



Exploring Early Education Programs in Peri-urban Settings in Africa

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Executive summary

The government has not historically been a major actor in the preprimary sector, but over the last decade this has changed substantially; the Office of the President declared Early Childhood Development (ECD) a national priority in 2004, and the government has both increased funding for private not-for-profit preschools and allowed for a large scale expansion (predominantly in public schools) of a reception year for 5 to 6 year-old children immediately before they start at primary school. Considerable progress been made towards universal attendance of this Reception (or “grade R”) across the country. This has led to the development of a two level preprimary system consisting of smaller private preschools (largely non-profits by status) aimed at 3-5 year olds, and predominantly public grade Rs.

In July and August 2013, Innovations for Poverty Action (IPA) conducted a data collection exercise in Soweto, Johannesburg. Sampling was designed such that the study is representative of the 8 poorest of Soweto (comprising about 15% of the overall area). The data collection consisted of 238 household surveys, 30 headmaster surveys and 26 classroom observations conducted with the aim of discovering the scale, cost and quality and preschool education in this area. This paper gives details of this research and its findings, a summary of which are included here:

- Attendance varies considerably across the traditional ‘preprimary’ age group, though it is generally fairly high; an estimated 58% of 3 year olds in Soweto are attending preprimary and an estimated 83% of 5 year olds attend a primary or preprimary classes. These preschools tend to be fairly formal, and parents generally view them as educational establishments rather than simply daycare centers.
- The incidence of poverty is fairly high in the study area; around 29% live in a household earning less than \$2.50 PPP per capita per day. Preschool attendance is positively correlated with both household income and educational attainment of adults within the household.
- Over half respondents said that their main motivation was that their child should learn skills or be prepared for primary school. Less than 20% said that their main reason for sending the children to school was because there was no-one to look after them at home.
- Although preprimary education is optional, caregivers seem to view both preschool and grade R as an important preparatory step for their children. Respondents estimated that a child that attended a low-cost preschool as well as grade R would be earning about 75% more per month at the age of thirty than a child that had only attended grade R, and that a child that attended just grade R would be earning more than 50% more than a child that had no attended no preprimary classes.
- We find strong evidence that parents perceive more expensive private schools as superior to low cost private schools. This, taken with the correlation between household income and preschool expenditures, and the importance of fee level in choosing a preschool, suggests that poverty may be a significant barrier to accessing quality preschool education.
- The cost of a preprimary education is substantial. The cost of sending a child to preprimary is around \$51 per month on average. Only around half of this cost is the basic school fee, with the rest consisting of additional costs such as compulsory feeding programs, school trips and transport. The Government’s Child Support Grant, claimed for by the caregiver of 74% of the children attending

preprimary in our sample, provides some assistance but the financial burden of preprimary schooling remains significant.

- Children attend preschool classes from 3-5 years and then a one year reception year (Grade R) from 5-6 before starting primary school. Most children change schools between preschool and primary school; only 10% attend a preschool with a primary school attached. The most common path is for children to attend a private preschool and then a public school for grade R and primary school.
- In theory caregivers have considerable choice when choosing a school for their child. They have fewer options, however, for grade R; the average caregiver knows of 3.3 pre-grade R options that their child could walk to, but only 2.1 grade R options. The most important factors caregivers consider when making the school choice are proximity to the house and fee level.
- Preprimaries (our denomination for pre-grade R and grade R schools) may be less academically and more broadly oriented than in other areas of Sub-Saharan Africa. For example, preprimary children do not sit exams, and learning goals are broadly in line with those in the US and Europe.
- Preprimaries tend to be well-equipped at both the classroom and schools level. Most have a variety of toys that students can use, as well as thematic spaces within the classroom and substantial outdoor play areas. There is, however, considerable variation – a significant minority of schools lack basic play and/or learning materials.
- Grade Rs are larger and more academically oriented than preschools. Children in grade R have more learning materials, are more likely to be sitting in rows facing the front, and tend to have more experienced, more highly qualified teaching. Class sizes are also substantially larger, with an average of 29 pupils per teacher in grade R (as compared to 17 per teacher in preschool). These differences are probably reflecting a difference in age range, but also the fact that the public sector is predominant in grade R, while the contrary is true for pre-grade R.
- Around two thirds of private schools in our sample were registered with the government, and these schools tended to be better funded and better resourced. Programs targeted at young unregistered schools might help to close this gap.

In general the preprimary sector in Soweto is large and well-attended, though there is evidence that the market is not saturated, especially for grade R. Most parents are aware of the value of education at young ages, and a majority of 3-6 year olds – particularly at the higher end of the age range - are attending preprimary schools. There is evidence suggesting, however, that cost remains a barrier preventing children from attending good quality preschools. Students from the poorest backgrounds and the children of immigrants are significantly less likely to attend school and, if attending, are more likely to be attending schools with poor resources. This suggests that programs aimed at reducing inequalities in access to quality preprimary schools might be beneficial.

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Terminology used in this report:

Preprimary	Both pre-grade R and grade R education services
ECD Center	Any center offering preprimary grades (official denomination)
Pre-grade R/Preschool	The two years preceding grade R (aimed at 3-5 year olds)
Grade R/Reception	The year preceding Primary 1 (aimed at 5-6 year olds)

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1. Sector Background: Early Education in South Africa

Preschool education programs only started to progressively reach significant portions of the poor segments of the South African population after the end of Apartheid. The private sector, which consists mostly of non-profits, has remained the main player in the sector. Independent centers are most common, though they are sometimes supported by larger nonprofits usually referred to as *Resource and Training Organizations* (RTOs).

The government has been gradually increasing its involvement over the last decade, including the Education White Paper 5 on Early Childhood Education in 2001, the declaration of Early Childhood Development (ECD) as a national priority by the office of the President in 2004, the National Integrated Plan for ECD in South Africa (NIP) in 2005, and the Children's Amendment Act in 2007. These successive declarations and policies have translated so far into two main areas of public sector involvement, which have had large contributions in reshaping the early education sector as a whole. Firstly, the government has increased its funding for private ECD centers, and secondly there has been a large scale expansion (predominantly in public schools) of a reception year -commonly called *grade R* - for 5 to 6 year-old children.

➤ **Main area of government involvement #1: Subsidies to ECD centers, and the registration requirement**

This subsidy to private ECD centers is managed by the Department of Social Development (DSD). It was introduced as early as in 1983, but has only reached a large scale in the last decade. It is estimated that subsidies totaled more than a billion rand (125 million USD) in 2011/2012, more than three times what they were in 2003/2004.¹

¹ Giese S, Budlender D, Berry L, Motlala S & Zide H, "Government funding for early childhood development: Can those who need it get it?", commissioned by Ilifa Labantwana, 2011, p.23.

The subsidy is calculated on a per child basis, and is only available for children in the 0-4 age range whose caregivers fall below a certain income threshold.^{2,3} The amount of the subsidy varies from province to province, but is quite substantial (for instance, it was R15 per child per day in the Western Cape as of 2011).⁴

To be eligible to the subsidy, however, the ECD centers—as per their official denomination- need to be officially registered with DSD, and doing so requires that the center meets a long list of requirements (see Table 1), which many are unable to do, particularly in the most vulnerable areas. Critics have argued that the stringent and wide-ranging nature of registration requirements, as well as with the complicated process necessary for obtaining the subsidy, is creating a “trap” preventing the more vulnerable centers from upgrading to formal status; there is a sort of catch-22 in which they cannot acquire subsidies without registration, but require the subsidy to be able to secure the resources necessary to upgrade the center so as to meet the requirements for registration.⁵

Yet, although most of the headmasters we spoke to in Soweto were roughly aware of these requirements, our data suggests that they are not

² The threshold is different from province to province, but is typically around \$200-300 joint monthly income. See Giese et al, p.35.

³Note that below grade R (age 5 to 6), there is no uniform system of levels. Each center may have their own denominations for the different levels and often only refer to a class by using its age range. ECD centers, as per their official denomination, are more often called “crèches” in practice, and typically welcome children aged 0-6. There is not always a clear cut distinction between children in nappies and others, which muddies the distinction between daycare and preschool. However, our report focuses on the 3-6 age range primarily.

⁴ Giese et al., p.35.

⁵ See for example Giese et al.

fully and strictly enforced in practice (see part 4.3.1).

Table 1: non exhaustive list of requirements for the registration of ECD centers (adapted from Gielse et al.)⁶

INFRASTRUCTURE
A safe environment for children within the facility and while travelling to and from the facility.
Adequate space and ventilation in compliance with building standards.
Hygienic and adequate toilet facilities, including one potty for every child under the age of 3 years, and one toilet for every 20 children aged 3-6 years.
Access to refuse disposal.
Hygienic area for food preparation, including cooling facilities and covered containers.
Measures for the separation of children of different age groups.
Action plans for emergency situations.

STAFF
Minimum staff - child ratios of: 1:6 for children aged 0-18 months, plus an assistant 1:12 for children aged 18 mths-3 years, plus an assistant 1:20 for children aged 3 and 4 years, plus an assistant 1:30 for children aged 5 and 6 years, plus an assistant
Staff trained in ECD programmes, basic health care and first aid

CURRICULUM AND OTHER SERVICES
Respect for and nurturing of the culture, spirit, dignity, individuality, language and development of each child, including assistance with birth registration.
Programmes aimed at helping children to realise their full potential and ensuring positive social behaviour.
Programmes which meet the emotional, cognitive, sensory, spiritual, moral, physical, social and communication development needs of children, including support to caregivers and household visits.
Proper care for sick children or children who become ill.

⁶ Those requirements are only a selection. More details in Giese et al. It should be noted that there is fact a dual registration requirement: ECD centers must be registered both as *partial care facilities* and as *ECD programmes*. Most of the infrastructure requirements are related to the partial care facility registration, while most of the staff and curriculum related requirements are related to the ECD programme registration.

The subsidy has created a powerful incentive for the creation of private ECD services, or to the upgrade of existing ones. The number of registered ECD centers has dramatically increased in recent years, from about 13,000 in 2008 to around 19,000 in 2011.⁷

The requirement that registered centers be nonprofit organizations (NPO)s is most likely the main reason why for-profit ECD centers are very rare in South Africa. This does not, however, necessarily mean that centers are not intended as an income stream for those who run them.

➤ **Main area of government involvement #2: *The implementation of a reception year (grade R) in all public primary schools***

Grade R has been made officially part of the Foundation Phase of primary school (grade R to grade 3), and is administered by the Department of Basic Education. It is now mandatory for every public primary school to have a grade R attached to it.

The government is currently aiming to reach universal grade R enrolment by 2014, though the target is 80% if one only counts ECD provision in “ordinary” schools –i.e. one does not count informal centers.⁸ It seems that the government is on course to achieve this 80% target; grade R gross enrolment rate in non-informal centers or schools increased from 40.3% in 2006 to 60.3% in 2009, and this was likely due in large part to the scale-up of the policy of attaching a grade R to all public primary schools throughout South Africa.⁹

⁷ www.unicef.org/southafrica/SAF_resources_kbsreport.pdf, 2008, p.5 and www.pmg.org.za/docs/2011/111012dsdrep.pdf, 2011, p. 7

⁸ Department of Basic Education, “Action Plan to 2014 Towards the realisation of Schooling 2025”, 2010, p.3.

