability of the social delivery system.

NUTRITION AND BREASTFEEDING:

Recommendation 2: The Department of Social Development should consider ways to improve and monitor the quality of food provided to young children at community-based ECD facilities.

Recommendation 3: Information campaigns should be targeted at mothers to improve nutrition for young children, especially those not attending ECD facilities.

Recommendation 4: Scaling up of approaches to offer mothers more information and support to encourage exclusive breastfeeding should be explored and tested because of their potential beneficial impact on nutritional choices that affect babies and toddlers.

PRESCHOOL EDUCATION AND GRADE R:

Recommendation 5: In expanding preschool coverage, particular attention should be paid to quality.

5a: Children's development and learning should receive greater priority in registration of community-based preschools.

5b: Clear and practical policies on ECD should be formulated regarding resourcing, nomenclature and learning aims of the different levels of preschool.

5c: Basic monitoring of community-based ECD centres should be strengthened through establishing indicators and measures of quality.

5d: Innovative ECD delivery approaches should be encouraged, including strategies aimed at educating parents about child development.

5e: Systemic testing should be introduced to assess and monitor the quality of early learning and the extent of learning deficits in both ECD centres and Grade R.

Recommendation 6: Teacher and ECD practitioner training, quality and support in early childhood facilities and schools should be improved. Thus:

6a: All ECD qualifications should contain evidence-based early childhood educational content.

6b: Opportunities for in-service training that provides practical strategies for supporting early learning should be extended to all Grade R teachers and ECD practitioners.

6c: Grade R teachers and ECD practitioners should be provided opportunities to observe best practice teaching.

- 6d:** On-site mentoring of Grade R teachers and ECD practitioners should be provided.
- 6e:** Ongoing structured curriculum support to Grade R teachers should be provided with regard to implementing the Curriculum Assessment Policy Statement (CAPS), including practical ideas on how to achieve the stipulated learning outcomes.
- 6f:** Monetary and other incentives should be provided to retain good teachers and practitioners in ECD and Grade R.

Recommendation 7: Common tools should be developed to assess children's language, literacy and mathematics development in ECD and Grade R, in order to track progress in learning outcomes.

Recommendation 8: Support should be given to strengthening home learning environments, including awareness-raising campaigns to assist parents in supporting early learning. This should include making storybooks in all of the country's official languages more widely available.

FOUNDATION PHASE EDUCATION (UP TO GRADE 3):

Recommendation 9: A small number of clear and measurable goals in terms of basic learning outcomes that every child should master at different ages in the Foundation Phase should be developed and widely disseminated.

Recommendation 10: A single central goal for the Foundation Phase should be set, that every 10 year old child should read fluently in their mother tongue. This goal should be widely propagated in a more succinct version: Every child should read.

10a: Principals of primary schools should be required to report quarterly to the authorities and to parents on progress in reaching the goal that every child should read.

10b: Provincial Departments of Education and the provincial Ministers of Education should report annually on the progress towards achieving the goal that every child should read.

SOCIAL GRANTS, MAINTENANCE PAYMENTS AND WELFARE SERVICES:

Recommendation 11: The provision of identity documents for young children should be streamlined to make it easier for poor people to access child grants shortly after the birth of children.

Recommendation 12: The state should enforce child maintenance payments by absent fathers more strictly, whilst also propagating the importance of parental responsibility for ensuring a safe and enriching environment for the development of their children's social and cognitive skills.

Recommendation 13: A better long-term funding dispensation for welfare services should be provided to expand the network of social and community workers active in rural areas and to provide the facilities and services prescribed by the Children's Act.

POLICY OPTIONS

- 13a:** The Department of Social Development should apply norms and standards for provincial departments in funding and providing welfare services for children, as recommended by the the Financial and Fiscal Commission in their 2013 report on The provision and funding of child welfare services in South Africa.
- 13b:** Consideration should be given to eventually supplementing this with norms and standards for the allocation of at least a minimum number of social workers or auxiliary social workers to magisterial districts, based on objective criteria, to ensure sufficient resources for expanding the reach and coverage of welfare services.
- 13c:** A conditional grant should be paid to provinces for funding a minimum number of social workers or auxiliary workers, both in their own employ and in private welfare organisations subsidised by provinces. These workers should also work with communities to help prevent rather than simply treat the consequences of weak parenting and abuse of children.

SPATIAL FACTORS AND MUNICIPAL INFRASTRUCTURE:

- Recommendation 14:** Adequate municipal and other infrastructure and services should be provided to all citizens, including poor households in rural areas and for ECD facilities and schools in these areas. This is in light of the fact that poor housing and physical infrastructure, as well as inadequate provision of clean water and sanitation, has a damaging effect on children's health.
- 14a:** National Treasury should thus continue its support of poor municipalities to improve service provision.

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