⁹ Feza Nosisi, “Background Paper 9: Grade R”, in *Diagnostic Review of Early Childhood Development*, edited by Linda Richter, 2012.

It should be mentioned that beyond direct public grade R provision, the Department of Basic Education is also supporting private grade R providers by providing teachers and/or by directly providing subsidies.¹⁰ This support can go to a stand-alone grade R, a grade R attached to a pre-grade R facility, or a grade R attached to a primary school. This subsidy has not, however, prevented a general shift from private to public attendance at grade R, likely because not all private grade Rs have been able to secure the DBE (Department of Basic Education) subsidy, or because the cost to parents remains lower in public grade R despite government financial support to the private sector.

From anecdotal evidence, it seems that the official incorporation of grade R into the Foundation Phase (which is currently grade R up to and including primary 3), and its physical attachment to primary schools, have begun to effect a change in the mindset of caregivers, at least in our study area, for whom grade R is increasingly decoupled from other pre-grade 1 classes. More and more parents are starting to see grade R as having more in common with the early primary school grades than with preschool.

Early Education in the current policy agenda:

Today, the ECD sector, including early childhood education, occupies a prominent place in the South African policy agenda. The NIP (National Integrated Plan for ECD in South Africa), which was written for the period 2005-2010, is currently being reviewed, and a new integrated policy is being drafted for the ECD sector. There are ongoing discussions around the possibility of an expansion of the public grade R system to lower grades, as well as developing potential alternatives to classical center-based care for those younger ages (e.g. playgroups, or home based programs). Less formal learning arrangements might be particularly useful in rural

areas where provision of ECD services remains very low.

¹⁰ Department of Basic Education, Department of Social Development and UNICEF, "Tracking public expenditure and assessing service quality in Early Childhood Development in South Africa", 2011, p.4.

2. Description of the study area: the poorest wards of Soweto



View from an informal area of Soweto. In the background, a typical formal township neighborhood comprised of small government houses. (Photo: G. Bridgman)

In choosing the specific urban township of South Africa where to conduct the study, the criteria included an urban township with at least a population of 150,000 (to be sure we would have at the very least 30 preschools), and diverse enough to encompass a wide range of the realities of urban poverty in South Africa. Soweto met all these criteria.

Soweto is located about 15 km to the south west of the city center, with a population of more than 1 million.¹¹

¹¹Given the fluctuating nature of the boundaries of Soweto, any exact estimate comes with assumptions. That being said, according to a broad definition of its

Borders of Soweto have different definitions (e.g. the new regional divisions from 2006 of the Johannesburg municipality exclude some areas that people typically consider as part of Soweto, while the census Soweto “main place” encompasses areas that most people that the team talked to wouldn’t typically include). The decision was made to use the census “main place” boundaries, which are the broadest boundaries encountered, so as to so as to include the realities of newer, typically less formal settlement areas that are developing rapidly and outside of what

boundaries that is used for this study, Soweto had a population of 1,284,260 as of the 2011 census (calculation by the authors).

people traditionally consider to be Soweto (e.g. Tshepisoong to the north west).

With any definition, Soweto was too vast to allow for a representative sample of the whole area within the timeline and budget of the study. Therefore, and given the focus of the study on the poor and the very large disparities in income levels in Soweto today, it was decided to select the 8 poorest wards (out of 46) based on ward-level median income in the 2011 census data. The median income in those 8 wards is the same range as that of other major townships of Johannesburg, such as Alexandra or Diepsloot.

Yet very large income disparities exist even within these 8 wards. As an indication of that disparity,

there were both formal and informal settlement areas. The sample included both types of settlements: urban poverty in South Africa is quite different from that of other African countries, in that most urban poor actually live in formal settlement parts of townships, due to the large government-provided housing system. However, informal areas were oversampled to make sure they would represent about half of the sample (instead of a fourth), and therefore represent a large enough subsample on which relatively meaningful estimates could be drawn. This allowed the data to provide meaningful insight both about the poor of Soweto in general, and about the poor living in informal settlements of Soweto in particular.

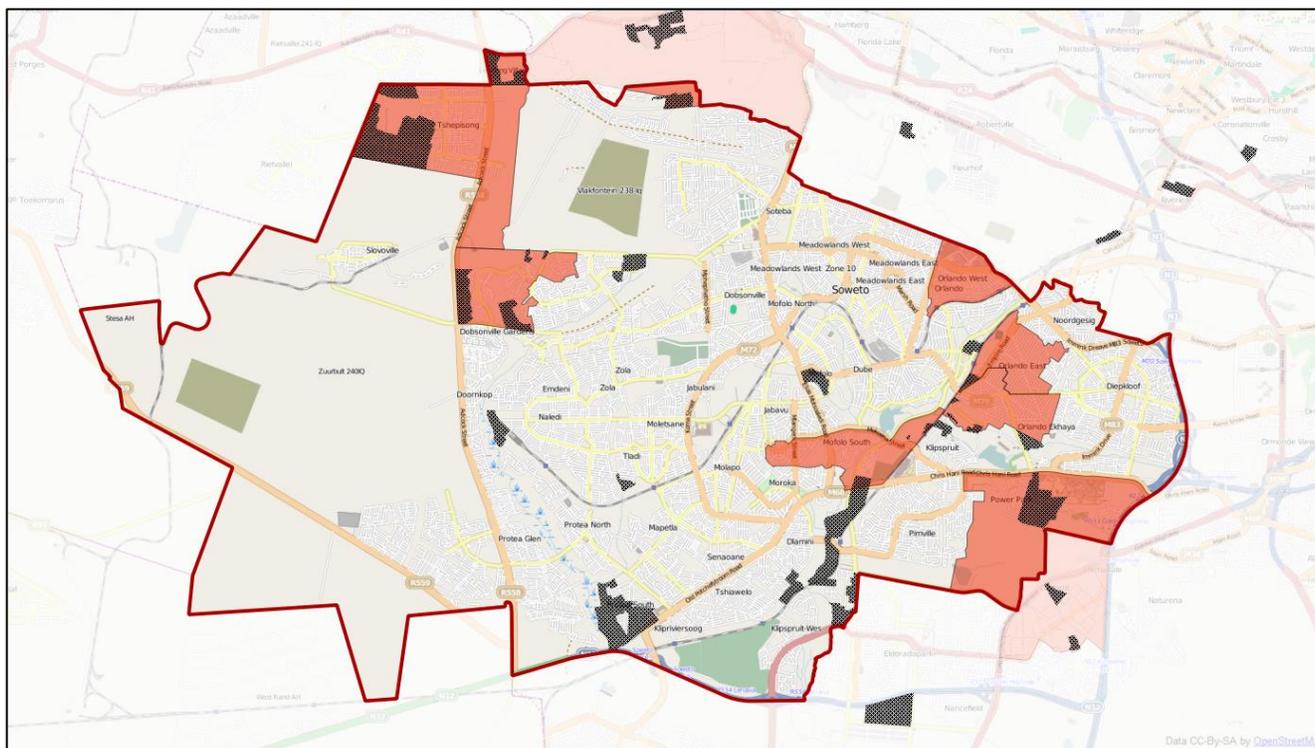


Figure 1: Soweto and the wards included in the study

The Soweto ‘main place’ boundaries are in dark red. Shaded in red are the 8 wards (or part of wards, for those that were only partially within the Soweto main place boundaries) of which the sample of this study is representative : those are the 8 poorest wards as per median household income from the 2011 national census data. The informal settlement areas are shaded in black.

3. Study design

3.1. Sampling design

Data was collected in Soweto both through a household survey and through preschool headmaster interviews and classroom observations. First, a representative sample of households in the study areas was randomly drawn. The household survey built a list of preschools attended by a representative set of children (i.e. those from the households that were surveyed). Thirty preschools were sampled from that list to be visited.

As discussed in part 2, the findings below cannot be generalized as such to other - even seemingly similar - areas, and can only provide rough insights on what the situation is likely to be across poor urban townships of South Africa in general.

Sampling for the household survey

The sample was drawn to be representative of the study area described above. A 2-stage stratified cluster sampling was used, the clusters being enumeration areas (EAs) from the 2011 national census.

Stage 1: stratified sampling of 26 EAs

In a first stage a sample of 26 of the 233 residential EAs of the study area was drawn. Those EAs had been defined by and used for the 2011 national census. Those are small geographical units precisely delineated. In our survey area, a typical EA has somewhere between 100 and 200 compounds. Any geographical point within Soweto (and in fact, within South Africa) belongs to one and only one EA, whether or not there was a structure there at the time of the census. This means that even structures that were built after

2011 are still included in the sample frame, as they necessarily belong to one EA - only non-residential EAs as of 2011 were excluded.

One (minor) issue in determining the sample frame of EAs was that ward borders do not necessarily match EA borders, so that some EAs can be spread between two wards. It was decided that an EA would be assigned to the ward in which its geographical center was, which was determined using a GIS software. It is using that rule that the list of 233 residential EAs from the 8 poorest wards (or parts of wards within the boundaries of the Soweto main place) was established.

The sample of EAs was drawn using a stratified sampling approach, with 5 different strata. Two EAs were sampled from a first stratum comprised of the 16 EAs described as “collective living quarters”, which are essentially a different type of formal residential areas (we are counting them in the formal residential category in the different breakdowns formal/informal presented in this report).¹² We then sampled 12 of the 61 informal residential EAs, and 12 of the 156 formal residential EAs, in both case stratifying by Western/Eastern side of Soweto (strata 2 and 3 for

¹² According to the census documentation, collective living quarters are defined as “Structurally separate and independent places of abode intended for habitation by large groups of individuals or several households. Such quarters usually have certain common facilities, such as cooking and ablution facilities, lounges or dormitories which are shared by the occupants.” Statistics South Africa, *How the count was done*, 2011, p63. Last accessed on October 4, 2013 on: http://www.statssa.gov.za/Census2011/Products/Census_2011_How_the_count_was_done.pdf

the West, strata 4 and 5 for the East).¹³ As explained above, oversampling informal EAs this way allowed us to produce estimates specific to informal settlements with reasonable statistical power. However, this unequal probability sampling design was taken into account in computing the sampling weights that were used in the analysis, so that any claim made about the study area as a whole can be considered as representative of the whole area, which is about 75% formal.

Stage 2: sampling of structures/compounds within EAs

Contrary to our approach when sampling in Nairobi, Kenya, our first city studied in this multi-country project, sampling of Soweto EAs was not done with probability proportional to size, since there was no good measure of size available. Instead, it is the second stage of the sampling that was crafted so as to get close to a self-weighting sample: a fixed *ratio* of the number of structures/compounds that were found in the EA were sampled (instead of sampling a fixed number of structures/compounds).

The approach that was used to divide the EA in residential structures, and thereby create a sampling frame, was also somewhat different to the one used in Nairobi. 21 of the 26 EAs were divided into residential *compounds* rather than residential structures; the EA was split into a number of slightly larger geographical units, which may each have contained anything from 1 (most

¹³ The 8 poorest wards were clearly clustered in two different parts of Soweto: on to the East, and one to the North West. A proportional number of EAs was sampled on each side. This stratification was only meant to increase statistical power, considering the fact that all EAs in the Eastern part were much closer to downtown Johannesburg than the North-Western part was potentially creating systematic differences between the two areas.

common) to about 6 structures (instead of numbering each individual structure). There was a dual rationale for doing so; firstly, there was a much larger number of structures per EA than in Nairobi, thus verifying and numbering each one would have too time-consuming given the scope of this study. Secondly, compounds seemed to be the natural base unit in most of Soweto; the vast majority of residential units were fenced areas, and it was easy to delineate these using satellite images. Where there was more than 1 structure per compound it was generally the case that there was one main, more formal, dwelling flanked by a number of informal 'Umkhukhu' (tin shacks) which were rented out. In the remaining 5 of the 26 EAs a similar process as in Nairobi was used, in that each individual *structure* was numbered. These 5 EAs were more informal than the remainder, and tended to be on the 'expanding edge' of major settlements. Houses tended to be less permanent and of lower quality, and could not easily or naturally have been split into compounds.

Based on ex-ante estimates of the number compounds/structures that would be necessary to obtain a total of around 250 surveys, a sample of 15% of the compounds/structures was drawn in each EA (rounded to the closest integer – this rounding being also taken into account when computing sampling weights).

In those compounds or structures, all households with at least one child aged between 3 and 12 were then visited for the survey. Across the 26 EAs 248 eligible households were found, of which 238 were interviewed. Of the remaining 10 households 1 refused to participate and in the remaining 9 a suitable respondent could not be located despite at least two, and often three visits (always including one on a weekend day). Out of those 238, the 151 households that had at least one child aged between 3 and 6, or above 3 and attending preprimary (i.e. pre-grade R or grade R), were

administered a full survey. The remaining 87 households only had children aged 7 to 12 (and not attending preprimary), and were administered a short survey (see details in part 3.3. below).

Sampling for the headmaster survey and classroom observations

From this sample of 238 households 60 preprimaries were identified as being currently attended by children in the household. Note that it had been intended to include in the sample frame any type of center welcoming more than 5 children aged 3-6, to include more informal providers. However, all centers mentioned by caregivers as fitting this simple criterion were all described by parents as being a preprimary, with no center being described as too informal to be called as such. Therefore, in the rest of the report, we will be using the concept of *preprimary* and *ECD center* for the schooling for children aged 3-6 interchangeably. Note that since this study is looking at children aged 3-6, this concept also includes grade R, so that grade R classes were included in the sample frame, even if they were attached to a primary school and not to classes aimed at lower age ranges (sometimes called “crèches” by parents, though this concepts also includes children below the age of 3).

Out of the 60 preprimaries attended, we sampled 15 to receive the headmaster (or “principal”) survey only, and 15 to receive both the headmaster survey and classroom observations. This sampling was done using a stratification by nominal fees (terciles), and whether the preprimary (i) had been mentioned by some parents as being the best in terms of quality within a walking distance and never mentioned as being the worst, (ii) had been mentioned by some parents as being the worst in terms of quality within a walking distance and never mentioned as

being the best (iii) neither mentioned as one or the other, or mentioned by some parents as the best, and by some as the worst, therefore preventing us from a clear classification.

Sampling weights in each stratum were used in a non-proportional way, so as to have enough observations in strata that we were particularly interested in. In particular, it was decided to oversample slightly preschools that had been listed only as best, or only as worst, to be able to better understand what parents view as quality provision in the early education sector - a question which will be addressed in future reports.

Of the 30 preprimaries originally selected, 5 had to be replaced by another randomly selected preprimary within their stratum. On two of these occasions this was because they were found to be far from Soweto (ie more than about 20 minute by vehicle), twice the principal refused to participate, and in the final case the school was found to have recently closed down. We were able to able to conduct interviews in the all the replacements, bringing the final tally to 30.

In the 15 of these schools also selected to receive classroom observations, the observation was conducted in one class per grade: for example, in a preprimary with 2 classes for each grade, we observed one class randomly chosen per grade. In a preprimary with 1 class of children aged 3-5 and one class of children aged 5-6, we observed both classes.

Across the 15 schools 26 classroom observations were performed. The resulting data will be analyzed in future reports.

3.2. Description of the data collection instruments

The surveys were conducted in July and August 2013, and comprised of three different data collection instruments.

The Household Survey

The household survey focuses on costs and priorities around children's education, as well as basic facts about the family, household finances and infrastructure. Specific questions were asked for each child aged 3-12 per household. The questions were largely close-ended with pre-tested and populated answer options. The definition of the household used was a group of people eating food purchased from the same budget, living in the same place, and recognizing the authority of one person, the head of household.

The questionnaire was administered to an individual who was the caregiver of at least one eligible child within the household. If the head of household fell into this category then they were interviewed wherever possible. The only exception to the rule that the respondent had to be a parent/caregiver was if households contained no 3-6 year old children, and no children attending preprimary; in these cases the survey was fairly short, and contained predominantly simple and objective questions, and therefore enumerators were allowed to interview any adult in the household who had a decent knowledge of the schooling of children under 12 within the household.

The full survey, administered to households containing at least one child aged between 3 and 6, or at least one child attending preprimary (for cases where older kids were attending preprimary), included objective questions on fees (both basic

fees and additional costs) and the schooling schedule, as well as more complex questions about the definition of quality for preprimaries, expected returns to investment in preprimary, and priority ranking of level of education. The survey was administered using a PDA (a smart phone), and most often took place in the household. The full survey took around 40 minutes, while the truncated version (administered to families who only had children outside the 3-6 age bracket) took around 10 minutes. The main objective of the latter was to enable us to also build a representative sample of primary schools so as to look at the interaction between preprimaries and primary school (mainly the proportion of primary schools with a preprimary attached).

The Headmaster (or "Principal") Survey

The headmaster survey, lasting about 45 minutes, contained detailed questions about schools finances, class size and school infrastructure, teacher qualifications, and curriculum and goals for students, as well as seeking to ascertain the challenges and characteristics distinctive to the school. Some questions related to the whole school, but most were focused on the preschool and Grade R classes. The headmaster or proprietor was the preferred respondent, though senior teachers were interviewed if the headmaster was not available or did not have sufficient information to answer the age-specific questions. A majority of the survey was close-ended questions with pre-tested and piloted answers, but a selection of broader questions regarding learning goals and challenges were asked as open-ended questions to allow for a full range of possible answers. The goal of the survey was to capture details on the key quality metrics outlined in a pre-determined analysis plan. A few observable infrastructure questions were also recorded by the enumerator for each.

The Classroom Observation Survey

The classroom observations were conducted in half of the 30 selected preprimaries. The instrument focused on supplementing the headmaster interview and covering the remaining key indicators of quality. The 60 minute observation was conducted for 1 class in each of the age ranges 3-4, 4-5 and grade R (where applicable) in each of the selected schools.

The survey started with a number of general questions on observable details such as the number of children in the class, the proportion of girls, and the equipment in the classroom. The bulk of the 60 minutes, however, was spent answering questions relating to the substance of the lesson, and the activities of teachers and pupils. Every 3 minutes the enumerator was instructed to record a 'snap shot' of the class activities by selecting from amongst an extensive pre-recorded list what the teacher was doing, what type of lesson was going on, and the exact activities of three specific children chosen at the start of the observation.

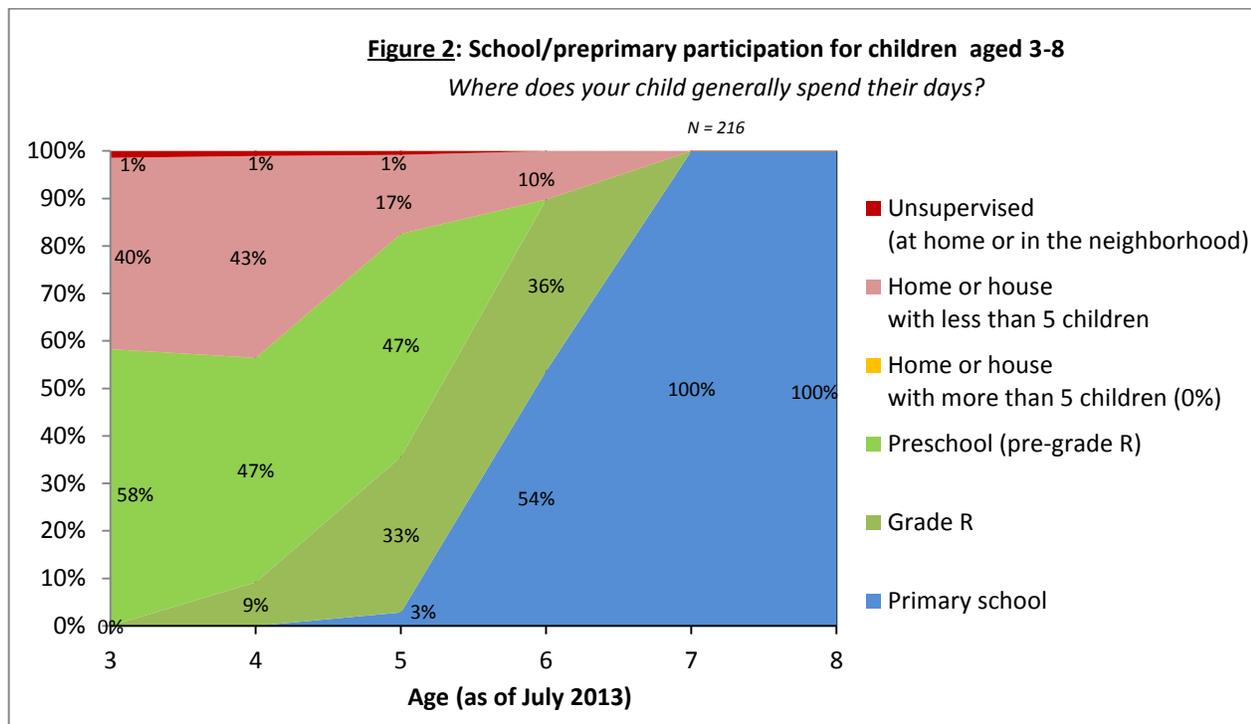
The enumerator recorded the information silently, not disturbing the class. Observations were conducted only in the first half of the school day in an attempt to capture instructional lessons at similar times across schools, and because children often slept or went home after lunch.

4. Findings

It should be mentioned that with the limited sample size (238 households and 30 preprimaries), the confidence intervals on all our estimates are relatively large. The 95% confidence intervals are shown on all histograms. Despite this caveat on the level of precision of all our findings, we estimate that this sample size is sufficient for the purposes of this exploratory study.

4.1. Participation in ECD centers

4.1.1. General participation statistics



We first analyze where children generally spend the day. As shown on Figure 2, preprimary participation rates vary considerably at different ages; **less than 60% of 3 and 4 year olds in Soweto attend preschool or grade R, compared to more than 80% of 5 year olds.**

As a side note, it does seem as though the government is hitting its target of universal primary education, with 100% of 7 year olds within the sample attending primary school. There still

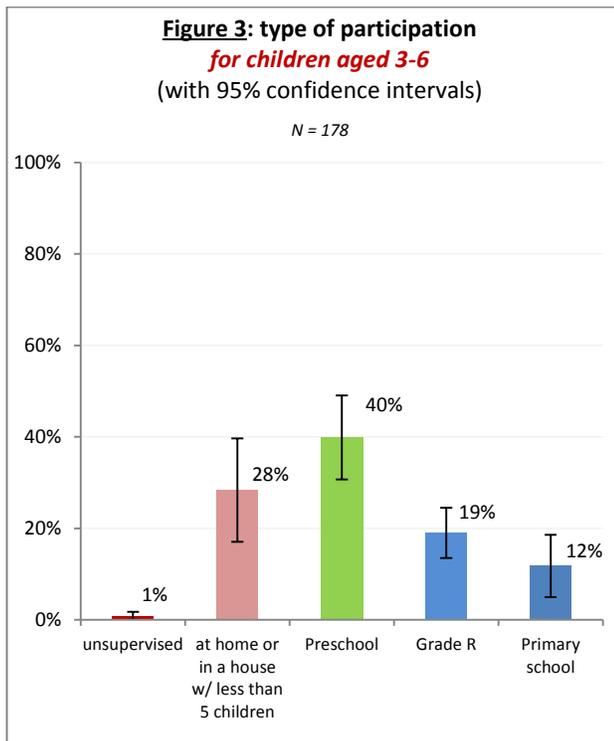
seems to be some work to do, however, before the target of 100% attendance at grade R is reached, even in a non rural area such as Soweto; about 10% of 6 year olds were not attending a primary schools or grade R, and these children will most likely go on to start Primary 1 with no prior schooling.¹⁴

¹⁴ Note that this figure of 10% of children aged 6 means in practice only 3 children in the sample, so this rate should not be considered as a precise estimate.

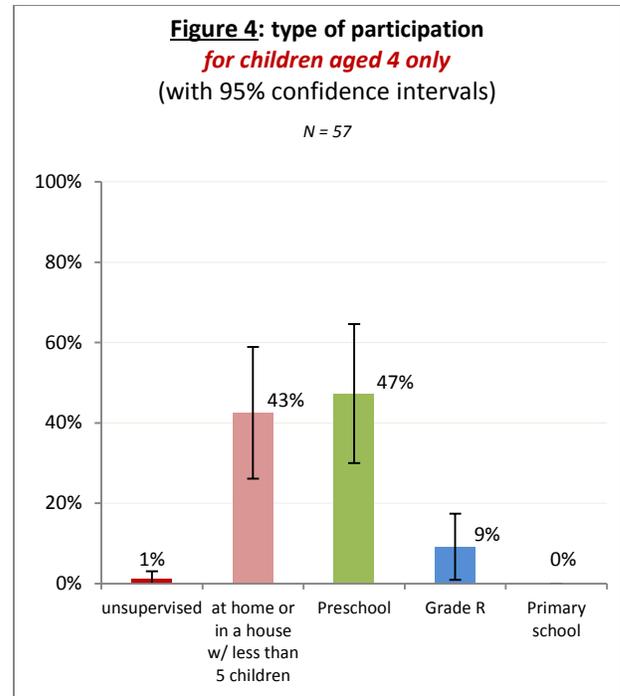
Where a child aged 3-6 was not attending preprimary we asked what the major reason for this was. There was little consistency amongst the caregivers of 6 year-olds (indicating that there may be a number of reasons why these children are not in school), but amongst the 3-5 year olds the vast majority of those not attending school were not attending apparently because parents were not able to afford the fees. We shall return to this in more details in section 4.2.1 below.

As illustrated in Figures 3 and 4 school participation rate (including preschool and primary school) for children aged 3-6 is estimated at 71%, and the preprimary attendance rate for children aged 4 is about 56%.¹⁵

In the sample, girls exhibit a slightly higher school participation rate than boys (73% versus 67%), but the difference is not statistically significant.



¹⁵ The brackets on the figures provide 95% confidence intervals. For the overall school participation rates of 3-6 year olds, this interval is 71% +/- 12%.



4.1.2. Breakdown of participation by informal/ formal dwellings

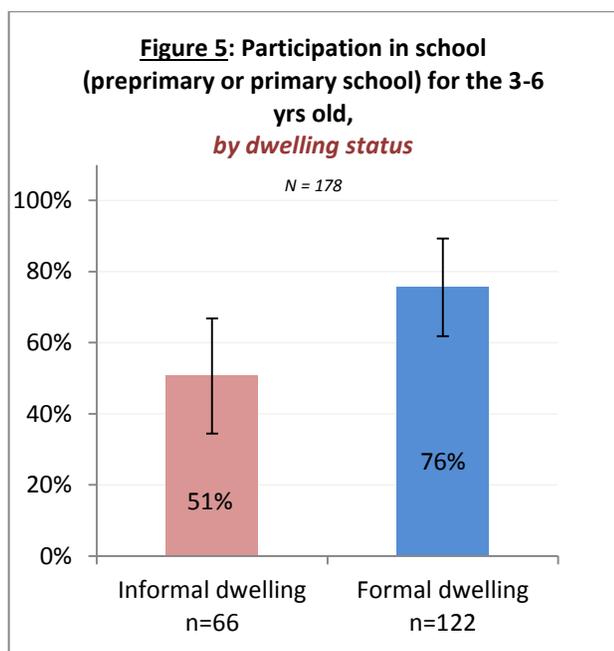
The 2001 South African census defines an informal settlement as ‘An unplanned settlement on land which has not been surveyed or proclaimed as residential, consisting mainly of informal dwellings (shacks)’. The census defines an informal dwelling as ‘a makeshift structure not erected according to approved architectural plans’.¹⁶

An estimated 20% of children aged 3-6 in the survey area live in an informal dwelling, generally a tin structure. The majority, however, live in small formal brick structures surrounded by a small yard. Many of these are Government-built RDP (Reconstruction and Development Plan) houses, more than two million of which have been built since the end of Apartheid. These houses are given for free, which means that the correlation between formal housing and income levels in South Africa, and in Soweto specifically, may not be as strong as

¹⁶ For more information on the standard definition of formal and informal used by Statistics South Africa please see: <http://www.statssa.gov.za/census01/html/concepts%20&%20definitions.pdf>

witnessed in other urban areas in sub-Saharan Africa.

However, the rate of school (preprimary or primary school) participation for the 3 to 6 years old still remains lower in informal settlement areas (the difference being statistically significant at the 5% level). For 3 to 6 year olds living in informal dwellings participation in formal schooling is 51% (+/- 16.2%), while for those living in formal dwellings it is 76% (+/- 13.8%).



4.1.3. Breakdown of participation by poverty status

In an attempt to get estimates of poverty and household financial status, typically difficult numbers to measure with short surveys, we used two different data collection methods to assess poverty status in the household survey:

- **Poverty status based on reported income:**

The respondent was asked to estimate income in a typical month along five dimensions (salaries/wages, profit from businesses, agricultural income, remittances and other income) for all household members in the household older than 12 years. We add those individual incomes, and derive daily income per capita in the household.

This data provides useful ballpark figures, but it should be noted that household total income data is available for only 78% of 3 to 6 year old children. The most common reason for missing data is that respondents refused to provide the estimated income for at least one member of the household but there were also a few cases in which the household total income appeared to be inaccurate, in that it was too low given reported school expenses).

Based on this imperfect data, we find that 15% of the 3-6 year old children in the area live in extreme poverty, i.e. in a household earning less than \$1.25 PPP per capita per day, and 32% live in a household earning less than \$2.50 PPP per capita per day.¹⁷ Those figures increase to 31% and 49% respectively if the sample is restricted to those living in informal areas.

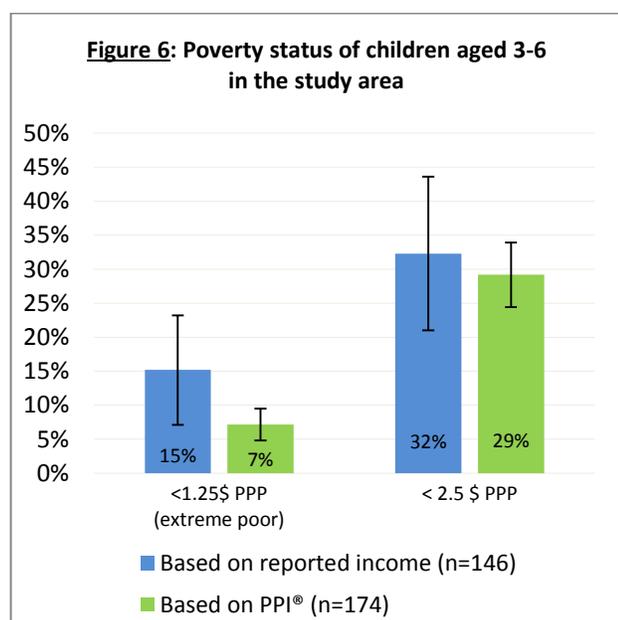
- **Poverty status based on the *Progress out of Poverty Index*® (PPI):**

This tool, developed by Mark Schreiner from Microfinance Risk Management L.L.C, is comprised of a country-specific set of 10 simple questions. The majority of these questions relate to asset

¹⁷ PPP is in 2005 international USD. Conversion rate used: 1 international USD 2005 = 6.251 Rand of 2012 (authors' derivation based on data.worldbank.org/indicator/NY.GDP.MKTP.CN and data.worldbank.org/indicator/NY.GDP.MKTP.PP.KD)

ownership, but some relate to attributes such as family size and family education. It produces a score (the PPI index), that estimates the probability that the household is below a certain poverty line.¹⁸ The PPI questions are somewhat less sensitive than income question, and we therefore had a response rate of 100%.

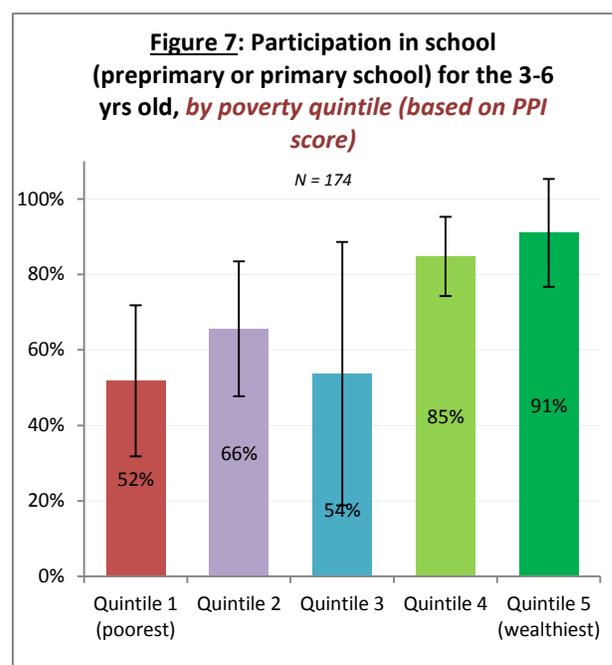
Based on this data, our estimates of poverty are slightly lower: we estimate that 7% of the 3-6 year-olds in the area live below the \$1.25 level, and 29% below the 2.50\$ level. Those figures are 19% and 60% respectively for informal dwellings only.



The correlation between PPI score and income per capita in our sample is fairly high (59.7%). Moving forward in this report, we will use the PPI index as our preferred poverty measure, since it removes the problem of missing data and is likely less prone to under-reporting.

Using the statistics on poverty status, we now look at school participation for children aged 3 to 6 using PPI score quintiles (see Figure 7). Generally,

we see that wealthier households send their children aged 3 to 6 to preprimary or to primary school more than poorer households. The participation rate is in fact statistically significantly associated with PPI score (whether we use a probit or a logit regression model). The difference is striking – around on half of the 3-6 year olds from the poorest quintile attend school compared to 90% of those in the wealthiest quintile.

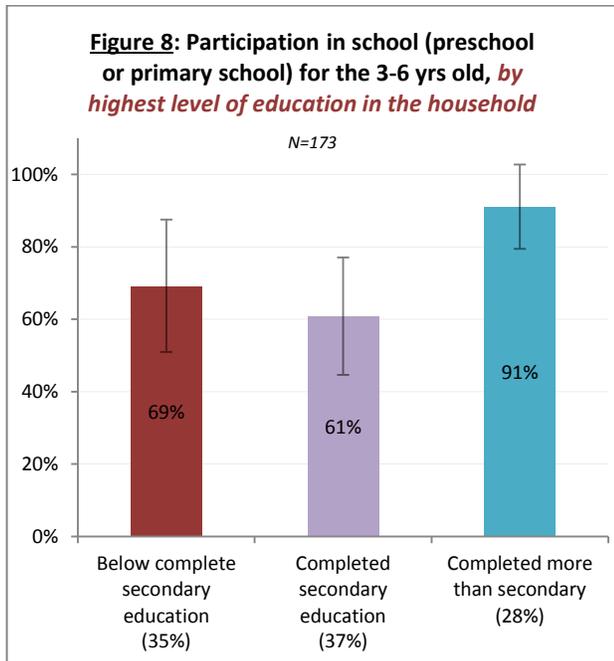


4.1.4. Breakdown of participation by level of education of parents

All households we surveyed that contained a 3-6 year old child had at least 1 adult member who had completed some primary school. In fact, in the survey area we estimate that around 97% of the children aged 3 to 6 have at least one member in their household who completed some level of secondary school, and no less than 65% have at least one member in their household who completed secondary school. The breakdown below (Figure 8) shows that a higher education level in the household is associated with larger

¹⁸ "Progress out of Poverty Index: A Simple Poverty Scorecard for Kenya", Mark Schreiner, 2011.

participation rates. This association is statistically significant (which we see whether we use an ordered probit or an ordered logit model).



4.1.5. Breakdown of participation by nationality

Based on our data we estimate that around 4% of children in the study area do not have a South African passport or birth certificate. Anecdotally we found a number of children from Mozambique, Nigeria and Malawi. Most of them live in informal areas. We estimate that about three quarters of non-South African living in the study area live in informal dwellings, compared to only 16% among South African children aged 3-6 of the study area. It should also be noted, as background, that parents of non-South African children are not eligible to child support grants, which are among

the main source of income in poor households in the study area.

The data shows large discrepancies in school attendance between nationals and non-nationals. While preschool attendance is estimated at 71% for 3-6 year old children as a whole it is only 15% percent for those without a valid South African ID.

Only 15 non-South African children within the age range were within our sample but the difference in participation rate is still highly statistically significant. This indicates that a program aimed at helping South Africa’s substantial immigrant population to access preprimary facilities could target an underserved population.

4.1.6. Absenteeism and time spent in preschool

According to the household survey data, 100% of the children attending preschool or Grade R attend school for 5 days in a “typical week”. We also asked the headmasters to assess the proportion of enrolled children that were absent on an average day. On average reported preprimary absenteeism in schools attended by children within our sample was just 4%, indicating that, according to headmasters, absenteeism levels are very low.

Children attending preschool or grade R are usually in the center for a large number of hours – 98% are there for 25 hours or more per week, and the median amount of time spent in preschool in a typical week is in the 35-45 hour range. 35% are spending 45 hours or more (or at least 9 hours per day in a 5 day week) in school.

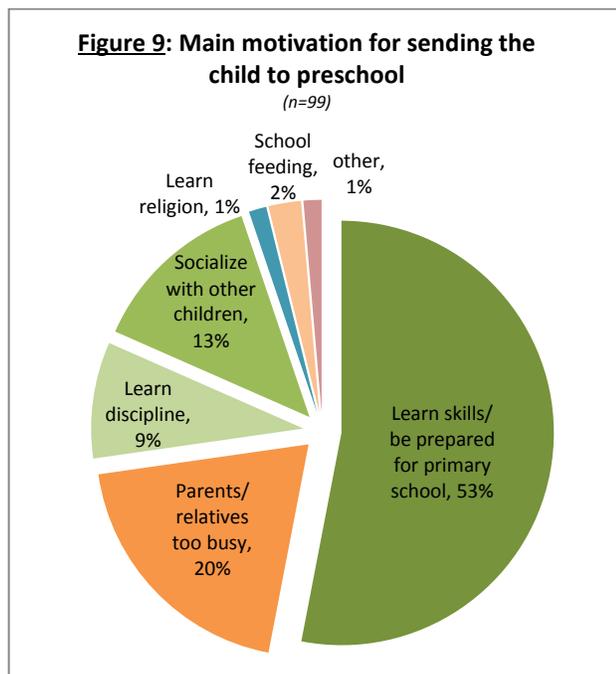
4.2. Description of the demand for ECD services

4.2.1. Parents value preschool education highly

Estimating the demand function for preprimaries cannot be done in a satisfactory way with an observational study (i.e. without imposing an exogenous variation on prices). However, one can (i) try to understand the nature of the demand for preprimary services to get a sense of whether willingness to pay is likely to be high, and (ii) estimate the expected returns to preprimary education for parents.

- **Nature of the demand for preschool services**

To approach this question, caregivers of preschool students were asked an open-ended question about the main reason why they were sending their child to preprimary. Their responses were categorized by the enumerators, and the results are shown on Figure 9.



In a majority of responses the main motivation was for the child to learn skills or be prepared for primary school. Only 20 percent view preprimary primarily as a daycare service.

When looking at how these results differ for grade R versus preschool it seems that, as we might expect, preschool fulfills more of a daycare center function than grade R; more than 20% of preschool students attend school predominantly because there is no one is at home to look after them, but the same is true for less than 10% of grade R students.

In our sample of 178 preprimary-aged children 59 were not going to preprimary nor primary school. We asked the caregivers of these children to detail the most and second most important reasons that they did not send their child to school. Out of these caregivers 74% said that that the most important reason was that they could not afford the fees, indicating that there are important financial barriers to preprimary participation. No caregiver said that the most important reason they kept their child at home was that there was someone to look after them. This indicates that even amongst those who are not sending their children to preprimary it is not viewed simply as a daycare centre, though the 24% who named availability of an adult at home as the second most important reason indicates that this may be an important facilitator of a decision taken for other reasons.

Overall, there seems to be a clear education-related motivation, which points toward a likely demand for academically-oriented preprimary services (as opposed to simple daycare services). During the headmaster survey, however, we found

that the average school attended by students from within our sample makes provision for children to be able to arrive about 80 minutes before the school day officially starts. Anecdotally headmasters told us that many parents do make use of this facility, which indicates that need for daycare is likely also to be at least a subsidiary motivation.

- **3-6 year old children not attending preprimary or primary school generally have little access to learning materials**

With the objective of building a proxy for the amount of educational opportunities at home, parents of 3-6 year old children were asked about the educational materials that they have at home.

Of all children 3 – 6 years old 63% (whether attending to preprimary or not) live in households with at least 1 textbook, and 77% have access to paper and pens. Amongst the subset of children that do not attend school or preprimary these figures were lower at 28% and 47% respectively. This indicates that children not attending school may also be more disadvantaged than their school-attending peers in terms of learning materials available at home. A large proportion may not have any access to reading and writing materials.

- **Expected returns to preschool education are high**

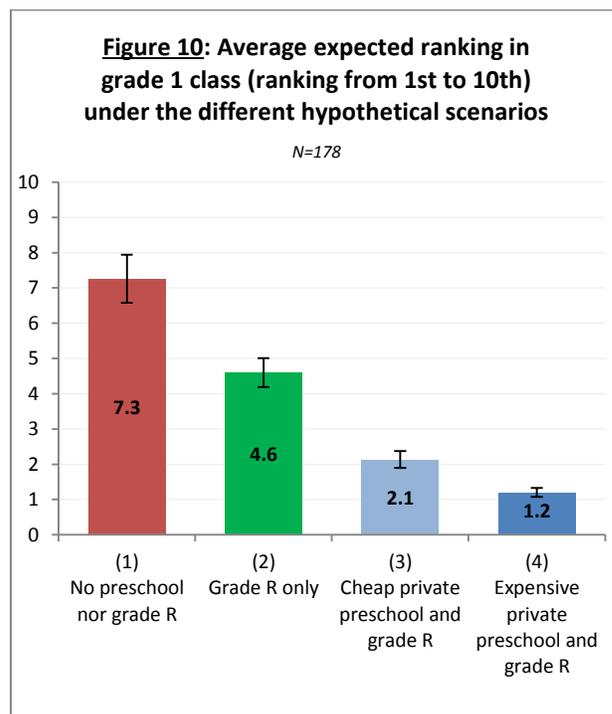
To get at the subjective concept of expected returns to different types of preprimary, and thus the rank in terms of quality and expected skill-generation, we asked respondents to estimate both short- and long-term returns for each child who was either in the 3-6 age range or going to preschool.

(i) Short-term returns: preparation for primary school

We first asked caregivers to assess how their child would rank in grade 1 under four distinct hypothetical scenarios:

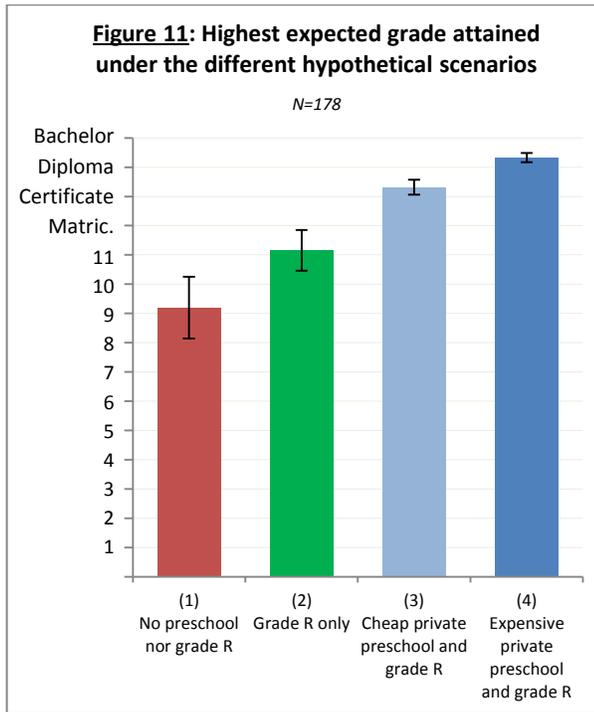
1. If they had been to neither preschool nor grade R (so go straight to grade 1 with no prior schooling);
2. If they had been to grade R only (no preschool);
3. If they had been to a preschool charging less than 200 ZAR/month (~20 USD) and then to grade R;
4. If they had been to a preschool charging more than 400 ZAR/month (~40 USD) and then to grade R.

In each of the scenarios, the respondent was invited to rank the child between 1st and 10th (1st being the best student in the class, and 10th the weakest). Figure 10 shows the average ranking in each of the four scenarios. This clearly indicates that caregivers do understand preprimary as an important preparation for success in primary school.



(ii) Medium-term returns: Highest education level attained

We then asked caregivers what they thought the highest level of education their child would go on to attain in each of the 4 scenarios. Respondents indicated that they thought their child would drop out of school earliest if they had no preprimary education (scenario 1), and that they would remain in education the longest in scenario 4.



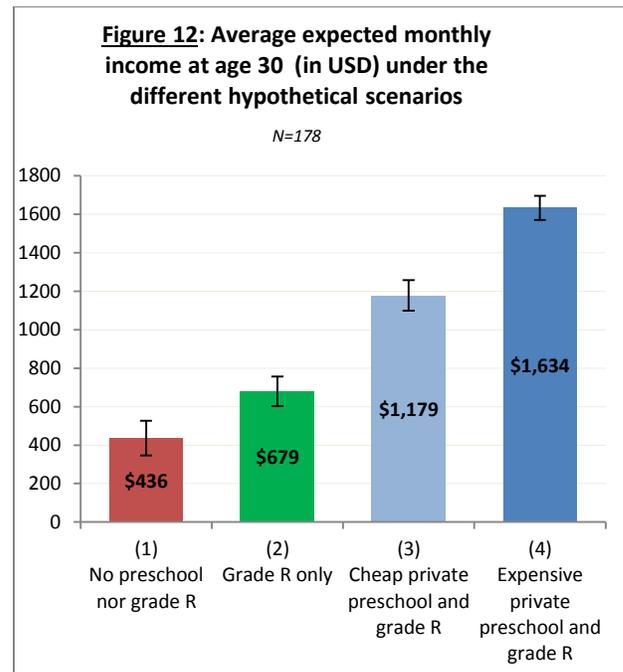
On average respondents estimated that their child would not complete more than primary education under scenario 1, would complete secondary school only under scenario 2, and that the child would go on to complete some tertiary under scenarios 3 and 4. This seems to indicate that the learning benefits of preprimary are seen as enduring beyond the early years of primary.

(iii) Long-term returns: Income at 30

Finally, we used the same four scenarios and asked parents how they thought their child would go on

to earn per month when they are 30 years-old. Figure 12 shows the average expected monthly salary¹⁹ under scenarios (2), (3), and (4) compared to the no preschool scenario. Note that this data indicates very optimistic expectations knowing that average reported income in the 25-60 year old population is around \$234 USD per month in our sample.^{20,21}

We cannot, of course, be sure that some of these responses are not driven by what the respondent thought the interviewer was expecting to hear. We saw above, however, that enrollment rates are high and that parents do seem to view preprimary as having strong returns which points towards the same direction.



¹⁹ We asked for income ranges only instead of actual figures. Therefore, to calculate those averages, we assigned to each range its middle value. For the last range –namely “14,000 ZAR per month or more”, we assumed that the average would be 18,000 ZAR.

²⁰ This income data is available only for households that have kids aged 3 to 6 or going to preschool –which are the same households for which the question about expected returns to education. That being said, as described in part 4.1.3, note that it is possible that this income data suffers from some degree of under-reporting, and is only available for 78% of children in the age range.

²¹ Exchange rate used: 1 USD = 9.9313 ZAR

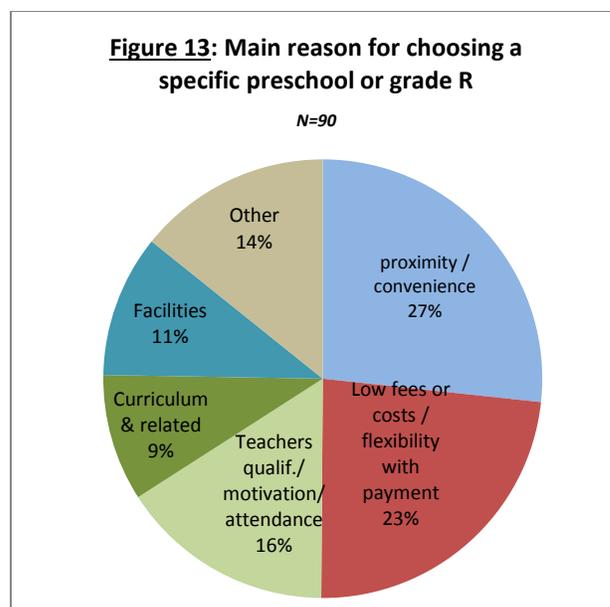
These results seem to indicate that parents do value preprimary as important for a child in terms of immediate school readiness, eventual educational attainment and income in the future.

Beyond the fact that those expected returns seem to be very high, it is interesting to note that in each case parents see the highest ‘percentage improvement’ as being between grade R only, and grade R and a low cost preschool. It seems that parents believe that even a low cost education will pay considerable dividends in the future.

Finally we find no significant difference in expected income for girls versus boys in any scenario.

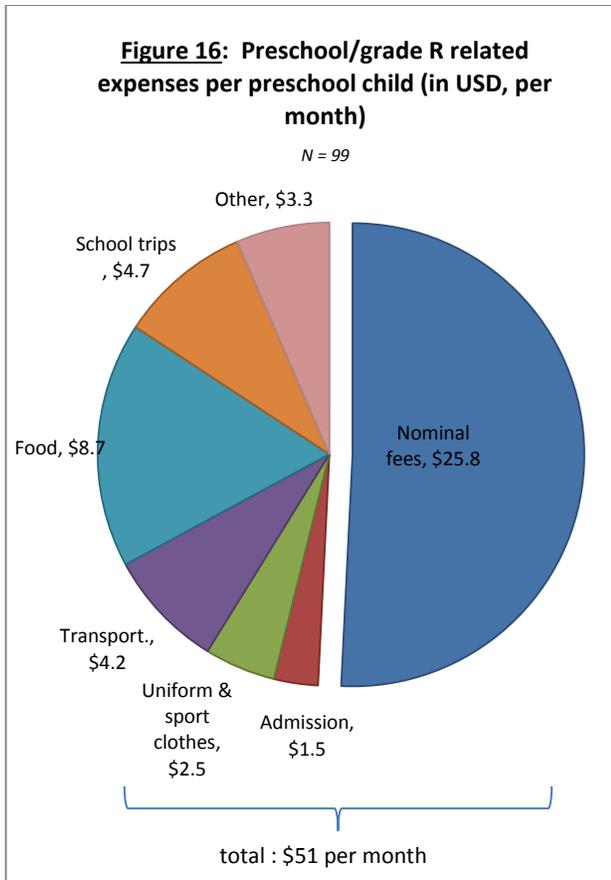
4.2.2. Low ability to pay

Having established that parents profess to place significant value on a preschool education, we now investigate further how parents choose where to send their child, and how much of a factor cost is in making this decision. We asked parents whose children attend preprimary to give the main reason they chose that particular school, and the results are given in Figure 13. The pattern of responses was similar for preschool and grade R, and we therefore use the two together here.



The reason mentioned most often was related to convenience and proximity (27%), but cost (or flexibility with the schedule of payment) was mentioned by 23% of the caregivers of preschool students as the main reason for choosing a specific preschool. A further 23% mentioned cost as the second most important reason, which means that cost is a strong consideration when choosing a preprimary for at least 46% of the households.

To further investigate the financial burden that preprimary imposes, we turn now to preprimary-related expenditures. In Figure 14, we show the various preprimary related expenditures. By these we mean the expenses that would not have been incurred if the child was not going to preprimary. Some are fees charged directly by the school (such as nominal fees or school feeding fees), others are expenses that are not paid to the school but would not have been incurred if the child was not going to preprimary (such as uniform and books). The sum of all those different costs is the total monetary cost of sending the child to preprimary, which is about \$51 per month per child on average.

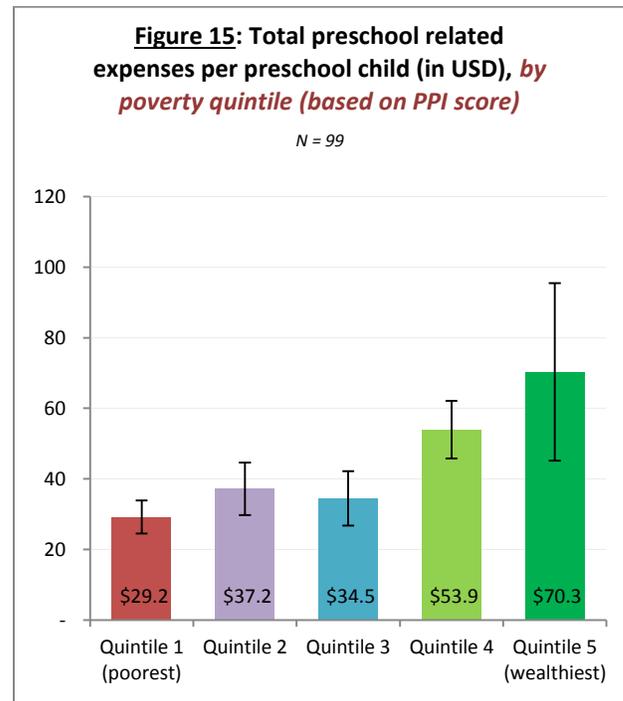


Based on the self-reported income data described earlier, this (ie the fees for *one* preprimary child) would represent as much as 11% of the household total income on average. While this figure should be treated with caution given the potential underreporting on household income, it seems fair to conclude that parents do allocate a very substantial proportion of their income on preschool related expenses. This indicates again that caregivers do see preprimary education as an important investment.

It also indicates, however, that preprimary services are in fact expensive compared to other services, especially when considering educational costs of multiple children.²² Figure 15 looks at the variation

²² Within our sample households with at least 1 three to six year old child had an average of 1.3 children in the age range.

in preprimary expenses across the different poverty quintiles (again, based on PPI®).



As expected, the preprimary expenses of the poorest households tend to be lower. This association is statistically significant (using a binary regression of total preprimary related expenses on PPI score). In other words, preprimary students from poor households spend less on preprimary-related items. This is also true if one looks at nominal fee expenses only.

Discounts, Scholarships and Government Support

Within our sample the incidence of scholarships or fee reductions is very low, but there is high take-up of the Government's Child Support Grant (or the Foster Care Grant for those caring for children who are not their own). All South African children between the ages of 0 and 18 who come from lower income families are eligible for this grant,

which is worth around \$30 per month.^{23,24} This grant is being claimed for 74% of the children attending preprimary in our sample, and a further 15% are not eligible either for income or nationality reasons. Within the poorest PPI quintile the proportion claiming is actually 94%. It seems, therefore, that that government is succeeding in providing support to lower-income parents. We also find that, amongst the poorest quintile, those receiving the Child Support Grant spend more on their child's schooling than those who don't, though the data does not allow us to establish a causal relationship here.

Asides from government support, however, few parents receive assistance to help offset the cost of the preprimary education. Only 7% of children receive a fee discount from the school they send their child to, and the average discount is around \$4.²⁵ These discounts seem to be given on an ad hoc basis and seem to be due to family circumstances, rather than academic merit. No child was receiving a scholarship or bursary from an organisation other than their school. It seems, therefore, that parents are paying a significant portion of the fees themselves.

Overall, preprimary choice is certainly affected by poverty level; ability to pay seems to act as a significant constraint when choosing a preprimary school.

4.2.3. Further evidence on demand-side constraints to quality

We asked caregivers of preschool and grade R students to name the preschool or grade R they thought was of best quality among those that they knew of within walking distance for their child. We found that, among preprimary children who walk to preschool or grade R, 40% of parents are not sending them to what they consider is the best school for that age group within walking distance. Parents from the wealthier quintiles seem to be slightly more likely to be sending their children to what they consider the best school, but the association is not strong.

Almost two thirds of those who send their child elsewhere stated that their main reason was that that school was too expensive. 3 out of 4 caregivers of children in this situation in the poorest quintile stated that their main reason was that the preschool preprimary they considered as best was too expensive, while it was the main reason for only 1 out of 4 in the richest quintile.

This seems to point again towards a key- barrier preventing parents from choosing the best quality ECD, and that this is it may be particularly the case for the poorest households.

²³ The current stipulation for receiving the grant is that the household should not earn more than ZAR 34,800 per year if single, or more than ZAR 69,600 per year if married. For more information please see: <http://www.services.gov.za/services/content/Home/ServicesForPeople/Socialbenefits/childsupportgrant/>

²⁴ 30 USD ~ 300 ZAR

²⁵ This figure is calculated excluding one child who gets free tuition to an expensive school because her mother works there.

4.3. Description of the supply of preschool ECD services

This section of the analysis draws on the headmaster survey data more intensely than previous sections. We will therefore first provide more information about this data to assist the reader in putting the quantitative claims we are making below in perspective.

The relatively small sample size produces large confidence intervals and it is therefore especially important here to remember that the information provided below can only provide an indication of actual figures across Soweto; it should not be considered precise.

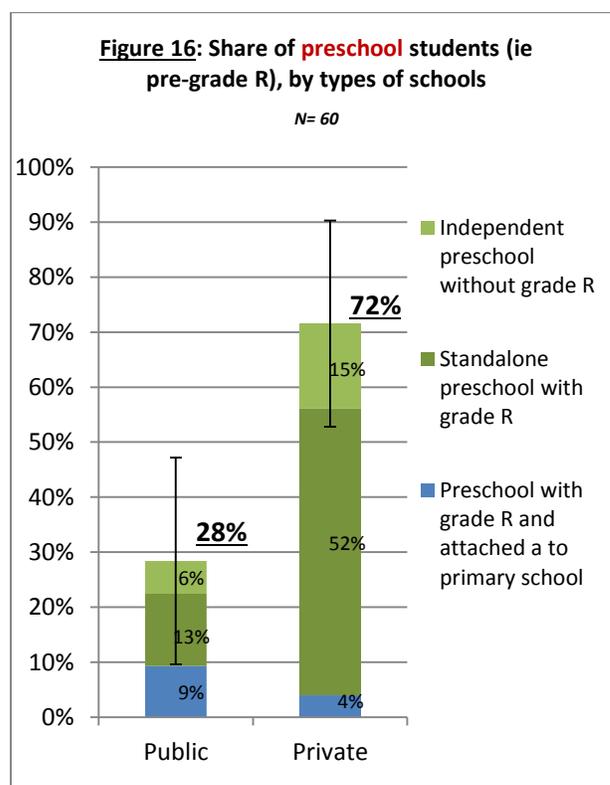
Second, two different types of claim will be made here, using two different sampling weights systems. Sometimes it will be stated that “x% of preschool students attend a preprimary school that have/do...”, in which case larger weights are being put on preschools that were attended by multiple children in the sample. In other instances it will be stated that “x% of the preschool preprimary attended by our sample of children have/do...”, in which case all 77 schools that were in the preschool preprimary sampling frame are given equal weight. Within these two weighting systems we will also sometimes make statements pertaining just to those schools attended as preschools by children in our sample, and those schools attended as grade R by children in our sample. Some schools fall into both categories. We are using the weight system that seems most relevant in each instance.

Last and overall, due to the nature of the data we will draw more heavily on qualitative than quantitative analysis. Quantitative supporting data will not always be available or appropriate.

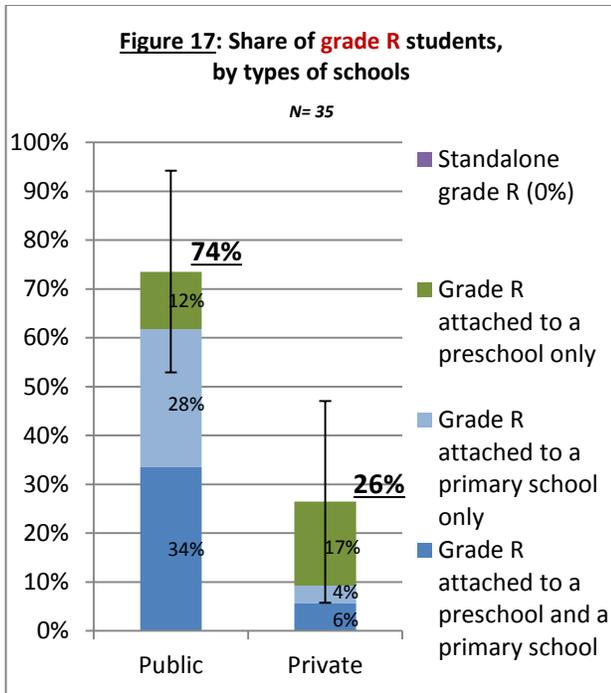
4.3.1. Typology of Preprimaries in Soweto

- **Most children attend a private preschool but a public grade R**

An estimated 71% of preschool students in Soweto go to a private preschool (Figure 16), but an estimated 74% go to a public grade R (Figure 17). In terms of absolute number of centers, out of the 40 pre-grade Rs attended by children from the sample, 27 are private, while out of 29 grade Rs attended, only 11 are private.²⁶



²⁶ Note that the absolute numbers of schools do not match exactly the percentages of children indicated above both because of the unequal probability sampling and because multiple children are sometimes going to the same schools.



This shows a strong pattern of transition from the private to the public sector between pre-grade R and grade R.

For primary school students we find that in the study area 89% are attending a public school, which is even higher than the 74% of grade R students attending public schools. In absolute numbers, we found no less than 64 public primary schools that were attended by children from our sample (most of which had a grade R attached), but only 12 private primary schools.

It appears that while there is a large and vibrant private preschool sector, unlike peri-urban areas of other African countries, the private sector plays a relatively minor role in grade R as well as primary school provision in the study area.

Table 2 shows the breakdown of schools within our sample. Of the sample 9 of the 30 are public

schools, of which all 9 offer grade R and only 2 offer preschool²⁷.

Table 2: Breakdown of schools within our sample by grades offered and public/private status

	Public	Private
Total	9	21
<i>Offering Preschool</i>	2	21
<i>Offering Grade R</i>	9	10

Within our sample there is considerable overlap between the public/private split and the preschool/grade R split. Very few public schools offer preschool, so a large majority of preschools are private, and a large majority of public schools only offer grade R. In the below analysis we will sometimes distinguish between public and private schools, and sometimes between preschool and grade R but the large overlap should be born in mind when interpreting these results; public schools are almost exclusively grade Rs.

- **Private schools registered with the Government tend to be better funded and better resourced than unregistered schools**

Of private preprimaries attended by children within our sample 62% were registered with either

²⁷ These two schools take 4-5 year olds, but not younger children. According to headteachers they effectively split the grade R intake into 2 groups based on age, and they conceptualize these classes as quasi grade R; the style and content of teaching is very similar to that in grade R.

the Department of Social Development or the Department of Basic Education.

Registered schools and non-registered schools differed on a number of scales. Summary findings in registered schools within our study area include:

- Teacher salaries were higher (see Table 3);
- There were more learning materials such as textbooks;
- Both the school and parents were less likely to receive financial support from another organization. For example, no parents in unregistered schools were receiving a fee exemption;²⁸
- Schools were older. On average registered private schools in our study area were founded in 2004 and non-registered private schools were founded in 2009.
- Schools were slightly larger. The average registered private preprimary had around 55 students, compared to 45 in a nonregistered preprimary.

Table 3: Typical teacher pay per month for teachers in registered versus non-registered schools (in ZAR)

	Registered School	Non-Registered School
Preschool Teacher	1600 (\$165)	1200 (\$124)
Grade R Teacher	2000 (\$206)	1000 (\$103)

Overall it seems that non-registered schools are worse off in a number of different areas. It is important to note, however, that we are unable to judge the direction of causality here; it could be that once a school is registered it becomes better

²⁸ Fee exemptions are granted to low income parents in some areas. For more information on the South African system of fee exemptions see: http://www.westerncape.gov.za/sites/www.westerncape.gov.za/files/documents/2013/school_fees_regulations.pdf

resourced, or that better resourced schools are better able to register and meet the registration requirements. There may also just be no particular causality between resources and registration, in the sense that younger schools are possibly simply not registered *yet*, and at the same time have not yet been able to make the investments that would make them look similar to registered schools.

Whichever is predominant, however, the two tier nature of private schools suggests that interventions aimed at unregistered private schools might be well-targeted.

We used our data to estimate whether the private preschools in our sample fulfilled a sub-selection of the DSD registration requirements, namely latrine number, class size, providing a 'safe environment for children within the facility' and providing 'proper care for sick children or children who become ill'²⁹. Table 4 shows the percentage of schools attended by children in our sample that were able to fulfill these criteria:

Table 4: % of preschools attended by children in our sample that meet a sub-selection of DSD registration requirements

Requirement	% private schools attended as preschools that can meet requirement
Latrine number per child	65%
Pupil teacher ratio	81%
Safe Environment (fence)	100%
Health (first aid kit)	52%
All of the above	33%

²⁹ We used existence of a fence around the school as a proxy for 'safe environment' and possession of a first aid kit as a proxy for 'proper care for sick children'. These are probably very restrictive proxies, so that the proportions obtained for these categories are certainly upper bounds.

It seems that based on our calculations only a third of private preschools in our study area can meet these four requirements. We also find, however, that unregistered schools are no less able to fulfill them than registered schools indicating that there must be other reasons explaining their non-registered status. One possible explanation for this surprising result is that unregistered schools are smaller, and perform well in terms of ratio (teacher or latrines). This result may also be a sign that registration requirements are only verified at the time of registration, and not later. For example, once registration has been secured, there would be little enforcement to make sure that infrastructure and number of teachers grow at the same rate as the increase in school attendance. This is in line with what we heard from sectoral experts and a few headmasters, who were describing that there was indeed a DSD visit aimed at verifying the facilities at the time of registration, but rarely after registration had been obtained.

- **Chains of preschools are not a major feature of the Soweto landscape - most private preschools are standalone schools**

Most of the private schools in Soweto are a single standalone school. Only 2 schools of the 21 private preprimaries in our original sample of 30 preprimaries belonged to a chain, and of these 1 had only had 1 sister-school. The second chain was somewhat larger, but it seems as though generally private preprimaries are small businesses.³⁰

³⁰ We were unable to secure an interview with the headteacher of this school, and therefore replaced it. Information from the school within that second chain therefore does not form a part of this analysis.

4.3.2. Quantity considerations

To investigate the number of preprimary options that caregivers have to choose from, we asked caregivers of children who were aged 3 to 6, or going to preprimary, how many preprimaries they knew in the area that their children could walk to (including the one their child was attending, if relevant). The results are displayed in Table 5.

Table 5: Number of Preprimaries that caregivers of children attending preprimary know that are within walking distance

	Average Number of Schools Known	Proportion knowing more than 2 schools
Knowledge of preschool options among caregivers of children attending preschool	3.3	90%
Knowledge of grade R options among parents of children attending grade R	2.1	33%

It seems that the caregivers of children attending preschool do mostly know at least 2 (and most know 3 or 4) preschools within walking distance. It may be, of course, that for a number of parents a proportion of the schools they know will be out of reach for cost reasons, but it does seem that most parents do have options from which to choose a school. Given this, and the fact that (as we saw above) the most common reason given for picking a school was its proximity to the house, it is not surprising that 73% of preschool children walk to school.

That situation is somewhat different for grade R. A full third of caregivers whose children attend grade R know 1 or fewer in their neighborhood; it seems that parents have less choice at this schooling level. Anecdotally, this fits in with what we witnessed in Soweto – public schools (where most grade R children go) tend to be large and relatively scarce. Despite the comparatively small number of

schools within walking distance, 84% of children attending grade R still walk to school.

Amongst children who walk to school the average length of commute is 12 minutes both for preschool and grade R. Amongst the 24% of children who do not walk most take a minibus, taxi or school bus. Amongst non-walkers the average length of commute is 22 minutes.

To further understand the extent of parental choice we asked headmasters whether their preprimaries accepted all students, to verify whether preprimaries were saturated. An estimated 77% of preprimaries attended by children in our sample claim that they accept all children. All of those that did not stated that their reason for not doing so was that they were full (and that they operated their admissions on a first come first served basis). This seems to indicate that only about a fourth of preprimaries are saturated. This figure is not significantly different when restricting the calculation to schools that parents listed only as the best school within walking distance.

Again, however, looking at the breakdown between reception year and pre-reception year is instructive; 61% of the schools attended as grade R by children in our sample accept all children, compared to 83% of the schools attended as preschool by children in our sample. A partial explanation for this may be that around two thirds of schools offering grade R are government schools compared to just one third of schools offering preschool. Government schools, in our sample, are significantly more likely than private schools to be fully enrolled.

This reinforces the conclusion drawn from table 4 that **caregivers seem to have less choice when it comes to grade R than when it comes to preschool.**

4.3.3. Quality considerations

- **The preprimary schools in our study area generally had decent infrastructure and materials**

The basic classroom setting appeared to be geared to play and learning-through-play than to a formal academic style of learning:

- Children spent considerable time playing on the floor or outside;
- Around half of classrooms we observed containing preschool children had no desks and chairs; children sat on the floor when seated. The same was true for 2 of the 10 classrooms we observed containing grade R children.
- In more than half the classrooms we observed no children wore uniform.

Materials in classrooms were also more geared towards play than formal learning:

- Less than half of the schools attended as pre-grade Rs in our sample had any textbooks in the classroom, and less than 20% had more than 1 textbook per child.
- Only around 10% of schools had no storybooks and the average school had more than 1 story book for each child.
- Schools generally had a decent number and variety of toys available for preprimary use. Only about 10% of schools did not have any toys.

Wider school infrastructure was also generally quite good. All schools offering preprimary grades had latrines on the premises and a fence around the school. All bar one had electricity at least some of the time and all bar two had a playground for the children.

- **Student-teacher and student-classroom ratios**

On average across all schools a preprimary child in the survey area is in classroom where teacher/pupil ratio is 1:21 and the average number of pupils per classroom is 24. There is considerable variation from school to school however; we found student teacher ratios as low as 1:6 and as high as 1:40. These figures do, however, differ significantly by level and by type of school.

Preschool versus Grade R

Student teacher ratios and pupils per classroom generally seem to be larger in Grade R. Children attending grade R have a student teacher ratio of 29:1 and a class size of 33 on average, while those attending preschool have a ratio of 17:1 and a class size of 20. This is roughly in line with what one would expect given that grade R classes are predominantly public (where class sizes are traditionally higher), contrary to preschools where recommended class sizes are smaller.

- **Profile of teachers**

Gender

An overwhelming majority of preprimary teachers are female: they are an estimated 9 out of 10 teachers in the preprimaries attended by children in our sample³¹. The proportion of female teachers differs for grade R and preschool; in preschool 97% of teachers are female, compared to 68% of grade R teachers.

³¹ This is based on 70% of the teachers within our sample. We were unable to ascertain the gender of teachers from the names of the remaining 30% (representing 22 teachers).

Qualifications

According to their headmasters most teachers in schools in our study area – 85% - have completed an ECD-specific training course. This breaks down into 96% of public sector teachers and 79% of private sector teachers.³² South Africa has a sophisticated system of ECD-related further education courses. Of those with a qualification around two thirds of private sector teachers have only a basic qualification (equivalent to less than a high school certificate) while over 60% of public sector teachers have a certificate or diploma in ECD.³³

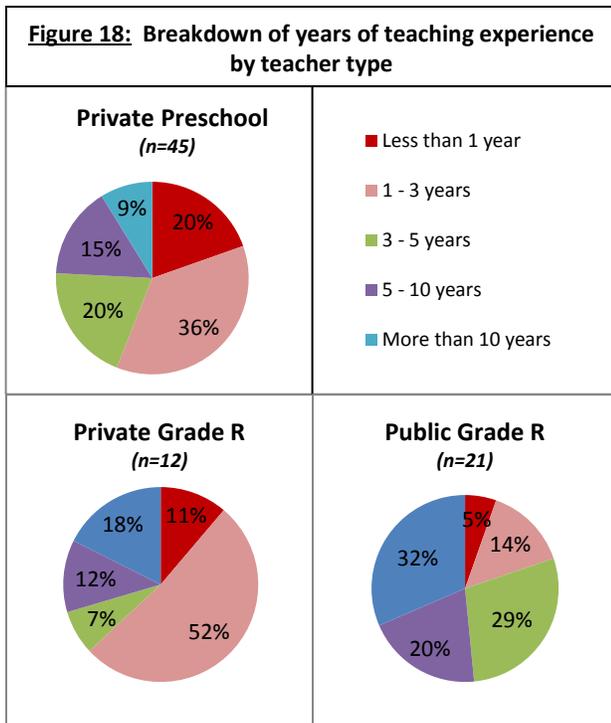
Teaching Experience

Across the preprimary sector teachers have on average 6 years of teaching experience. In the public sector the average was 8 years, compared to 5 in the private sector. Figure 18 shows the difference in teacher experience between private preschool teachers, private grade R teachers and public grade R teachers³⁴.

³² 94% of grade R teachers have an ECD-specific training course compared to 79% of preschool teachers, which demonstrates, as mentioned in section 4.3.1, how closely the two splits mirror each other.

³³ Again, this mirrors the preschool/grade R split; around two thirds of preschool teachers have only a basic qualification compared to just a third of grade R.

³⁴ Public preschool teachers are excluded due to the very small sample size.



- **A relatively non-academically oriented teaching style**

It seems that teaching style in preschools is less academically oriented than in other countries we have visited in sub-Saharan Africa. We saw above that in many classrooms children did not sit in rows facing the front, but instead around round tables, or on the floor. Lesson content also seems to be less academically focused.

Exams

No schools attended by children in our sample hold exam with preschool children. This is in line with government policy for admission to primary school, which states that “schools may not administer tests, or use pre-school experience or language as

reasons not to enroll a child [into primary school].”³⁵

Homework

In 3 of the schools no homework was set for preschool children. In the remaining 27 the average age when homework is first set is 5. This is considerably later than in other countries in sub-Saharan Africa we have visited; when we asked a representative sample of headteachers of schools in the Mukuru slum of Nairobi, for example, they reported that homework was first set at age 3.5, a full 18 months earlier.

Learning Goals

According to headmaster within our sample children should know the numbers from 1-9 by age 4, and should be able to read the alphabet at age 4.5. These goals are less aggressive and more generally in line with expectations of preschoolers in the US and Europe.

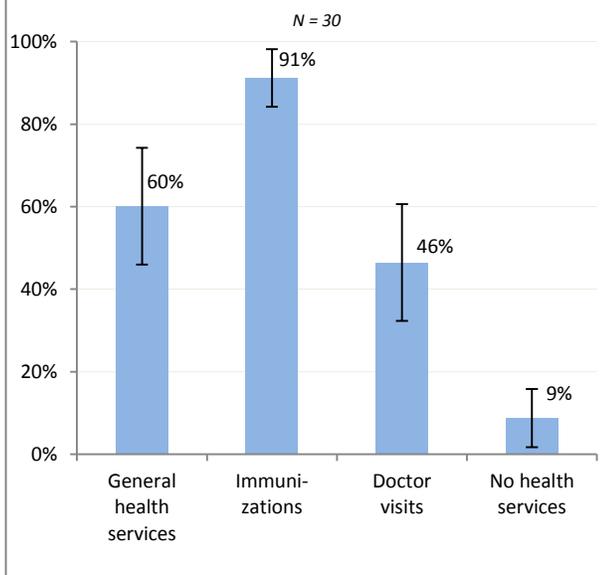
- **Health and nutrition**

All but one of the schools in our sample provided at least one meal per day to students (and over 90% provide both breakfast and lunch). For all but one of these 29 schools that provide food no extra charge is levied; food costs are included within nominal fees.

Health service coverage is also fairly satisfactory. As shown in Figure 19 less than 10% of schools offer no health services, and over 90% offer immunizations.

³⁵ For more information please see <http://www.southafrica.info/services/education/edufacts.htm#.UmpJcvnlalG#ixzz2ijGk1RF>

Figure 19: Percentages of Soweto preprimary children receiving different types of health services in preprimary



Appendix

Pictures of preschool settings in Soweto:

