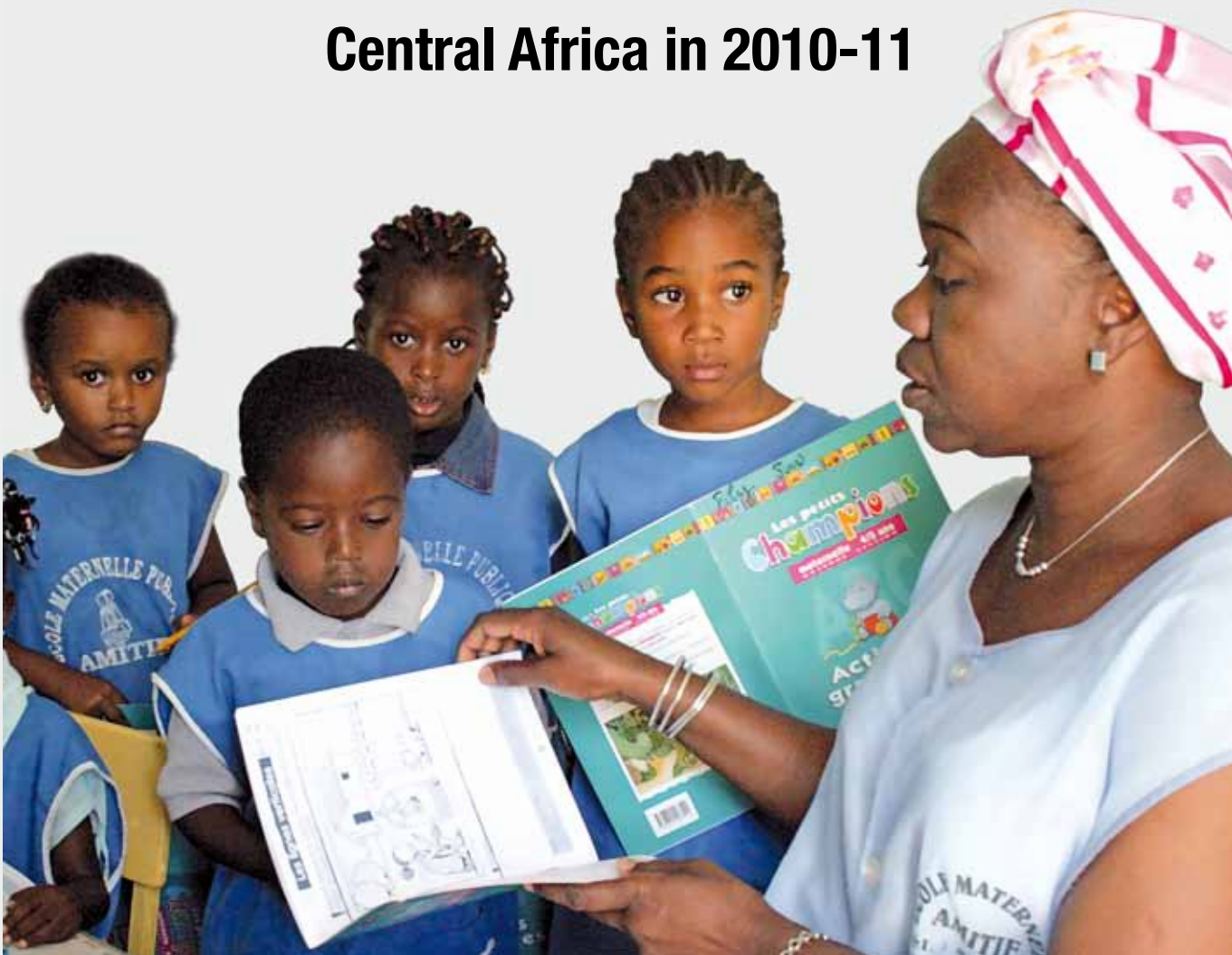# State of **Early Childhood Development** in West and Central Africa in 2010-11

Analysis based on MICS4 Surveys

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

International Institute
for Educational Planning
Pôle de Dakar
EDUCATION SECTOR ANALYSIS

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State of **Early Childhood Development** in West and Central Africa in 2010-11

Analysis based on MICS4 Surveys

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Foreword

The early childhood years, in particular the period from birth to the age of eight years, are today recognized as a crucial period for early childhood development, both in terms of children's physical health and in terms of their motor, socio-emotional, cognitive and language development.

Although some progress in the area of early childhood development (ECD) has been noted over the decade, in part following the setting of Education for All goals in 2000, many countries on the African continent are behind; few of them today have a coherent and financially sustainable ECD programme that is linked to the health and education sector programmes that they are supposed to be based on.

Although numerous explanations concur to explain this situation, one of them relates to the fact that the well-foundedness of ECD-oriented interventions, be it the utility of preprimary education or the positive effects of healthy parental practices, is not yet widely understood or known. This is all the more unfortunate that the situation of African children is of particular concern: many live in environments marked by significant privation, which hinders their optimal development and have detrimental repercussions, not least on their schooling careers.

This study aims to better understand the family and environment context in which the young children of West and Central Africa grow up and the way in which this affects their development and their access to primary school. On the basis of the findings, the study aims to provide the sector's players with a basis for reflection, be it in the countries covered by the study or other countries in the region, to identify options for the development or reorientation of ECD programmes (preschool and parental education).

Another goal of this study relates to the capacity of MICS surveys to portray ECD issues comprehensively, and to offer reorientation options to better deal with these issues in the future, on the basis of the limitations identified (note annexed to this study).

Acknowledgments

Acronyms

ARI	Acute Respiratory Infection
CSR	Country Status Report
DRC	Democratic Republic of the Congo
ECD	Early Childhood Development
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
HIV&AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
IMF	International Monetary Fund
MICS	Multi Indicator Cluster Survey
MMR	Maternal Mortality Rate
MRY	Most Recent Year
OVC	Orphan and Vulnerable Children
PASEC	Programme for the Analysis of Education Systems
PI	Parity Index
PPP	Purchasing Power Parity
U5MR	Under 5 Mortality rate
UIS	UNESCO Institute for Statistics
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children Fund
UNFPA	United Nations Population Fund
UNPD	United Nations Population Division
WHO	World Health Organization

Executive Summary

The years of early childhood, in particular the period from birth to the age of eight years, are today recognized as a crucial time for the development of young children, both in terms of their physical health, and as they relate to their motor, socioaffective, cognitive and language development.

Although progress in the area of early childhood development (ECD) has been noted over the decade, in particular following the setting of Education for All goals in 2000, countries on the African continent are somewhat lagging; few of them today have a coherent and financially sustainable ECD programme, related to the health and education programmes that should form their basis.

Although numerous reasons combine to explain this situation, one is that the rationale behind ECD-oriented activities, be it related to the utility of preprimary teaching or the positive impacts of healthy parental practices, is still misunderstood by many.

This study aims to provide factual evidence on these aspects, to better understand the family and environmental context in which West and Central African children grow up, by offering a detailed description of the socioeconomic characteristics of households with young children, of their parental practices in areas as varied as health, nutrition, hygiene and stimulation, as well as of the access of children to preschool/early learning services. The study will, among others, seek to identify those areas where progress has been noted and determine the nature of the contributing factors (social, economic, family, environmental). Thus, it will analyze the effect of these variables on the level of children's development and their readiness for primary school. The underlying hypothesis, that children growing up in an environment promoting good family practices and/or involved in early stimulation or preprimary activities have higher levels of development and are better prepared for primary school, will be checked against the data.

The results of the analyses also offer a basis for reflection on the identification of avenues for the development or reorientation of ECD programmes (parental and preprimary education), be it in the countries studied here or more globally in countries with similar socioeconomic characteristics. A final goal of this study relates to the identification of MICS survey shortcomings for a global approach to ECD issues, and the proposal of some reorientation alternatives to better address this issue in the future.

This study covers eight countries of West and Central Africa for which a MICS4 survey was available at the time of analysis. These are The Gambia, Ghana, Mauritania, Nigeria, the Democratic Republic of the Congo, Sierra Leone, Chad and Togo. They provide an interesting coverage of West and Central Africa for the 2010-11 period: indeed, 82.3 million children aged under nine years live in the study sample countries. They represent 29 percent of the population of these countries, and 67 percent of children aged zero to eight years in West and Central Africa.

The main results of the analysis are described below. They show that:

- The countries of the study face global contexts that are particularly difficult, marked by often alarming levels of poverty and insecure health and social environments. This directly affects families and their ability to satisfy their children's basic needs.

- The child-friendly quality of the family environment is generally poor: the insecurity of income and lodging that affects a great number is compounded by practice levels in health, hygiene, nutrition and stimulation that are not always optimal. The number of households in the region that do not fully master the basic health, hygiene and nutrition habits required for the optimal and harmonious development of their children is too high. The stimulation context is also marked by a certain degree of poverty in terms of books and toys, sometimes accentuated by the low level of adults' involvement in their children's learning, thus depriving the latter of an effectively stimulating environment.

- Access to preschool/early learning activities is globally weak, as only a third of children aged three to five years in 2010-2011 are concerned. Although the availability of services appears to play a frontline role in the opportunity to access preschool/early learning services, as potentially illustrated by significant regional variations, the financial capacity of families also appears to be an important factor impeding or favoring access. The positive role played by mothers' education is also noteworthy, as a potential lever, as well as parental practices, in particular in the areas of stimulation and nutrition.

- The development of 60 percent of children aged three to four years in the eight sample countries is on track. The rate increases with age, suggesting the progressive nature of the acquisition of skills with age. Children's gender has a moderate impact, being insignificant in six of the eight countries. Finally, the area of residence is not always discriminatory, but when it is, urban children are favored.

- Access to a preschool/early learning activity has the most marked impact on children's development, followed by good parental practices in terms of stimulation and the level of household wealth.

- Both protection and risk factors have cumulative, but also compensatory effects on the development of young children. However, disadvantages in terms of development are difficult to recover.

- Access to primary school is still far from being universal, and is marked by late entry (the proxy used for school readiness). Preprimary attendance has a modest effect on the age of primary access, as do parental practices.

In the light of these findings, it is possible to suggest some strategy options, summarized as follows:

- There is a strong need to better understand the determinants of family practices to encourage the adoption of those that are favorable to children's development.

- It is important to act early to achieve an optimal effect on children's development, not least because cumulated development disadvantages are difficult to recover later on. Encouraging the adoption of good parental practices (through the adoption of education programmes that are tailored to local needs), in the areas of stimulation, nutrition and hygiene, constitutes a particularly cost-effective lever of action.

- Access to preschool should be facilitated by the implementation of actions impacting both the supply of and demand for preprimary services; these actions should also seek to prioritize interventions that aim to alleviate the most disadvantaged population groups' financial constraints.

- Interventions should be at the local level, considering the strong disparities observed between countries, but also within countries.

- It will be important that countries ensure the availability of analysis tools that will enable a better understanding of the stakes, to improve the planning and monitoring of ECD-oriented interventions.

Introduction

Background and Issue

The years of early childhood, in particular the period from birth to the age of eight years, are today recognized as a crucial time for the development of young children, both in terms of their physical health and as they relate to their motor, socio-emotional, cognitive and language development. This period is particularly critical for the development of the brain (See Box 1). It is even recognized today that certain physical or mental health issues faced by adults could be related to inappropriate care during early childhood (CCCH, 2006).

Box 1: Early Childhood and the Development of the Brain

The early childhood period is considered to be particularly critical for individuals, because it is when the brain develops. At birth, a child's brain is composed of billions of neurons, close to half of which are not yet interconnected. The network between these neurons is established under the influence of genetics and lived experiences, to ultimately shape the architecture and basic functions of the brain. Indeed, if genes provide the general matrix for the development of the brain, babies' and young children's physical and social experiences (including learning) mould the brain, in addition to their environment. In this respect, the quality and quantity of experiences lived during early childhood play a prominent role (Shonkoff, 2010).

Although the brain continues to mature through adolescence, the greater part of children's development (motor, socio-emotional, cognitive and language skills) occurs before primary school age (Shonkoff, 2010).

Ensuring that the brain is suitably formed from the earliest age enables children to build aptitudes and capacities on solid bases. The neurological connections that are formed during early childhood are the foundations that support later ones. Furthermore, the delayed development of certain aptitudes entails delays in the development of other abilities. Waiting for the beginning of primary, or even nursery school, to start the learning process is already late (Knudsen et al., 2006).

Appropriate care during early childhood is also related to positive externalities both at the individual (better school readiness, better school retention, stronger levels of learning,[1] better health, greater income as adults and so on) and social (greater worker productivity, reduced risky behavior and delinquency, lower morbidity and so on)[2] levels. Early interventions are in this respect considered to be among the most productive and sensible investments, especially for children from disadvantaged backgrounds (Heckman, 2006).

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[1] See the work of Mingat.

[2] See the research of the Nobel Prize winner James Heckman. Also, *The Lancet* series devoted two special series (January 2007 and September 2011) to the ECD issue, including novel studies on the positive externalities of early childhood (http://www.thelancet.com/series/child-development-in-developing-countries).

Aware of the multiple challenges and benefits that early childhood development (ECD) carries, many countries have committed to developing national early childhood development programmes that support the creation of a 'favorable environment' that is likely to contribute to the optimal development of children in all dimensions (physical, cognitive, language and socio-emotional). This implies the development of activities in several sectors, related to education, health and hygiene, nutrition, legislation/protection, or even social affairs.[3] In the field of education, two axes are usually prioritized: parental and preprimary education.[4]

Although progress has been noted over the decade, in particular following the setting of Education for All goals in 2000, countries on the African continent are somewhat lagging; few of them today have a coherent and financially sustainable ECD programme, related to the health and education programmes that should form its basis. Public financing is often insignificant (under two percent of the education budget is allocated to preprimary in Sub-Saharan Africa on average),[5] impacting the coverage of such services. Preprimary coverage rates on the continent are amongst the lowest worldwide, at 14.5 percent in 2010 (UIS).[6]

A number of parental education activities aiming to improve key family practices in terms of early childhood care are implemented. They are generally organized by health and nutrition services. Some activities are also offered in the area of protection, and to a lesser degree in the area of stimulation and early learning. Given that these activities often depend on different ministerial services and players (due to the multidimensional nature of ECD), they are rarely part of a structured and structuring ECD programme. This approach is all the more difficult that the coordination among players and of activities is still to be reinforced in many countries.

The rationale of ECD-oriented activities, be it related to the utility of preprimary teaching or the positive impacts of healthy parental practices, is still misunderstood by many. They are also perceived as expensive (current preprimary supply is mainly private in most countries, addressing the needs of wealthy urban residents). Preprimary is furthermore rarely attributed significant budgets in a context of limited public resources, high competition among education subsectors and the prioritization of the primary level.[7] Parental practice, relating mainly to the private/family environment, is opaque in nature,[8] or even inaccessible (it is difficult to intrude into people's private lives).

This is all the more unfortunate that the situation of African children is particularly alarming: many live in environments marked by significant deprivation, limiting their optimal development (UNICEF, 2014).[9] SSA might indeed be the region where children's deprivations are the highest, according to Save the Children's development index (2008).[10] An article published in The Lancet (Grantham-Mc Gregor et al., 2007) estimated that of 117 million children under five years living in Africa, 61 percent suffered from stunting or lived in poverty, two corollaries affecting later development. Poverty, malnutrition, social conflict and forced migration, and limited access to quality health and education services are among the main concomitant factors.

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[3] Reflecting the multidimensional nature of children's development, ECD services are *de facto* multisectoral in nature

[4] The first years of primary are also a pivotal period, helping to ensure a smooth transition between preprimary and primary school (such as through the continuity of curricula). See Annex 1 on the services adapted to children according to their age.

[5] Jaramillo and Mingat, 2011.

[6] The Gross Enrollment Rate (GER) is 22.5 percent in the Arab States, 30 percent in Central Asia and 57 percent in East Asia and the Pacific. Latin America (70 percent) is just behind North America and Central Europe (85 percent), according to UIS (2010).

[7] Although the first goal set in Dakar in 2000 relates to early childhood development, this has been largely overshadowed by the goal for universal primary education.

[8] Note that the development of specialized household surveys, such as the Demographic and Health Survey (DHS) and the Multi-Indicators Cluster Survey (MICS), has shed some important light on different family practices.

[9] For detailed figures, please see the statistical tables of the report.

[10] This index is based on (i) the under-5 mortality rate; (ii) the under-5 malnutrition rate; and (iii) the out-of-school rate for children of primary school age (Save the Children, 2008).

ECD activities, given their multidimensional character, have several appeals, enabling complementary approaches to address various needs of children:

- They can play a central role in reducing socioeconomic disparities, enabling poorer children to enter primary with the minimum level required for a satisfactory schooling career. Indeed, many studies show that children from disadvantaged backgrounds often start primary school under or badly prepared, weakening their schooling *de facto* (Abadzi, 2006; Fernald et al., 2009).

- In the area of health and nutrition, parental education can play a central role in encouraging the adoption by parents of appropriate behavior in terms of health, nutrition and stimulation, contributing to the harmonious development of their children.

Furthermore, ECD activities can today provide one credible answer to the great challenges faced by the primary education sector in the areas of retention, repetition or even learning achievements. Although they cannot solve all of primary education's problems, they can significantly contribute to relieve them, by ensuring that children are ready for school and teaching, which improves both the internal efficiency of education as well as children's learning levels (Jaramillo and Mingat, 2011; Garcia et al., 2011).[11]

Goals of the Study

This study aims to better understand the family and environmental context in which West and Central African children grow up, by offering a detailed description of the socioeconomic characteristics of households with young children, of their parental practices in areas as varied as health, nutrition, hygiene and stimulation, as well as the access of children to preschool/early learning services.

The study will, among others, seek to identify those areas where progress has been noted and determine the nature of the contributing factors (social, economic, family, environmental – See the work of Mingat). Thus, it will analyze the effect of these variables on the level of children's development and their readiness for primary school. The underlying hypothesis, that children growing up in an environment promoting good family practices and/or involved in early stimulation or preprimary activities have higher levels of development and are better prepared for primary school, will be checked against the data.

The study will analyze in greater detail the effect of the interaction between the quality of family practices and access to preschool/early learning services on children's development. Are good parental practices and preschool/early learning activities substitutes (the lack of one is compensated by the presence of the other) or complementary (the effects of their presence/absence are mutually reinforcing)? This question is critical in the African context, marked by a highly limited supply of preschool/early learning activities.

Finally, on the basis of the analyses performed, the study offers a basis for reflection on the identification of avenues for the development or reorientation of ECD programmes (parental and preprimary education) be it in the countries studied here or more globally in countries with similar socioeconomic characteristics.

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[11] One more percentage point in terms of the preprimary GER translates into a 0.12 percentage point drop in the primary repetition rate. The impact on retention is of 0.317 percentage points, of which 0.209 percentage points are directly attributable to preprimary attendance, the rest being related to the indirect impact of reduced repetition (Jaramillo and Mingat, 2011).

A final goal of this study relates to the identification of MICS survey shortcomings for a global approach to ECD issues, and the proposal of some reorientation alternatives to better address this issue in the future (note annexed to this study).

Sources

The study is based on MICS4 (Multi Indicator Cluster Surveys)[12] that include novel tools to measure the physical, language, cognitive and socio-emotional development of children aged three to four years, as well as a composite synthetic indicator, the Early Childhood Development Index. MICS4 surveys also provide information on a number of parameters related to children, their families and their environment, providing detailed information on children's health, hygiene and nutrition.

This study covers eight countries of West and Central Africa for which a MICS4 survey was available at the time of analysis. These are The Gambia, Ghana, Mauritania, Nigeria, the Democratic Republic of the Congo, Sierra Leone, Chad and Togo.[13] They provide an interesting coverage of West and Central Africa for 2010-11, period during which most of these surveys were carried out. Among other approaches, it will be possible to compare these countries to each other as well as to identify subregional trends.

Analytical Framework

The analysis of parental practices and the use of preschool/early learning services is based on the finding that children's development is influenced by a great number of factors that reflect the different *micro*, *meso* and *macro* dimensions (See Figure 1 below).

- On the *macro* level, the macroeconomic, social, demographic, sanitary and political contexts largely determine authorities' political and financial commitment to ECD activities. The macro level also determines the service delivery and efficiency of social and family policies.

- Simultaneously, the *micro* context (family characteristics, parental care practices and beliefs, culture and so on) affects children's development by directly impacting on the environment they grow up in. The quality of their family and social environment is all the more critical that young children develop through the relationships and interactions that they have with others, who in the early childhood stage are mainly their parents, and their mother/carer in particular.

- These two main sets of factors interact with the quality and quantity of ECD services available in a country at the local level, whose use will also be conditioned by cultural and social attitudes and practices that are specific to the community where children and their families live. This is the *meso* level.

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[12] The sources used to characterize the quality of children's family environments (such as the quantity and quality of interactions with parents/carers and peers, stimulation and education activities carried out at home, the type of stimulation exercises and so on), the level of their physical/motor, language, cognitive and socio-emotionaldevelopment, or their schooling careers are few and far between. A reduced number of specific studies have been developed (See for instance the work of Mingat et al.).

[13] The databases and questionnaires are available online: http://www.childinfo.org/mics4_questionnaire.html.

Figure 1: Micro, Meso and Macro Factors Affecting ECD

MICRO SPHERE

Children's Development:
- Physical/motor
- Linguistic
- Cognitive
- Socio-emotional

Child's health and behavior

Family Context:
- Family characteristics
- Parents' education
- Family income, etc.
- Parental care practices

MESO SPHERE

ECD Services and Programmes (access, quality)
- Parental education
- Preprimary education
- Health, nutrition and hygiene services
- Social programmes (Social subsidies, etc.)

Community
Cultural and Social Practices

MACRO SPHERE

Macro Context (at the national level)
- Economic development and growth
- Poverty
- Political and institutional commitment to ECD
- Financing
- Cultural values

Source: Adapted from Vegas and Santibáñez, 2010, in World Bank, 2011.

Furthermore, different factors/experiences that can promote the good development of children *(protection factors)* or compromise it *(risk factors)*, are associated with each level described. Although risk and protection factors are well distinct from a conceptual point of view, they are often two faces of a same reality, the protection factor being the inverse value of the risk factor, of sorts (Walker et al., 2011). Thus, whereas a lack of cognitive stimulation in early childhood could be assimilated to a risk factor, appropriate stimulation would *a contrario* be considered as a protection factor.

Protection factors include warm and loving child-parent relationships, breastfeeding, reading, appropriate discipline, attendance of a quality early learning center, decent living conditions and sufficient family income. Mothers' education is a major protection factor (See Box 2). Poverty, the lack of access to health services, family discord, nervous maternal depression, the lack of cognitive stimulation, illness and iodine or iron deficiencies are risk factors (Walker et al., 2007 and 2011; CCCH).[14]

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[14] www.rch.org.au/ccch.

Box 2: Poverty and Mothers' Level of Education

Poverty and the level of education of mothers demonstrate complex relationships with other factors.

Poverty, as highlighted by the work of Armatya Sen (1999), goes well beyond straightforward monetary or material poverty, even if for practical reasons it continues to be described as such. It is also related to inadequate nutrition, hygiene and health, which favor infections and stunting.

Poverty is also associated with weaker levels of mothers' education and to fewer home-based stimulation and learning opportunities, in terms of quantity and quality. The case of language is particularly illustrative: delays in acquiring language, and especially vocabulary, are in great part related to the quality and quantity of direct conversations with parents/carers; these tend to be less rich in vocabulary and complex sentences in disadvantaged households (Abadzi, 2006).

Furthermore, high levels of mothers' education are related to: (i) better child health and nutrition; (ii) better understanding and use of services; (iii) better quality living environments; (iv) better knowledge of child development; (v) the adoption of more varied and appropriate education strategies; (vi) the provision of a stimulating family environment; and (vii) higher aspirations in terms of children's education. They are also associated to lower rates of maternal depression, favoring calmer and healthier family environments (Walker et al., 2011; CSR reports – www.iipe-poledakar.org).

These factors have a strong impact on children's development, and explain that those from disadvantaged backgrounds start primary with a number of limitations that translate into weak school results and a higher likelihood of repetition and early dropout (Walker et al., 2007, Filmer and Prichett, 1998). However, appropriate actions can protect children from the negative consequences of living in poverty.

This study deals with four types of protection/risk factors:[15]

- The level of household wealth;
- The level of mothers/carers' education;
- The quality of parental practices (health, hygiene, nutrition and stimulation);
- Access to preschool/early learning services.

Control variables are used: (i) the age and gender of the child; (ii) children's orphan status; (iii) the area and region of residence; and (iv) the gender of the head of household. The area and region of residence are used here as *proxy* measures of the cultural environment in which children grow up. They also capture, to some extent, characteristics that are not observed in the service offer. The way these variables interact to influence the level of children's development and their readiness for primary school are illustrated by Figure 2.

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[15] Although narrow links exist or are expected to exist among these different variables, it will be interesting to establish the extent to which the net effects of each persist when analyzed together.

Figure 2: Presumed Links between the Different Factors Impacting Children's Development and their Readiness for Primary School
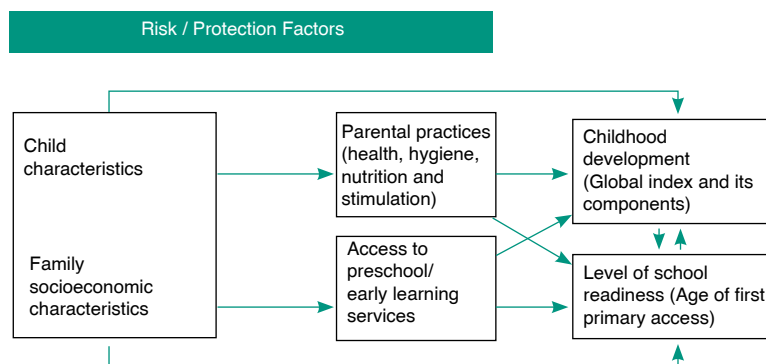
Source: Authors.

The measure of the level of early childhood development used in this study is that of the MICS4 surveys. The *Early Childhood Development Index* is based on the scores obtained in four areas: (i) arithmetic and reading abilities; (ii) physical development; (iii) socio-emotional development; and (iv) learning levels, generally speaking. On the basis of a series of questions (See Section IV for a detailed description), indicators of children's progress are established for each of the four areas. The index is representative at the national level.

Some limitations should however be noted: (i) the questionnaires are of the screening variety, where children are not directly assessed by investigators but questions are asked of parents/carers (often mothers); (ii) the same questions are asked in relation to all children aged three to four years, and scores tend to increase with age; this dimension is controlled during the computations to avoid introducing age bias; and (iii) only children aged three to four years are covered.

Parental practices are defined according to questions drawn from various MICS4 survey modules, which inform on characteristics that are specific to households, to children under five years or to carers, in the areas of health, hygiene, nutrition, stimulation or protection practices. Little information is available on children aged five years and above and the practices that relate to them, meaning that it is difficult to directly appraise the impact of parental practices on children's readiness for school, and more generally to understand the evolution of parental practices in these different dimensions over the entire period covered by ECD, from birth to eight years of age.[16]

The *level of children's readiness* for school is appraised in this study by the age of first primary access. Being short of information on individual schooling careers (preprimary attendance and the number of repetitions during primary), this measure at least reflects the fact that readiness for school can translate into an easier transition to primary, characterized by first access to this cycle occurring at the official age.[17]

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[16] To circumvent this issue, the sample of children has been limited to those with younger brothers and sisters for whom parental practice information was provided.

[17] MICS surveys do not enable to appropriately measure school readiness, although this is at the heart of ECD. Indeed, they do not inform on: (i) the preprimary attendance of the entire population, which would enable to assess the impact of preprimary attendance on individuals' school and socioeconomic careers; or on (ii) the level of development of children currently in primary Grade 1 (this information is only collected for children aged 3-4 years). Initiatives such as that promoted by UNICEF's West and Central Africa Regional Office tend to compensate for these shortcomings. Assessments of student learning such as EGRA, PASEC or SACMEQ also enable to analyze the links that exist between preprimary and schooling careers and pupils' learning levels. See annex 1 note 2 for more details.

Although the population group of interest for this study is that of children aged up to eight years, the analyses will not always be carried out for this entire age group, adapting to the available data.

Outline of the Study

The study is organized into five sections:

- *Section 1:* Analysis of the socioeconomic context of the countries covered by the study, to appraise economic, demographic and social development levels that affect the environment in which the region's children grow up;

- *Section 2:* Analysis of the family environment in which young children grow up and evolve;

- *Section 3:* Analysis of access levels to preschool/early learning activities, to establish both coverage rates and the profile of beneficiary children;

- *Section 4:* Study of children's development through the relationship between parental practices and preschool/early learning activities and the Early Childhood Development Index; and

- *Section 5:* Study of the issue of readiness for school through the link between preprimary attendance and the age of first primary access.

The analysis ends with a summary of the key results with a view to identify global avenues of guidance to improve ECD services and programmes, in both dimensions of parental practices and preschool/early learning activities.

Section I

General Context in which Children Grow Up

The study's sample of countries includes 82.3 million children aged zero to eight years. They represent 29 percent of the population of these countries, and 67 percent of children aged zero to eight years in West and Central Africa. It is a significant sample.

Map 1: Geographic Coverage of the Analysis
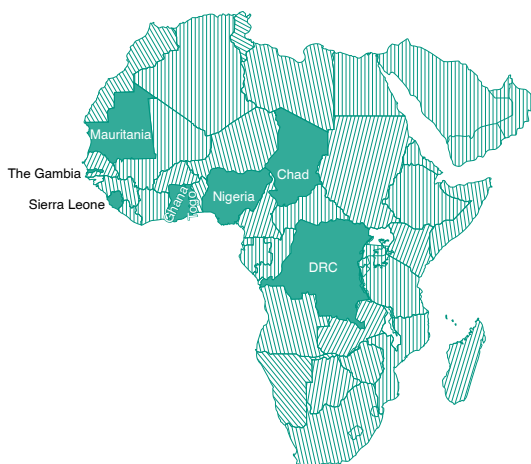
Source: Authors.

Analyzing the global context in which children and their families evolve enables to better understand the conditions and constraints they face. To do this, a series of indicators are used, borrowed from the areas of macroeconomics, demographics, health and education. They are consolidated in Tables 1 to 3 below.

I.1 Economic and Demographic Aspects

Many of the region's children live in insecure conditions, or even extremely precarious conditions, judging by the great economic fragility of households and individuals, illustrated by per capita income levels that are among the lowest worldwide. In 2011, the average level of income per capita was US$ 2,015 Purchasing Power Parity (PPP). Significant disparities are however noted between countries: Ghana and Nigeria display levels of GDP per capita above US$ 2,500 PPP,[18] whereas DRC's barely exceed US$ 350 PPP. Furthermore, various

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[18] These two countries belong to the very limited circle of African countries ranked as middle-income countries. The others belong to the low-income countries' group.

countries of the region (Chad, DRC, Sierra Leone and Togo) are ranked among the World Bank's list of fragile countries.[19] This situation translates into one where a majority of people live below the poverty threshold (59 percent).[20]

Whereas the share of people living with less than US$ 1.25 PPP is relatively weak in Mauritania (21 percent), Ghana (30 percent) and in The Gambia (34 percent), it is on the other hand extremely alarming in DRC, Chad and Nigeria, where rates approach 60 percent. The case of Nigeria is symptomatic of a particularly uneven distribution of wealth: despite its relatively favorable position in terms of per capita living standards, the country has the highest proportion of poor people of all countries of the sample.

A certain level of economic vitality nevertheless characterizes the eight countries, with average annual growth rates above seven percent over 2002-2011. However, this growth is drawn by just a small number of countries, including Nigeria (7.4 percent), Chad, Ghana (7.1 percent), and to a lesser extent DRC (6.1 percent) and Sierra Leone (5.8 percent). The Gambia and Togo, with average annual economic growth rates over the past 10 years of 3.5 percent and demographic growth rates that are barely lower, have provided few perspectives of improving of the living conditions of their populations over this period.

Table 1: Macroeconomic and Demographic Indicators, 2011

	Population 0-8 years (Thousands) (1)		Total Population (Thousands) (1)	Average Annual Demographic Growth Rate 2002-11, %	GDP per Capita (US$ PPP) (2)	Poverty Rate (<US$ 1.25 PPP/day), % (3)	Average Annual GDP Growth Rate (Constant) 2002-11, %	Urbanization Rate, % (3)
	Nb	%						
Gambia, The	531	31.4	1,689	2.7	1,811	34.3	3.5	58.9
Ghana	6,174	24.9	24,821	2.6	3,113	30.0	7.1	52.2
Mauritania	966	28.1	3,432	2.9	2,007	21.2	4.4	41.7
Nigeria	48,255	29.4	164,193	2.7	2,582	64.4	7.5	50.5
DRC	19,165	30.0	63,932	2.9	349	59.2	6.1	35.9
Sierra Leone	1,590	27.1	5,865	3.0	1,131	53.4	5.8	38.8
Chad	3,925	32.5	12,080	3.4	1,844	61.9	7.4	28.2
Togo	1,773	27.9	6,362	2.6	1,048	38.7	3.3	44.1
Average / Total	**82,379**	**29.2**	**282,374**	**2.8**	**2,015**	**58.6**	**7.2**	**45.9**

Source: (1) UNPD; (2) IMF; (3) UNDP; 2013. Authors' computations.

Note : Averages are weighted.

The demographic variable is a considerable challenge for most countries: over the 2002-2011 period, the average annual growth rate was close to 2.8 percent, with rates above the three percent mark in Sierra Leone and Chad (3.4 percent). The rapid growth of the population constitutes a further challenge to development in these countries, given the important further needs it creates in terms of natural resources, food and social services, among others.

The quick urbanization that is often associated with demographic growth carries numerous challenges of its own. In 2011, 46 percent of the inhabitants of the countries studied lived in towns, with strong disparities among

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[19] A country is considered to be a fragile state if its harmonized CPIA (Country Policy and Institutional Assessment) score is below 3.2 or if it has been home to a UN or regional peace-building force for over three years. The CPIA assesses the quality of the country's institutional and political framework. It covers 16 criteria spanning 4 areas: economic management, structural policies, social inclusion and equity policies, and public sector management and institutions. A score between 1 (low) and 6 (high) is established.

[20] Under US$ 1.25 PPP per day per person.

countries however: thus, urbanization rates remained low in Chad, DRC and Sierra Leone (under 30 percent). On the other hand, urban populations are dominant in The Gambia (59 percent), Ghana (52 percent) and Nigeria (50 percent).[21]

Although towns can be very efficient, facilitating the supply of different services (water and sanitation, social services, transport, culture and so on) at lower costs thanks to the concentration of the population in a limited space, they can also be the source of great strains, in particular on space and natural and environmental resources, and ultimately can have a detrimental impact on the well-being of their inhabitants, when marked by an excessive concentration of population.[22] The growth of shanty-towns, over-population, promiscuity, high youth unemployment, sanitation issues, overcrowded health and education services are a reality in many large African towns.[23]

I.2 Health Considerations

The health environment is here approached through a series of indicators relating to the prevalence of malaria and HIV&AIDS, two illnesses that can constitute, according to their magnitude, a heavy burden on societies, and be linked to high mortality and morbidity rates that offer information on the quality of health systems.

Malaria constitutes a public health challenge in most of the sample countries, where it is considered to be endemic. In 2011, the average number of malaria cases reached 300 per 1,000 individuals, with rates being particularly high in Chad (357 cases per 1,000), Nigeria (317 cases per 1,000) and Sierra Leone (307 cases per 1,000).

By the death it causes and the severe and chronic deterioration of the population's state of health, malaria represents a strong factor of social destabilization, both individual and collective. The high absenteeism and reduced work capacities it entails weigh heavily on household income, productivity and the running of companies and social services. The financial costs can also be significant: the direct spending attributable to malaria can represent up to 40 percent of public health spending, 30 percent to 50 percent of hospital admissions and up to 50 percent of outpatient care. Among children, malaria can generate permanent neurological damage and contribute to school absenteeism, leading to slower and more difficult school career paths.[24]

The socioeconomic consequences of *HIV&AIDS* are fairly similar. The countries of the region do however have relatively low prevalence rates: although all countries have prevalence rates above one percent (threshold beyond which the epidemic is rooted and begins to spread to the entire population), none has a rate beyond four percent, considered to be the level at which the epidemic escapes all control.[25]

The precariousness of health and care structures is also illustrated by record levels of *maternal (MMR) and under-five (U5MR) mortality* rates. All countries in the region have MMRs higher than 300, considered to be the

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[21] Two African cities stand out for their large size. Lagos (12.5 million inhabitants) and Kinshasa (10 million inhabitants) were both among the 50 most populated cities worldwide in 2012.

[22] The costs associated with an excessive concentration of people (traffic, road accidents, health costs related to exposure to high levels of air and water pollution, time lost in transport) are visible in very large cities and in those marked by inadequate town planning and management. Considerable investment is required to ease urban congestion (Henderson, 2002), implying varied global strategies (property management, access to social services, expansion of water, sanitation, transport and telecommunications infrastructure, environmental protection) to favor the more harmonious and sustainable development of cities (UNFPA, 2007).

[23] Boongaarts. http://www.worldwewant2015.org/node/298720.

[24] http://www.coalitionpaludisme.org/pages/impact_economique_et_social_du_paludisme.html.

[25] UNDP, 2002.

threshold value of a high MMR.[26] The sample average is of 649 deaths per 100,000 live births; the situation is however far from homogenous among countries: a woman from Chad is 3.6 times more likely to die following a pregnancy or childbirth (MMR of 1,100) than a Togolese woman (MMR of 300).

The risk of *child mortality* is equally high. On average, one out of eight children (U5MR of 12 per 1,000 live births) would not attain their fifth year in 2011; in Sierra Leone, they were one out of five. Pneumonia, diarrhea and malaria account for almost half the causes of mortality in children under five years. Yet these three illnesses could easily be avoided or treated through simple and cost-effective means. According to the WHO, malnutrition could be an underlying factor in more than a third of deaths, making children more vulnerable to severe illnesses.

The high rates of *malnutrition* in the sample countries are cause for concern in this regard. Close to 35 percent of children under five years suffer from stunting. This share is particularly alarming in Sierra Leone, where it exceeds 40 percent. Stunting, which corresponds to low height-for-age, is the result of an insufficient nutritional intake over a long period and of repeated infections. Stunting generally occurs before the age of two years, and its effects, according to the WHO, are largely irreversible. The strong link between malnutrition and a deficiency in certain micronutrients and the development of children's cognitive functions, is today recognized, and later translates into weak school performance (Walker et al., 2011).

Table 2: Health Sector Indicators, 2011 or MRY

	HIV&AIDS Prevalence Rate, (15-49 yrs) % (1)	Incidence of Malaria (No. of Cases per 1,000 Individuals) (2)	MMR (per 100,000 Live Births) (3)	U5MR (per 1,000 Live Births) (4)	Causes of the Mortality of Children Under 5 Years, % (2)			Stunting (Under 5 Years), % (4)
					Diarrhea	Malaria	ARI	
Gambia, The	1.5	300	360	76	9	20	15	23.4
Ghana	1.5	269	350	74	7	18	13	22.7
Mauritania	1.1	184	510	87	11	6	17	29.7
Nigeria	3.7	317	630	128	11	20	17	35.8
DRC	1.1	290	540	150	13	18	19	38.1
Sierra Leone	1.6	307	890	187	12	23	17	44.4
Chad	3.1	357	1 100	154	14	20	19	38.7
Togo	3.4	231	300	98	10	18	16	29.7
Average	**2.8**	**304**	**585***	**119***	**12**	**19**	**18**	**35.4**

Source: (1) UNAIDS, 2012; (2) WHO (web); (3) WHO et al., 2012; (4) UNICEF (childinfo.org).

*Note: Averages are weighted unless indicated by *. ARI: acute respiratory infection.*

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[26] In 2010, 40 countries worldwide had rates of 300 or above; among them, 36 are in Sub-Saharan Africa (WHO et al., 2012).

I.3 Social Considerations

Another key aspect of the global context relates to the *socio-educational and protection* environments in which children evolve. This is appraised here by a series of indicators relating to the illiteracy of adults and mothers in particular, and to the primary schooling of children. For protection, two aspects are retained here: (i) the lack of a birth certificate and (ii) the participation in any intense activity, be it productive or domestic. Both are associated with a heightened vulnerability of children.

Almost one adult in two (slightly more for women) is illiterate. Although strong disparities are noted between countries, the issue is prevalent in most of them. Over two-thirds of women are illiterate in Sierra Leone; close to three-quarters in Chad. Only Ghana stands out, with an adult illiteracy rate below one third (although slightly more for women). Given the importance of reading and writing in the acquisition of fundamental competences required in daily life and to ensure an optimal level of child care, these rates are cause for concern.

The link between the literacy of mothers (and their level of education more generally) and the development of children is widely documented and recognized *(See above)*. Unfortunately, programmes in favor of adult literacy, where they exist, are often of limited scope, one of the key reasons being related to the contracted share of education budget allocations (under one percent).[27]

Other elements might jeopardize children's development, such as not having a birth certificate[28] or their participation in intensive economic remunerated or domestic activities (at least 28 hours per week). The latter, when related to the worst forms of child labor, can be particularly detrimental to children's health and development. Child work is a reality in many cases, with close to 45 percent of children involved in productive or domestic activities. The birth certificate issue is also pervasive, affecting over 50 percent of children. The situation is particularly alarming in Chad and DRC, where 84 percent and 72 percent of children respectively have no birth certificate; in Nigeria, 58.5 percent of children are concerned. The situation is least critical in Sierra Leone and Togo, where 22 percent of children's births are not registered.

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[27] http://www.unesco.org/new/fr/dakar/education/literacy.

[28] Beyond the fact that birth certificates are often necessary to enjoy all the benefits and rights associated with citizenship, they are also generally required to enroll children in school and for national exams validating the completion of a cycle.

Table 3: Social Context Indicators, 2011 or MRY

Percentage

	% of Illiterate Adults (15 Years and Above) (1)	% of Illiterate Women (15 Years and Above) (1)	% of Children (Under 5 Years) with no Birth Certificate (2)	% of Children (5-14 Years) Involved in Work * (Incl. Domestic) (2)
Gambia, The	48.9	58.1	47.5	Na
Ghana	28.5	34.7	37.2	Na
Mauritania	41.4	48.0	41.2	21.5
Nigeria	48.9	58.6	58.5	47.1
DRC	38.8	53.9	72.2	42.4
Sierra Leone	56.7	67.4	22.0	49.8
Chad	64.6	74.6	84.3	48.0
Togo	39.6	52.0	22.1	46.6
Average	**45.2**	**57.7**	**59.4**	**45.7**

Source : (1) UIS; (2) MICS4 Report. * At least 28 hours of domestic chores or one hour of economic activity (among children aged 5-11 years) or at least 14 hours of economic work or 28 hours of domestic chores (among children aged 12-14 years) during the week preceding the survey.

Note : Averages are weighted. Na - Not Available.

The countries of the study face global contexts that are particularly difficult, marked by often alarming levels of poverty and insecure health and social environments. This directly affects families and their ability to satisfy their children's basic needs. The following section examines the family cell to draw up an initial profile of households, to appraise the quality of the environment offered and the potential level of protection or risk for children's development.

Section II

Quality of the Family Environment of Children Aged 0-8 Years

The family cell is the space, sometimes unique, where children gain their first experiences in life. From birth to the age of preprimary or primary enrollment, children are in almost exclusive interaction with the members of their family, and their mothers in particular during early childhood. This is why the parent-child relationship, and the mother-child relationship in particular, are central ingredients in the development of young children, and worthy of study.

More generally, the way in which families fulfill their role of primary life cell shapes children's development in multiple dimensions. Just as research today has established a direct link between the satisfaction of basic needs such as attachment, nutrition, housing, protection, education (in the broad sense) and children's development, it is also demonstrated that the contexts in which these basic needs are satisfied also has a strong impact on these levels.

Given this finding, two levels of analysis are offered to describe the family universe within which children aged under nine years grow up in the eight countries. They cover:

- *Household living conditions*, appraised through characteristics that are likely to have a significant impact on children's development (area of residence, household wealth, gender of household head, education of the mother/carer[29] and home characteristics).

- *Parental practices* in a number of key areas of children's development, such as health, hygiene, nutrition and stimulation. The quality of these practices will be appraised in the light of key expectations, and according to the socioeconomic and contextual characteristics of households.

I.1. Household Characteristics

Socioeconomic Characteristics

From Table 4 below, the following characteristics can be noted:

- 69 percent of households in the sample countries have at least one child aged 0 to 8 years. The share varies from 62 percent in Togo to 77 percent in The Gambia.

- 64 percent of households live in rural areas.

- 18 percent of household heads are women, on average: in Sierra Leone, Mauritania and Ghana, over 20 percent of household heads are women, against under 10 percent in Nigeria. These households are slightly more likely to belong to the poorest quintile (21 percent) than to the wealthiest (18 percent).

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[29] From this point, for simplicity's sake, "mother" will be used to designate both mothers and carers.

- In 50 percent of households, mothers are not educated; this is particularly true in Chad, The Gambia and Sierra Leone (over 70 percent). On the other hand, in Ghana and Nigeria, over 33 percent of mothers have at least secondary education; mothers are also relatively well educated in DRC and Mauritania (31 percent have at least secondary education).

Table 4: Socioeconomic Characteristics, Households of Children Aged 0-8 Years, 2010-11

Percentage of Households

	Rural Area	Female Household Head	Average Household Size	Wealth Quintile					Mother's Education Level		
				Q1	Q2	Q3	Q4	Q5	None	Primary	Sec. +
Gambia, The	47.7	14.0	9.8	19.4	19.9	19.8	20.1	20.7	63.2	11.0	25.8
Ghana	52.6	26.8	5.9	19.5	20.1	21.0	20.7	18.7	36.7	20.6	42.6
Mauritania	60.1	23.8	6.7	22.1	21.6	19.7	18.9	17.6	26.8	56.7	16.5
Nigeria	65.9	9.3	6.2	20.9	19.8	19.0	19.9	20.3	38.6	21.2	40.2
DRC	72.6	15.1	6.2	22.3	20.8	20.2	19.8	16.9	24.2	42.1	33.6
Sierra Leone	71.4	21.9	6.6	22.4	21.4	20.4	19.2	16.6	70.2	12.5	17.3
Chad	78.7	13.6	6.3	21.3	21.0	20.5	20.1	17.1	74.7	17.8	7.50
Togo	63.6	19.1	6.3	21.0	21.1	19.5	19.9	18.5	43.2	35.7	21.1
Average	**64.1**	**17.9**	**6.7**	**21.1**	**20.7**	**20.0**	**19.8**	**18.3**	**47.2**	**27.2**	**25.6**

Source : MICS4 and authors' computations.

Narrow relationships exist among these different variables (See Figure 3 below). The poorest households more frequently live in rural areas. Also worthy of note is that uneducated mothers live mainly in rural areas and more often belong to the most disadvantaged households (the poorest 20 percent – Q1). Thus, 14 percent of households cumulate these characteristics – rural area of residence, lowest wealth quintile and uneducated mother. For these children, development prospects would be particularly unfavorable.

Figure 3: Interaction between Area of Residence, Household Wealth and Mothers' Level of Education, 2010-11

Percentage of Households of Children Aged 0-8 Years
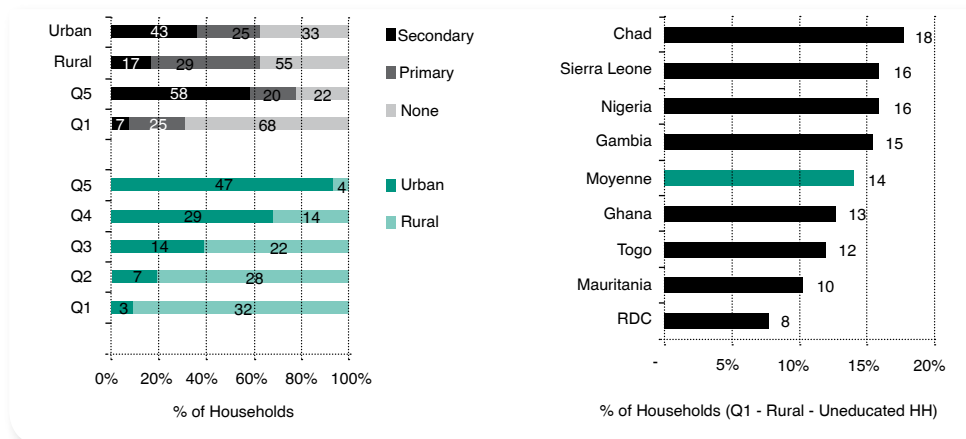
Source : MICS4 and authors' computations.
Note : Q1 represents the poorest 20 percent of households and Q5 the wealthiest 20 percent.

Household Living Conditions

Living conditions are overall insecure, marked by relative crowding, limited access to basic infrastructure and low levels of communication and audio-visual equipment:

- 17 percent of households on average live in situations of crowding; from 5 percent in The Gambia to 38 percent in Mauritania.

- Access to safe drinking water is ensured for 64 percent of households, on average. The situation is particularly critical in DRC and Chad where 44 percent and 52 percent of households have access, respectively, against 82.5 percent of Ghanaian households and 87 percent of Gambian households.

- Barely 41 percent of households have suitable access to sanitation. In DRC and Chad, they are fewer than 15 percent. The situation is more favorable in Ghana and The Gambia, where access reaches 60 percent and 78 percent of households, respectively.

- Access to electricity is highly variable according to the country, with levels below 15 percent in DRC (12 percent), Sierra Leone (9 percent) and Chad (5 percent) and higher than 50 percent in Nigeria (58 percent) and Ghana (61 percent).

- 61 percent of households have a radio and 29 percent a TV, appliances that are key to have a perspective on the outside world as well as being potential household sensitization tools for parental education. Radio, that carries a lower cost and is less reliant on electricity, is widely used in The Gambia, Nigeria, Ghana and Togo – over 70 percent of households have one. Its use is less widespread in DRC, Chad and Mauritania; in this latter country, the use of televisions appears to compensate somewhat.

Table 5: Home Characteristics, Households of Children Aged 0-8 Years, 2010-11

Percentage of households

	Home Crowding Density *	Access to Safe Drinking Water	Access to Suitable Sanitation	Access to Electricity	Ownership of a Radio	Ownership of a TV
Gambia, The	5.3	86.7	78.1	29.9	82.1	40.1
Ghana	20.1	82.5	60.5	61.1	72.5	49.9
Mauritania	37.6	61.7	41.4	35.8	47.7	33.6
Nigeria	16.9	65.3	50.4	58.0	75.8	50.3
DRC	13.1	44.1	11.6	12.1	41.8	14.3
Sierra Leone	10.8	56.0	39.0	8.8	54.8	7.9
Chad	20.9	51.7	13.2	4.9	47.6	6.0
Togo	14.7	61.9	33.0	31.4	68.3	27.7
Average	**17.4**	**63.7**	**40.9**	**30.2**	**61.3**	**28.7**

Source: MICS4 and authors' computations.

*Note: * Over 4 people living in a room.*

Again, the area of residence and the level of income appear to be particularly influential on access to basic infrastructure and on the ownership of common audiovisual equipment. The level of household wealth appears to be especially discriminating, as highlighted by the significant gaps between the two extreme quintiles (the poorest 20 percent – Q1 and the wealthiest 20 percent – Q5). The poorest households' level of access to water, sanitation and electricity is thus 3, 7 and 60 times lower than that of their peers from the top wealth quintile; just 37 percent of the former own a radio, against 84 percent of the latter.[30] Disparities between urban and rural households are comparatively slighter, with ratios ranging from one to four.

Figure 4: Access to Basic Infrastructure and Ownership of Audiovisual Equipment, by Area of Residence and Household
Wealth Quintile, Households of Children Aged 0-8 Years, 2010-11

Percentage of Households
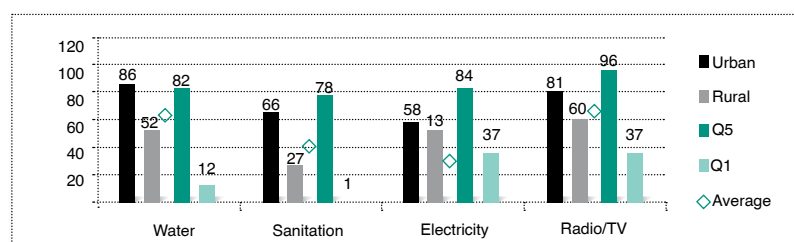
Source: MICS4 and authors' computations.

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[30] Just 40 percent of households belonging to the poorest quintile have a radio or TV at home; this constraint should be considered in any media campaign relying on these forms of communication.

II.2. Parental Practices

This section reviews different parental practices in areas recognized as being fundamental for children's development: *health, hygiene, nutrition and stimulation*. The idea is to assess the quality of the environment in which young children grow up, in the light of what is generally accepted as good practice in each field.[31] Secondly, it will aim to identify the socioeconomic and contextual household factors that could explain the variability observed in the level of the practices. More specifically, the purpose is to determine to what extent some practices bear relation to economic constraints (through the level of household wealth) or sociocultural or supply constraints (through mothers' level of education and the area of residence).[32]

Parental Practices in Health and Hygiene

The areas covered here include: (i) the appropriate care and treatment of the most common, and lethal, child illnesses (diarrhea, ARIs and fever); (ii) the recognition by mothers of the warning signs of pneumonia in young children; (iii) the vaccination coverage of children aged 12 to 23 months; (iv) the fact that children under five years sleep under a mosquito net; and (v) the availability of soap within the household for hand-washing.

The *appropriate care in cases of child illnesses* first requires the recognition of their signs. Adequate vaccination and sleeping under a mosquito net are appropriate health practices, which prevent or reduce the risks of young children's morbidity and mortality, as well as avoiding potentially detrimental effects on their development. To what extent do households adopt these practices?

Malaria prevention and treatment: Fever, or the malaria that is associated with it, represents the first cause of mortality in children under five years in the sample countries (See earlier Table 2). Household practices are far from being optimal: in just 31 percent of households all children under five years slept under a mosquito net the night before the survey, on average. This share is particularly low in Chad (11 percent) and Nigeria (17 percent). In Togo on the other hand, this good practice is adopted by 54 percent of households. The appropriate care of children in malaria cases (with anti-malarial prophylaxis) is ensured by only 23 percent of households on average (from 41 percent in Sierra Leone to 8 percent in Mauritania).

Recognizing the symptoms of pneumonia is *a priori* the first step in seeking to provide care. Overall, knowledge of the symptoms is very weak, with mothers recognizing the warning signs in just 5.4 percent of households (a child's difficulty to breathe or fast breathing). This rate is extremely weak in the sample countries; it calls for the strengthening of messages directed at mothers to ensure a better recognition of the signs preceding pneumonia. Nevertheless, in 46 percent of presumed pneumonia cases, households adopted best care practices in this field (giving antibiotics). This share is however far from homogenous among countries, ranging from 32 percent in Mauritania and Chad to 67 percent in The Gambia.

Diarrhea is the third cause of under-five mortality in the eight countries. Few households correctly follow the appropriate care steps, which consist in increasing the intake of fluids while maintaining the intake of food

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[31] For a detailed description of the various parental practices, see the different MICS country reports. Readers are also referred to the UNICEF Facts for Life guide, which offers a series of recommendations on the appropriate care of children at different ages, and in different areas of their development (UNICEF, 2010).

[32] This approach is borrowed from Mingat and Seurat (2011a and 2011b). Section IV of the study relates these practices to the evolution of children's development to identify those that constitute protection or risk factors.

(38 percent);[33] in Nigeria and Togo, under 25 percent of households give their children with diarrhea appropriate care, against 52 percent in Sierra Leone.

Vaccination coverage plays an essential role in reducing mortality and preventing incapacitating illnesses like polio. In barely 26 percent of households all children have received the recommended inoculations.[34] The situation is however highly heterogeneous among countries, with barely 3 percent of Chadian households having fully vaccinated their children, against 53 percent of Ghanaian households. The situation in Nigeria is equally critical with just 17 percent of households fully vaccinating their children.

Hand-washing, in the field of health, represents the most effective and economic act to reduce the incidence of childhood illnesses, including diarrhea and pneumonia.[35] As monitoring hand-washing behavior can be difficult through MICS-type surveys, this study determines whether households have any soap: 55 percent do. This share is particularly low in Sierra Leone (40 percent), The Gambia and DRC (about 50 percent). In Togo and Mauritania, over 65 percent of households have soap at home.

Table 6: Prevalence of Good Practices in Health and Hygiene, Households of Children Aged 0-8 Years, 2010-11

Percentage of Households

	All Children Under 5 Years Receive Appropriate Care in Cases of:			All Mothers/ Carers Recognize the Warning Signs of Pneumonia *	All Children Under 5 Years have been Vaccinated **	All Children Under 5 Years Sleep Under a Mosquito Net	Soap is Available for Hand-Washing
	Diarrhea	ARI	Fever				
Gambia, The	42.6	67.5	24.4	1.9	48.8	38.1	50.8
Ghana	43.6	56.7	30.6	0.8	53.1	39.1	54.6
Mauritania	38.5	31.6	7.8	8.4	7.4	24.8	65.5
Nigeria	25.8	44.8	24.6	9.4	16.8	16.9	60.7
DRC	38.2	42.1	17.9	6.8	23.2	34.7	49.9
Sierra Leone	52.3	55.7	41.3	7.7	25.7	29.5	40.3
Chad	40.0	32.1	19.2	3.8	2.9	11.3	55.0
Togo	21.9	40.6	19.2	4.7	26.9	53.9	65.1
Average	**37.9**	**46.4**	**23.1**	**5.4**	**25.6**	**31.0**	**55.2**

Source : MICS4 and authors' computations.

Note : * "child has breathing difficulties" and "child is breathing fast"; ** BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

Parental Practices in Nutrition

The nutritional status of children reflects their general health. When children are not exposed repeatedly to illness and have access to adequate food (both in terms of quantity and quality – meaning rich in micronutrients such as vitamin A), they face increased chances of favorable development. As a reminder, malnutrition is associated with almost a third of the deaths of children under five years (WHO).

This section examines a number of indicators that illustrate parental practices in the area of child nutrition: (i) the use of iodized salt by households; (ii) breast-feeding practices for children from birth to 23 months;

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[33] Most diarrhea-related deaths are due to dehydration, because of the loss of important quantities of bodily fluids and electrolytes, mainly through liquid stools. Appropriate care, be it through oral rehydration salts (ORS) or recommended home-made rehydration beverages, can avoid many deaths. This approach should be coupled with continued feeding to be fully effective.

[34] Although the recommended vaccinations can vary from one country to another, the following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

[35] Hand-washing is particularly important before eating, feeding or cooking, and after using the toilet, washing a child or playing out of doors.

(iii) giving children vitamin A supplements; and (iv) the levels of malnutrition in children under five years (the prevalence of children suffering from mild or severe stunting).

Iodine deficiency is the main cause of mental retardation and late psycho-motive development.[36] The share of households with salt at home at the time of the survey that use iodized salt appropriately (> 15 parts per million) is only 47 percent. Levels vary by a factor of 1 to 10, with Mauritania at the bottom of the range (8 percent) and Nigeria (82 percent) at the top.

Breastfeeding during the first years of life protects children against infections.[37] Only 42 percent of households with children under two years feed them adequately. This good practice is particularly well rooted in Togo (63 percent of households), but is less so in Ghana and Nigeria where it prevails in around 30 percent of households.

Vitamin A supplementation is measured by the share of households where all children under five years[38] have received at least one dose during the six months prior to the survey.[39] On average, 63 percent of the sample demonstrated appropriate behavior, reaching 85 percent in Sierra Leone, but standing at just 34 percent in Chad. With the exception of this case, regular national distribution campaigns appear to achieve good coverage rates.

Stunting[40] levels suggest that significant nutrition issues exist in the sample countries. In only 57 percent of households no child suffers from stunting. With barely 37 percent in Chad, the situation is equally critical in Sierra Leone and DRC where under 50 percent of households have no chronic nutrition problems. In Ghana, The Gambia and Togo, the situation appears to be better, with over 70 percent of households having no stunted children.

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[36] In its most extreme form, it causes cretinism. It also increases the risk of neonatal mortality and of miscarriage.

[37] WHO and UNICEF recommend: exclusive breast-feeding during the first six months, continued breast-feeding until two years or more and complementary feeding from the sixth month forth. Among other benefits, breast-feeding ensures an ideal provision of nutrients while eliminating the need for water, which can be of questionable quality, and carries the further advantage of being free, making it particularly advantageous for the poorest households.

[38] The computation was based on children of 0-59 months for practical reasons related to the need to cover broader age groups for the calculation of synthetic indicators. This has the impact of slightly reducing the vitamin A coverage levels.

[39] Vitamin A is essential for the health of the eyes and the good functioning of the immunity system. Given that daily consumption does not usually enable to cover these needs, that are greater during children's periods of growth and illness, in countries where the deficiency in vitamin A is high, it is recommended to give all children aged 6-59 months a high dosage of the vitamin every four to six months.

[40]   Stunting (height-for-age) reflects *chronic* malnutrition following inappropriate nutrition over a prolonged period and chronic or repeated illnesses. A child whose height-for-age is more than two standard deviations below the median for the reference population is considered to be short for their age and is classed as suffering from stunting (moderate and severe). The stunting is considered to be severe if the height-for-age is over three standard deviations below the median for the reference population (MICS).

Table 7: Prevalence of Good Practices in Nutrition, Households of Children Aged 0-8 Years, 2010-11

Percentage of Households

	Having Adequately Iodized Salt	All Children Aged 0-23 Months are Appropriately Fed	All Children Under 5 Years Received Vitamin A Supplement	No Child Under 5 Years Suffers from Stunting
Gambia, The	24.3	43.0	53.9	68.4
Ghana	32.7	28.1	62.1	75.8
Mauritania	7.9	43.6	67.2	56.8
Nigeria	82.4	32.7	60.4	57.3
DRC	72.5	49.0	67.0	47.7
Sierra Leone	66.2	38.6	84.8	46.5
Chad	58.6	38.3	33.6	37.3
Togo	31.0	63.0	77.1	67.7
Average	**46.9**	**42.0**	**63.3**	**57.2**

Source : MICS4 and authors' computations.

Parental Practices in Stimulation

Early learning and stimulation practices are key determinants of children's early development. Having toys and books at home and the number of activities carried out with children are the indicators retained to appraise household stimulation practices, and their quality. MICS questionnaires also include a question on the involvement of fathers in children's learning; this aspect is also dealt with here.

Books and toys are fundamental learning tools.[41] Playing games is indispensable to build children's abilities as well as for their integration in society.[42] Toys are far from wide-spread: close to 20 percent of households have none. This absence is particularly marked in Sierra Leone and Chad (25 percent of households have no toys). The availability of children's books is more limited still (91 percent of households have none). Only 5 percent of households have at least one book per child (11 percent in Ghana and Nigeria, the countries with the strongest book culture). Access to books remains a major challenge for most households in the region.

The involvement of adults in children's learning is appraised through six dimensions: (i) reading books or looking at pictures; (ii) telling stories; (iii) singing; (iv) taking children outside (of the house, quarter or yard); (v) playing with children; and (vi) spending time naming, counting or drawing things. In almost half of households adults are involved in children's learning in varied ways (in at least four activities), reaching almost two-thirds of households in DRC and Nigeria. The households where none of the above activities are carried out with children are also numerous (about a third); in The Gambia and Sierra Leone, adults have no activities with their children in about half of households.

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[41] Research has shown the importance of early exposure to language-rich environments – characterized by the reading of books to children or the number of books available to the household – for the development of language, reading performance and success at school. Thus, according to a study carried out in the United Kingdom, the most important factor of children's success in learning to read at primary school was their exposure to written material during their preprimary years (UNESCO, 2007).

[42] Indeed, playing games is a pretext for the acquisition of the four fundamental aspects of learning: (i): *knowledge,* games with adults being a unique opportunity to gain knowledge in every area; (ii) *doing*, through practice, replication and gestures; (iii) *being,* acquiring behaviors that enable children to integrate the world; and (iv) *wanting,* as without desire, there is no learning or evolution. See http://www.teteamodeler.com/scolarite/psycologie/jeu1.asp

Table 8: Prevalence of Good Practices in Early Learning and Stimulation, Households of Children Aged 0-8 Years, 2010-11

Percentage of Households

	Toys *		Books *		Support to the learning of children aged 3-4 years	
	No Child Has One	Each Child Has at Least One	No Child Has One	Each Child Has at Least One	No Child is Supported	All Children are Supported
Gambia, The	10.3	67.1	95.0	2.1	48.7	46.1
Ghana	13.5	74.7	83.0	11.0	30.4	20.7
Mauritania	23.3	57.9	91.8	4.1	25.8	30.7
Nigeria	17.5	67.9	79.3	11.1	32.6	65.5
DRC	22.6	59.9	96.9	1.7	38.0	61.0
Sierra Leone	25.2	64.8	92.2	5.6	45.1	53.2
Chad	25.5	55.2	97.6	0.9	18.1	41.7
Togo	18.9	67.0	92.8	4.3	19.5	31.9
Average	**19.6**	**64.3**	**91.1**	**5.1**	**32.3**	**43.8**

Source : MICS4 and authors' computations.

*Note : * Children under five years.*

The involvement of fathers in the education and identity building of children is indispensable, as they are the central masculine pole of the family. To be beneficial, fathers should be present and active with their children. In 25 percent of households, fathers take part in at least one learning activity with their children. The gaps vary by a factor of up to three, from Ghana where under 15 percent of fathers are involved in the education of their children, to Sierra Leone, where they are 42 percent. The absence of historical data does not enable to determine if this practice is on the rise, which could denote an evolution of the role of fathers within the household.

Figure 5: Involvement of Fathers in at Least One Learning Activity with Children Aged 3-4 years, 2010-11

Percentage of Active Fathers
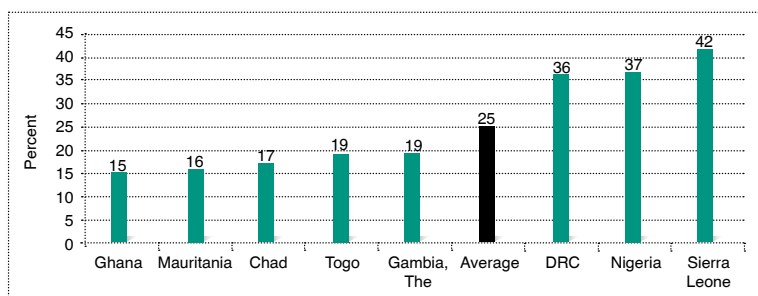
Source : MICS4 and authors' computations.

> The child-friendly quality of the family environment is generally poor: the insecurity of income and housing that affects a great number is compounded by practice levels in health, hygiene, nutrition and stimulation that are not always optimal. The number of households in the region that do not fully master the basic health, hygiene and nutrition habits required for the optimal and harmonious development of their children is too high. The stimulation context is also marked by a certain poverty in terms of books and toys, sometimes accentuated by a weak level of involvement of adults in their children's learning, thus depriving the latter of an effectively stimulating environment.

II.3 Elements of Analysis of the Quality of Parental Practices

To later determine the factors that may have a positive or negative influence on the level of households' good practices in the areas covered, parental practice indicators are disaggregated according to some socioeconomic and contextual household factors, that are easily available through the MICS surveys: the level of household wealth, the area and region of residence and the level of mothers' education.

To facilitate the analyses, *synthetic indicators* are used. They carry the advantage of regrouping in a single indicator the information contained in a number of child care indicators. Their computation is based on a factor analysis, performed for each of the four areas considered (health, hygiene, nutrition and stimulation) on a number of representative indicators (See the detail in Table 9).[43]

Table 9: Indicators Used in the Synthetic Indexes, by Area of Parental Practice

Area	Indicators (Responses are Binary)	Synthetic Index
Health	Households with children of 0-8 years where: • All mothers/carers recognize the early signs of pneumonia • All children under 5 years received their required vaccinations • All children under 5 years sleep under a mosquito net	Factor score obtained at the household level
Hygiene	Households with children of 0-8 years with: • Access to safe drinking water • Access to adequate sanitation • Soap for hand-washing	Factor score obtained at the household level
Nutrition	Households with children of 0-8 years where: • Salt is appropriately iodized • All children under 5 years received a vitamin A supplement • No child under 5 years suffers from stunting	Factor score obtained at the household level
Stimulation	Households with children of 0-8 years where: • Each child under 5 years has at least one book • Each child under 5 years has at least one toy • All children aged 3-4 years receive some learning support • Fathers are active in the learning activities of children aged 3-4 years	Factor score obtained at the household level

Source : Authors.

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[43] For each area and the eight countries, the first factor axis was retained; this shows a high level of inertia, generally above 70 percent (See Annex Table A1 for the detail of inertia levels). This result validates the use of synthetic indicators, as these correctly capture the information contained in the different indicators used for their respective computation.

The four synthetic indicators computed[44] are useful to understand the variations in terms of household good practices according to socioeconomic and contextual factors, but do not however enable the comparison of practice levels in the different areas among countries. From this point forth, households belonging to the upper third of good practice implementers are considered to apply best practices in each of the areas considered.[45]

Figure 6 below summarizes the level of disparities for the eight countries under study of the effect of the area of residence (urban/rural), household wealth, mothers' level of education and region on the likelihood that a household adopts best practices in the fields of health, hygiene, nutrition and stimulation. The disparity indicator used is the parity index (PI).

Figure 6: Disparities in the Effect of Socioeconomic Household Characteristics on the Prevalence of Good Parental Practice, by Practice Area, Average of the Eight Countries, 2010-11

Parity Index, in Absolute Values
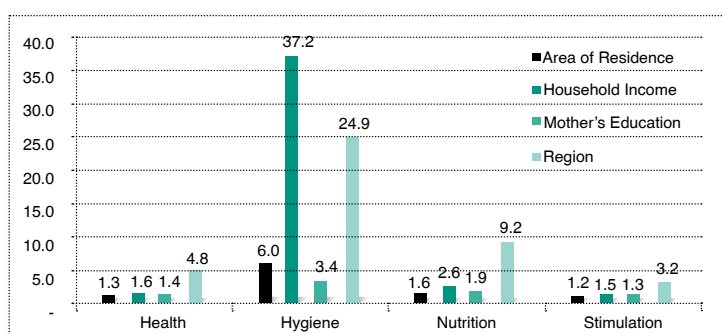
Source : MICS4 and authors' computations.

Note : Parity index (PI): Residence – urban/rural; Household income – Q5/Q1; Mother's education – Secondary and above/none; Region – maximum/minimum.

The urban/rural area of residence appears to have only a slight impact on the level of health and stimulation practices in the eight countries: the PIs are 1.3 and 1.2 respectively. For nutrition the PI of 1.6 is more significant, indicating that urban households adopt good nutritional practices 1.6 times more often than their rural peers. In terms of hygiene the disparities between urban and rural households deepen: urban households are six times more likely than rural ones to adopt good practices in this area.

Household income also has the greatest impact on hygiene practices. Households from the top quintile (Q5 – the wealthiest 20 percent) are 37 times more likely to adopt good practices in this area than households from the bottom quintile (Q1), on average. Household wealth also has a clear impact on nutrition practices (PI of 2.6 in favor of the wealthiest households). In the fields of stimulation and health, Q5 households are also more likely to adopt good practices than Q1 households, although to a lesser degree, with PIs of 1.6 and 1.5 respectively.

Mothers' education, although of slight impact overall, has a positive influence on some practices, such as hygiene, and to a lesser extent, nutrition. Households whose mother/carer's level of education is secondary or above are 3.4 times more likely to adopt good hygiene practices than households whose mother/carer has no education. The PI is 1.9 for nutrition and is close to 1.3 for both stimulation and health practices.

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[44] Being drawn from a factor analysis, they present highly divergent ranges of values across indexes and countries.

[45] Households are ranked according to their level of practice in increasing order, from the worst practice level to the best.

The region of residence appears to be a particularly discriminating factor, with PIs ranging from 3.2 (stimulation) to 24.9 (hygiene), with 9.2 for nutrition and 4.8 for health.

These results underline the existence of significant variations in the *level of household practices according to socioeconomic and contextual factors.* Far from being homogenous, the level of practice is all the better when households are wealthy, urban and their mothers are educated.

The results also show that if the area of residence appears to be one of the most powerful factors of disparity (indicating the existence of supply and cultural factors), the level of household income is particularly discriminating, followed at some distance by mothers' level of education and the area of residence (urban/rural).

Thus, considering the level of household income to illustrate the economic constraint that households face, it appears that in numerous cases, the failure of households to adopt good practices is linked to economic difficulties. This is particularly true in the area of hygiene, as access to drinking water, adequate sanitation and personal care products is strongly conditioned by households' levels of wealth.

Although these trends apply to most of the eight countries taken individually, national specificities are nevertheless apparent, some of which are surprising (See Annex Figure A.1). Thus, in Ghana and Sierra Leone, the urban/rural PI is below one for health practices, indicating that rural households' practices in this area are better. Hygiene practices are also better among households whose mother is not educated in The Gambia and among the poorest households in Ghana.

It should be noted that the logistic models used to measure the factors influencing households' good practices (See Table 10 below), with the exception of hygiene, explain an extremely low level of variation, with a coefficient of determination (R^2) under 10 percent for health, nutrition and stimulation. This indicates that the variables considered above explain less than 10 percent of the differences observed in practice levels. An important number of factors not observed here are therefore at play. The analysis deserves to be extended to better determine the key factors that influence parental practices.[46]

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[46] An analysis of the correlations between the synthetic indexes also shows weak links among them, with correlation levels below 25 percent (See Annex Table A2). This result indicates that globally, having a good level of practice in one area does not necessarily imply that good practices are adopted in other areas. If a threshold level of 20 percent is used, a correlation between nutrition and hygiene practices is observed in five of the eight countries. In Ghana, a link is established between nutrition and stimulation practices, as well as between hygiene and stimulation practices. In DRC, health practices are correlated with nutrition practices.

Table 10: Effect of Socioeconomic Variables on the Probability of Adopting Good Parental Practices, by Practice Area and Country, 2010-11

Sign and Significance of the Odds Ratios

	Health	Hygiene	Nutrition	Stimulation
Residence: Urban (Ref. Rural)				
Sign +	Gambia, The (+)	Gambia, The (++) Ghana (++) Nigeria (+++) DRC (+++) Chad (+++) Togo (++)	Gambia, The (+) Ghana (+) DRC (+)	DRC (+)
Sign -	Ghana (-) Sierra Leone (-)			
Mothers' Education: Secondary and above (Ref. No education)				
Sign +	Ghana (+) Nigeria (++) Chad (+) Togo (++)	Gambia, The (+) Ghana (+) Mauritania (+) Sierra Leone (+) Chad (+)	Ghana (+) Nigeria (+++)	Ghana (+) Nigeria (+)
Sign -	Gambia (-)			
Household Wealth: Wealthiest (Q5) (Ref. Poorest, Q1)				
Sign +	Nigeria (+) DRC (+) Chad (+++) Togo (+++)	Gambia (++++) Ghana (++++) Nigeria (++++) DRC (++++) Sierra Léone (++++) Togo (++++)	Gambia, The (++) Ghana (++++) Mauritania (+++) Nigeria (+++) DRC (++) Sierra Leone (++) Chad (+) Togo (++)	Gambia (++) Ghana (+++) Mauritania (++) Nigeria (+++) Sierra Leone (+) Chad (+) Togo (++)
Sign -	Ghana (-)			
R²	1.4 % to 8.6 %	26.3 % to 44.7 %	2.1 % to 16.4 %	1 % to 7.1 %

Source: Logistic regression of the probability that a household would adopt good practices in each given area. Only coefficients found to be significant up to 5 percent level were retained.

Note: A + (-) sign indicates a positive (negative) effect. +: odds ratio between 1 and 1.5; ++ odds ratio between 1.5 and 2; +++ odds ratio between 2 and 10; ++++ odds ratio above 10.

Reading Note: Urban households in DRC are about three times more likely to adopt good hygiene practices than rural households.

Section III

Access to Preschool/Early Learning Activities

This section analyzes the access to preschool/early learning activities by successively exploring two complementary aspects: (i) a description of access to preschool/early learning activities, reviewing the profile of beneficiary children and potential disparities according to the characteristics of children and/or their families; and (ii) the identification of the main factors that characterize access to preschool/early learning activities, to inform strategies aiming to reduce the noted disparities.

III.1 Profile of Beneficiary Children

Participation in a preprimary/early learning activity is here considered in a broad sense. It includes all forms of early learning, stimulation and preschool activities that children aged three to five years have access to, whether formally organized or not, daily or not.[47]

A third of children aged three to five years[48] had access to a preprimary/early learning activity in 2010-2011 (See Figure 7). This rate is low when considering the multiple benefits these activities carry for the holistic development of children and on their readiness for primary school.[49]

Figure 7: Share of Children Aged 3-5 Years* with Access to a Preprimary/Early Learning Activity, Eight Sample Countries, 2010-11

Percentage
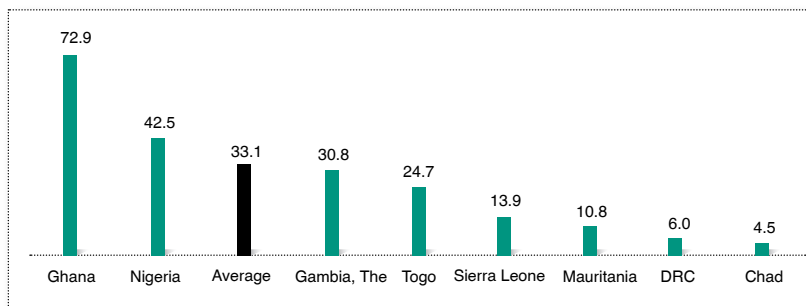
Source : MICS4 and authors' computations
*Note : The average is weighted. * For The Gambia, access covers children aged 3-6 years.*

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[47] The available information does not however enable to distinguish between the type of institution attended (public, private, community-based and so on), or to know the year of attendance when this spanned several years. It is to be noted that for most countries, preschool activities are organized for children aged 3-5 years; in Ghana however they are offered (and compulsory) for children aged 4-5 years, and in The Gambia, for children aged 3-6 years (See Annex Table A3).

[48] 3 to 6 years for The Gambia.

[49] See the following Sections IV and V on child development and school readiness.

Access to preschool/early learning activities is far from homogenous among the eight countries of the sample. Indeed, 73 percent of Ghanaian children had access to a preschool/early learning activity in 2010-2011, against under 5 percent in Chad. These large gaps illustrate the very unequal levels of development of this type of activities among countries, with countries like Ghana, Nigeria or The Gambia on the one hand, that have a relatively developed supply of services, and Sierra Leone, Mauritania, DRC and Chad on the other, where preschool/early learning services are in short supply.

National averages conceal significant variations within countries. The results of Table 11 illustrate this, informing on the access rate to a preprimary/early learning activity for children aged three to five years, according to given household and child socioeconomic characteristics, at the national level.

Table 11: Access Rate to Preschool/Early Learning Activities, Children Aged 3-5 Years,* by Child and Household Socioeconomic Characteristics, Average of the Eight Countries, 2010-11

Percentage and Parity Indexes

Gender	Girls	33.0			Average		24.6	Rural	Ara of Residence
	Boys	33.2					53.2	Urban	
	PI	1.0			33.1%		2.2	PI	
OVC Statut	Yes	31.6					12.5	Min. Regions	Regions
	No	33.0					64.1	Max. Regions	
	PI	1.0					5.1	PI	
Mother's Education	None	14.8					10.1	Poorest 20%	Wealth Quintiles
	Secondary +	58.5					64.5	Wealthiest 20%	
	PI	4.0					6.4	PI	

Source : MICS 4 and authors' computations.

Note : Weighted average. Covers children aged 3-6 years for The Gambia.

Household income: It is mainly with respect to income levels that access disparities are most important, being 6.4 times higher among the children of the wealthiest quintile households (64.5 percent) than among those of the poorest (10.1 percent).

According to the region: At the regional level, disparities are equally important, the parity index being 5, indicating a ratio from 1 to 5 between the regions with weak access and those with the highest access.

Mothers' education: The access rate is four times greater for children whose mother has at least a secondary education (58.5 percent), compared to those whose mother is uneducated (14.8 percent).

Area of residence: Access is over twice as great in urban areas (53.2 percent) as in rural ones (24.6 percent), with a parity index of 2.2.

Children's characteristics: The differences between boys (33.2 percent) and girls (33.0 percent), and according to being an orphan (33.0 percent) or not (31.6 percent) are minimal and hardly significant.

Although overall these findings hold for most countries, disparities are observed in highly variable proportions. In a country like Ghana, where close to three-quarters of the target group have access, disparities are slight. On the other hand, they are particularly marked in countries where the service coverage is weak, like Chad, DRC and Mauritania (See Figure 8). This could in part be explained by the fact that education systems with narrow coverage tend to reinforce disparities: they are often appropriated by a small fraction of the population. Conversely, when they develop they incorporate a broader population base, thus de *facto* reducing disparities (Mingat, 2006).

Figure 8: Disparities in the Access Rate to Preschool/Early Learning Activities by Children Aged 3-5 years*, Eight Sample Countries, 2010-11

Parity Index, Points
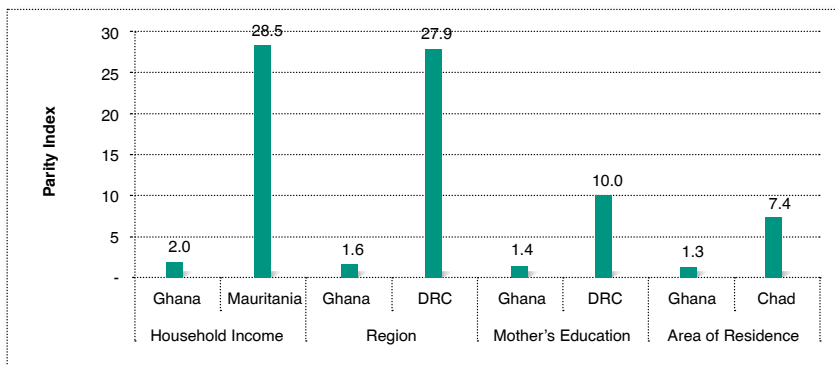
Source: MICS4 and authors' computations.

*Note: * Covers children aged 3-6 years for The Gambia. Parity index (PI): Residence – urban/rural; Household income – Q5/ Q1; Mother's education – secondary or above/none; Region – maximum/minimum.*

Regional disparities in DRC are displayed below for illustrative purposes, given that they are the most striking among the countries of the sample. The visual representation offered by Map 2 is unequivocal: on the one hand, in the province of Kinshasa, home to the capital, over a quarter of children have access to a preschool/ early learning activity; on the other, in the majority of provinces, under five percent have access to such services.

Map 2: Percentage of Children Aged 3-5 Years with Access to Preschool/Early Learning Activities, DRC, by Province, 2010
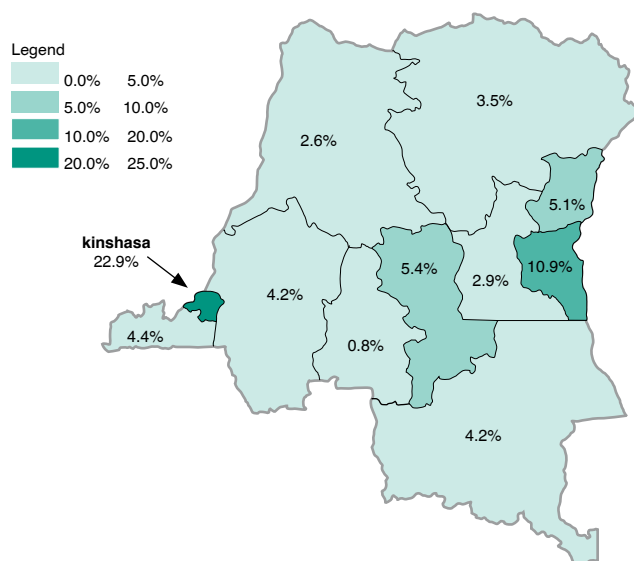
Source : MICS4 Surveys for DRC and authors' computations.

> Although the availability of services appears to play a frontline role in the opportunity to access preschool/early learning services, as potentially illustrated by significant regional variations, the financial capacity of families would also be an important factor impeding or favoring access. The positive role played by mothers' education is also worthy of note, as a potential lever.

The following analysis will enable to better distinguish, among these different characteristics, those that have a significant effect on the access of young children to preschool/early learning activities.

III.2 Factors Affecting Access

The preceding descriptive analysis has enabled to identify the key discriminating factors in access to preschool/ early learning activities. To now determine the net effects (all other things being equal) and significance of the factors on the likelihood of access to a preprimary/early learning activity, statistic modelization is used.[50] It enables to better understand and quantify the different factors with a view to identifying the measures that would favor children's access to these services.

The *explanatory variables* analyzed in the model cover: (i) child characteristics – age, gender and orphan status; (ii) family characteristics – gender of household head, area of residence, region, household wealth,

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[50] A logistic model is used given that the dependant variable is a dummy variable, equal to 1 if the child attends a preschool/early learning programme, or 0 if not.

mother's education; and (iii) parental practices in the areas of health, hygiene, nutrition and stimulation (on the basis of the terciles constructed previously).

The results for each country are presented in Table 12, which indicates the *odds ratios* for a given group of gaining access to preschool/early learning activities compared to another group (the reference group). Only the dimensions of interest and the risk and protection factors have been related here (See Annex Table A2 for the full models). The table also presents the weighted average of the coefficients for the full sample, to better identify the factors with a strong effect on the level of children's access to preschool/early learning activities..

Table 12: Modelization of the Factors Affecting Access to a Preprimary/Early Learning Activity, Children Aged 3-5 years*, Eight Sample Countries, 2010-11

Odds Ratios

	Household Income (Q5/Q1)	Mother' Education (Secondary + /None)	Parental Practices (1) (Good/Bad)			
			Health	**Hygiene**	**Nutrition**	**Stimulation**
Gambia, The*	2.27	1.80	1.87	1.31	0.79	1.44
Ghana	11.72	1.91	1.38	1.49	1.59	1.58
Mauritania	10.68	2.28	-	1.43	-	1.78
Nigeria	6.06	2.64	1.14	1.46	2.11	2.13
DRC	3.24	3.16	-	1.89	-	1.62
Sierra Leone	6.66	2.42	1.33	1.33	1.01	1.87
Chad	2.38	3.58	-	2.46	1.96	1.95
Togo	9.26	2.90	-	-	1.49	2.20
Weighted average	**5.76**	**2.74**	**1.17**	**1.60**	**2.01**	**1.95**

R² : 13.7 % - 39.9 %

Source: MICS4 and authors' computations.

*Note: *Covers children aged 3-6 years for The Gambia. (1) Households belonging to the first tercile are considered to have good practices. Only coefficients that are statistically significant up to 5 percent level are presented in the table. The average is computed on only the significant coefficients.*

Reading Note: In Nigeria, children from the wealthiest households (Q5) are six times more likely to gain access to a preprimary/early learning activity than those from the poorest households (Q1).

The *average net effects* seem slighter than the gross effects initially noted, but are nevertheless marked and significant. Thus, a child from a wealthy household (Q5) is 5.8 times more likely to benefit from preschool/early learning activities than a child from a poor household (Q1). The odds ratio is 2.7 for a child whose mother has secondary education or above, compared to a child whose mother has no education.

Parental practices also have a positive impact on the likelihood of access to preschool/early learning services: good practices in nutrition and stimulation improve the likelihood of access by 2.0, whereas good practices in hygiene are associated with a slighter odds ratio, of 1.6. Good health practices generally have less of an impact, only being significant in half the sample countries, with an average odds ratio of 1.2. Over and above the fact that they enable children to benefit from good health and remain attentive, and allow them to carry out non-domestic activities with greater ease, households with good parental practices may also be those most sensitized to the benefits of such services, and hence go to greater lengths to ensure their children attend.

These trends are generally observed in each country. The most discriminatory variables on the likelihood of access to preschool/early learning activities are household wealth and mothers' level of education. Clear variations are however observed among countries, with odds ratios ranging from 2.3 (The Gambia) to 11.7

(Ghana) according to household wealth, and from 1.8 (The Gambia) to 3.6 (Chad) according to mothers' education.[51]

Gender: Some control variables indicate that children's gender has a minimal impact on the chance of access to preprimary/early learning activities, this being significant in only two of the sample countries: in favor of boys in Chad (advantage of 32 percent) and in favor of girls in Ghana (advantage of 17 percent).[52] This result is encouraging, indicating that parents are not influenced by the gender of their child in their preschooling decisions.

Location: Another interesting result is the non systematic effect of the urban/rural area of residence on access to preschool/early learning activities. This would only be significant in DRC (2.6), Mauritania, Togo and Chad (1.3). Furthermore, the econometric analysis reveals that the region-specific benefits described above disappear or are reduced when variables such as household income, mothers' education or area of residence are controlled.

The cumulated effect: Far from having individual impacts, these effects tend to cumulate to generate highly contrasted situations. An illustration is proposed on the basis of Togo data, where a numerical simulation of the probability of access to preschool/early learning activities has been carried out according to mothers' education and household wealth. The gaps in the effects are substantial, from an access rate of 3 percent for the children of Lomé from poor households with uneducated mothers (cumulating the risk factors), to 81 percent for children from wealthy households of the Savanes region whose mothers have secondary education or above (cumulating the protection factors).

> The analysis of access has enabled to highlight the principal factors that influence the level of access of children aged three to five years to preschool/early learning activities. Household wealth is the most discriminating explanatory factor, followed by mothers' education and parental practices, especially in stimulation and nutrition. The area of residence also plays an important role in children's access to services, illustrating the central role played by supply.
>
> Any action aiming to increase children's access to preschool/early learning programmes should focus, simultaneously, on: (i) the various impeding factors, prioritizing interventions that reduce the financial burden on the poorest households;[53] (ii) encouraging the adoption of good parental practices, not least in the areas of stimulation and nutrition, through appropriate parental education programmes; (iii) carrying out literacy campaigns targeting mothers but also in favor of girls' education, as future mothers; and (iv) eliminating disparities in the geographic location of preschool/early learning services, taking care to prioritize those areas that are least well endowed.

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[51] The gross and net effects can differ considerably. The effect of household wealth on the probability of access to preschool/early learning services in Ghana for instance, appears to be considerably more discriminating in net terms (odds ratio of 12 – see Table 12) than in gross terms (PI of 2 – see Figure 6). This result shows the value of using multivariate analyses, which enable to isolate the single effect of a given variable.

[52] See Annex Table A4.

[53] Furthermore, children from the poorest backgrounds are often those who are most in need of such services.

Figure 9: Numerical Simulation of the Access Probability to Preschool/Early Learning Activities, by Child and Family Characteristics, Togo, 2010

Percentage

	Wealthy: 32%	Educated mother (Sec. et +): 49%
		Uneducated mother: 9%
Lome: 11%		
	Poor: 5%	Educated mother (Sec. et +): 25%
		Uneducated mother: 3%
	Wealthy : 42%	Educated mother (Sec. et +): 60%
		Uneducated mother: 14%
Maritime: 16%		
	Poor: 7%	Educated mother (Sec. et +): 34%
		Uneducated mother: 5%
	Wealthy: 60%	Educated mother (Sec. et +): 67%
		Uneducated mother: 18%
Centrale: 28%		
	Poor: 14%	Educated mother (Sec. et +): 41%
		Uneducated mother: 7%
National: 24,7%	Wealthy: 68%	Educated mother (Sec. et +) : 81%
		Uneducated mother : 31%
Savanes: 35%		
	Poor: 18%	Educated mother (Sec. et +) : 59%
		Uneducated mother: 13%
	Wealthy: 66%	Educated mother (Sec. et +): 80%
		Uneducated mother: 30%
Kara: 34%		
	Poor: 18%	Educated mother (Sec. et +): 58%
		Uneducated mother: 13%
	Wealthy: 60%	Educated mother (Sec. et +): 75%
		Uneducated mother: 24%
Plateau: 28%		
	Poor: 14 %	Educated mother (Sec. et +): 51%
		Uneducated mother: 10%

Source : MICS4 for Togo and authors' computations.

Section IV

Early Childhood Development

The MICS4 surveys include a module on the "development of children aged 36 to 59 months" which offers a measurement of the level of children's development in four areas: (i) early arithmetic and reading capacities; (ii) physical/motor development; (iii) socio-emotional development; and (iv) learning abilities. All four are useful to ensure good readiness for school.[54]

The evaluation of the level of children's development is conducted through a series of ten questions (See Table 13) put to mothers/carers. The responses then enable the computation of (binary) indicators for children's progress in the four development dimensions covered. Finally, these indicators are aggregated to establish the *Global Early Childhood Development Index.* This index enables to appraise the extent to which children's development in a given country is considered to be favorable, or on track.[55]

Table 13: Areas of Early Childhood Development (Children Aged 3-4 Years) Measured by MICS4 Surveys and Integrating the Global Early Childhood Development Index

Domains	Indicators and their Components (Responses are Binary)	Evaluation Criteria - Children are Deemed to be On Track if:
Literacy and Numeracy Abilities	Can the child: 1. Identify or name at least 10 letters of the alphabet? 2. Read at least four common simple words? 3. Recognize and name the symbols for the numbers 0 to 9?	At least two responses are positive
Physical Development	4. Can the child pick up a small object off the floor, such as a stone or a stick? 5. Is the child sometimes too ill to play?	At least one response is positive
Socio-Emotional Development	6. Does the child get on well with other children? 7. Does the child kick, bite or hit other children? 8. Is the child easily distracted?	At least two responses are positive
Learning	9. Is the child able to follow simple instructions to correctly perform a task? 10. Is the child capable of doing something independently when asked?	At least one response is positive

Source : MICS4 questionnaires (childinfo.org)

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[54] It is known that parental practices and ideas on the development of children (when and how children's aptitudes and abilities grow) are very largely determined by cultural frameworks. However, in addition to the skills and competences that are specific to a given culture, some are found across cultures and contexts. To what extent is this also the case of the abilities that are relevant to school performance? With the universalization of school, the required competences tend to be more homogenous across cultures. This is the case for instance of language or the recognition and processing of symbols, but also of social aptitudes such as knowing how to work in a group, wait for one's turn or review one's initial answer. These are skills that are helpful in school, as well as generally for one's adaptability in different life contexts (Fernald et al., 2009).

[55] A child is developmentally on track if on track in at least three of the four domains.

Sixty percent of children aged three to four years in the eight sample countries are developmentally on track. This average does however conceal strong variations according to the dimension considered. Almost all children have adequate levels of motor development (92 percent), 77 percent have sufficient learning abilities and 67 percent show levels of socio-emotional development that is appropriate for their age. On the other hand, children's development in terms of early numeracy and reading is only considered to be satisfactory in 25 percent of cases. These disparities reflect the general learning pattern, which is cumulative, sequential and progressive. Thus, the more complex skills, such as those related to early numeracy and reading, are generally acquired later, when children have already achieved a certain level of development in other areas. Also, children aged three to four years are not expected to master these skills.

Disparities among countries are also present. Without forgetting some of the inherent limitations of the data,[56] the indicators defined here enable to observe a systematic lag in the performance of Chadian children in the four areas considered, followed by their Sierra Leonean and DRC peers. By discarding the first dimension – early numeracy and reading – in which Nigerian and Ghanaian children excel, the development of Gambian, Mauritanian and Togolese children seems adequate.

Table 14: Proportion of Children Aged 3-4 Years whose Development is On Track, by Dimension, Eight Sample Countries, 2010-11

Percentage

	Early Numeracy and Reading	Motor Skills	Socio-Affective	Learning Abilities	Global	Global Score (/10)
Gambia, The	11.9	99.0	71.4	95.1	71.8	5.72
Ghana	28.0	94.9	64.7	89.5	65.5	5.38
Mauritania	19.4	97.5	75.3	91.1	73.7	6.15
Nigeria	32.9	93.2	68.3	79.4	64.5	5.67
DRC	10.9	89.8	66.0	72.2	49.4	4.85
Sierra Leone	9.4	85.8	65.3	77.8	53.4	4.82
Chad	5.9	86.8	57.1	48.6	33.0	3.90
Togo	10.7	98.6	76.0	80.9	66.6	5.51
Weighted average	**24.9**	**92.3**	**67.2**	**77.3**	**59.6**	**5.36**

Source: MICS4 and authors' computations.

A select number of factors are related to the share of children whose development is on track, including age, some socioeconomic and contextual factors and the general ECD context (See Table 15 below):

- The rate increases with *age*, underlining the progressive nature of the acquisition of skills.

- *The region of residence* shows the greatest disparities, with gaps of 45 percentage points between the average least advanced and most advanced regions, equivalent to a parity index of 1.9.

- *The level of household income* is also particularly discriminating: 29 points separate the children of Q5 households from those of Q1 households (with development being on track in 77 percent and 48 percent of cases overall, respectively).

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[56] These disparities are not always directly comparable. Apart from the impact of culture (See Footnote 56), the progressive and step nature of learning implies important variations between the moments when it occurs. See also the limitations discussed in the section on the conceptual framework.

- The development of children living in *urban areas*, and those with an *educated mother* (secondary education and above) is 1.3 and 1.4 times more likely to be on track, respectively, than their rural peers and than children whose mothers are uneducated.

- *Gender:* On average in the eight countries, no difference is noted between boys and girls.

Table 15: Proportion of Children Aged 3-4 Years whose Development is On Track, by Child and Household Characteristics, Average of the Eight Countries, 2010-2011

Percentage and Parity Index

Gender	Boy	59.8
	Girl	59.3
	PI	1.01

Age	3 years	55.3
	4 years	64.3
	PI	1.16

Area of Residence	Rural	54.7
	Urban	71.0
	PI	1.30

Household Income	Q1 (Poorest)	48.3
	Q5 Wealthiest)	76.9
	PI	1.59

Mother's Education	None	51.1
	Secondairy +	71.4
	PI	1.40

Region	Min	40.0
	Max	75.7
	PI	1.89

Children whose Delopment is On Track

8 Country Average 59.6%

50.0	No	Attendance of and ECD Activity
77.2	Yes	
1.54	PI	

57.4	Bad	Parental Practice Health
64.9	Good	
1.13	PI	

49.8	Bad	Parental Practice Hygiene
74.0	Good	
1.49	PI	

54.4	Bad	Parental Practice Nutrition
71.8	Good	
1.32	PI	

48.2	Bad	Parental Practice Stimulation
65.2	Good	
1.32	PI	

Source: MICS4 and authors' computations.
Note: The average of the eight countries is weighted

Regarding ECD practices, we note:

- *Participation in a preschool/early learning activity* is the most discriminating factor: 77 percent of beneficiaries' development is on track, against 50 percent of those who do not attend (PI of 1.54).

- *Hygiene practices* appear to be the most discriminating parental practice (parity index of 1.5): the development of children from households where these practices are satisfactory is therefore 50 percent more likely to be on track.

- *Stimulation practices* (PI of 1.35) and *nutrition practices* (PI of 1.3) also have a significant impact, but *health* practices appear to have little impact on the favorable development of children (PI of 1.1).

Although socioeconomic and contextual factors have differentiated impacts according to the country, as the gaps in the parity indexes suggest (See Figure 11 below), the nature of the impact is generally as expected. Figure 9 also suggests that participation in a stimulation activity is particularly discriminating, given the considerable PI gaps between countries.

Figure 10: Disparities in the Percentage of Children (Aged 3-4 Years) whose Development is On Track, by Household Socioeconomic Characteristics, Eight Sample Countries, 2010-20111

Parity Index
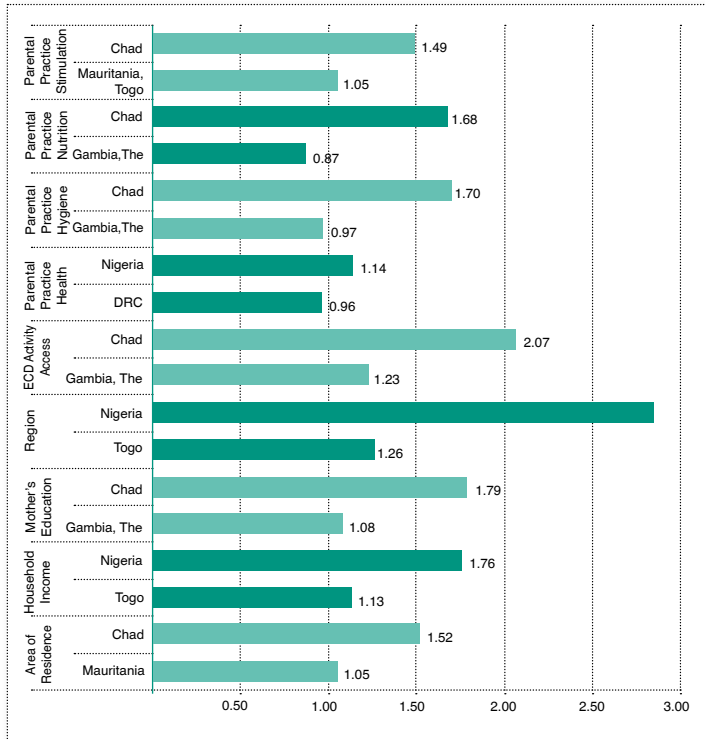
Source: MICS4 and authors' computations.

Net Effect of Variables on the Level of Development of Children

To rigorously identify the factors that have a significant effect on children's development, econometric modelization is again used, for the eight countries. A *linear* model is used, the dependent variable being a child's global score.[57] The model proposed retains the same factors used until now: child characteristics (age, gender and orphan status), family characteristics (mother's education, household income and gender of household head), geographic factors (region and area of residence) and specific ECD factors (access to a preprimary/early learning activity and parental practices in health, hygiene, nutrition and stimulation).

The weighted average of the values of the coefficients for the eight countries is presented in Figure 11 below, computed on the basis of the variables that are significant at the five percent level, but also on all variables, significant or not. Only the variables of particular interest have been included in the figure.

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[57] The choice of this specification is related to the fact that it led to higher levels of variance being explained (R^2) than with a specification based on the likelihood of children's development being on track. However, this does not alter the conclusions of the analyses. The Global ECD Score is based on the 10 indicators that form the ECD Index (see Table 13); each indicator being given a value of 1 when the child is able to perfom the task, and 0 otherwise. The Global ECD Score is a simple addition of the values obtained on the 10 indicators. It goes from 0 to 10.

Figure 11: Factors Affecting the Global ECD Score (Children Aged 3-4 Years), Average of the Eight Countries, 2010-11

Points
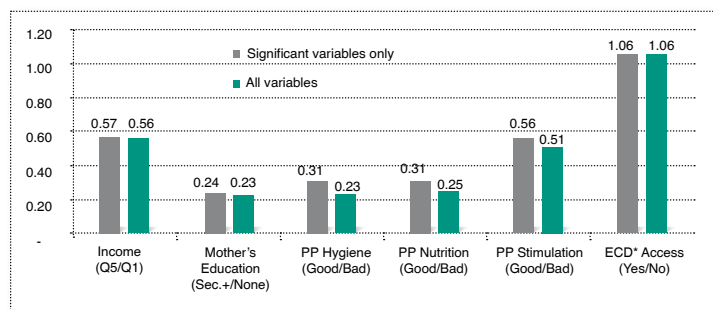
Source : MICS4 and authors' computations.

Note: Weighted averages of the coefficients of the regressions for the eight countries. The global score is out of 10. PP: parental practice. Coefficients are obtained by the linear regression of the Global ECD Score on age, gender and orphan status of children; household income (quintile), mothers' level of education (none, primary, secondary and above), gender of household head; the level of parental practices (good, average, bad) in health, hygiene, nutrition and stimulation; and access to a preprimary/early learning activity. The maximum significance threshold used is 5 percent.

Figure 11 shows that:

- *Access to a preschool/early learning activity* has the most marked impact on children's development. The child development global score for children attending such a programme is 1.06 points higher.

- Good *parental practices in terms of stimulation* also affect the global score, which increases by 0.56 points (half the effect of attending a preschool activity).

- Good practices in the areas of *nutrition and hygiene* each add 0.31 points to the score, but health practices are not significant overall.

- *Mothers' education* has a favorable net impact on the child development index, all other things being equal; its effect is however comparatively modest, adding 0.24 points to the global score.

- Finally, *household wealth* continues to be a particularly discriminating factor: the score for children from the wealthiest households is 0.57 points higher on average than that for their poorest peers.

It is interesting to note that the average gain of the development score brought about by household income is similar to that engendered by good parental practices in terms of stimulation, suggesting the possibility of compensating for precarious economic backgrounds by an improvement of stimulation practices within families.

The country-level analysis highlights marked variations in terms of the net effects of the different variables on the Global ECD Score (See Table 16).

Table 16: Disparities in the Factors Affecting the Global ECD Score, Children Aged 3-4 Years, Eight Sample Countries, 2010-11

Points

	Min	Max	Gap
Household Income (Q5/Q1)	0.287 (Gambia, The)	0.677 (Nigeria)	0,390
Mothers' Education (Sec.+/None)	0.217 (Gambia, The)	0.363 (Chad)	0,146
PP Hygiene (Good/Bad)	-1.190 (Gambia, The)	0.351 (Chad)	0,541
PP Nutrition (Good/Bad)	0.271 (Ghana)	0.314 (Nigeria)	0,043
PP Stimulation (Good/Bad)	0.236 (Togo)	0.651 (Sierra Leone)	0,416
Preschool/Early Learning Activity Access (Yes/No)	0.527 (Ghana)	1.400 (Chad)	0,873

Source : MICS4 and authors' computations. See Annex Table A5 for further details.

Note: The global score is out of 10. PP: parental practice. Coefficients are obtained by the linear regression of the Global ECD Index on age, gender and orphan status of children; household income (quintile), mothers' level of education (none, primary, secondary and above), gender of household head; the level of parental practices (good, average, bad) in health, hygiene, nutrition and stimulation; and access to a preschool/early learning activity. The maximum significance threshold used is 5 percent.

The most differentiated effects are noted in terms of *preschool/early learning activities*, that have an effect on the Global ECD Score ranging from 0.53 points in Ghana to 1.40 points in Chad. It is interesting to remark that these countries are those where the preprimary/early learning programme coverage is respectively the strongest and the weakest of the sample (See Section III). This could be explained by the quality of preschool/early learning services, or be related to the quality of the family environment. Indeed, the results of Section II on the quality of parental practices indicated that these tended to be poor in Chad. The case of Chad could also illustrate the potentially compensatory effect of preschool/early learning activities on children's development, in a context marked by a generally poor level of quality of the family context.

The variability observed in *parental practices*, particularly those of hygiene and stimulation, also suggest the existence of real scope to improve parental education.

The other variables included in the model show: (i) a positive relation between *children's age* and their level of development, which is no surprise. (ii) Children's *gender* has a modest influence, generally not being significant, except in Togo and Sierra Leone, where the Global ECD Score for girls is about 0.15 points lower. (iii) The area of residence is not always discriminating, but when it is, it favors urban children. This is the case, among others in The Gambia, Ghana and Mauritania.

To appraise the *potential cumulative or compensatory effect* of the different risk and protection factors[58] on the development of children, a numerical simulation of the Global ECD Score is carried out, for different ages and according to household wealth, mothers' level of education, access to preschool/early learning programmes and the level of good practices in the areas of health, hygiene, nutrition and stimulation. The illustration below (See Figure 12) focuses on data from Sierra Leone:

- The positive effect of *age* on the level of the global score: from 4.63 for children aged 36 months, the score reaches 5.05 for children aged 59 months.

---

[58] The protection factors are: Q5 households, mothers with secondary education and above, access to preschool/early learning activities, good parental practices in the four areas. Risk factors are: Q1 households, uneducated mothers, no access to preschool/early learning activities, bad parental practices in the four areas.

- *The cumulative effect of protection and risk factors:* a gap of 3.03 points exists between children who benefit from all the protection factors and those who are exposed to all the risk factors.

- *Disadvantages are difficult to recover:* the global score for children aged 59 months who cumulate all the risk factors is lower than the average score for all children aged 36 months.

- *Compensatory effects exist:* the children of poor households (Q1) but that benefit from a protective family environment and participate in early learning activities have a global score of 6.07 at 36 months, 1.85 points above that of children of the same age from wealthy households (Q5) but cumulating other risk factors

Figure 12: Numerical Simulation of the Global ECD Score, According to Child Characteristics and Protection/Risk Factors, Sierra Leone, 2010

Points
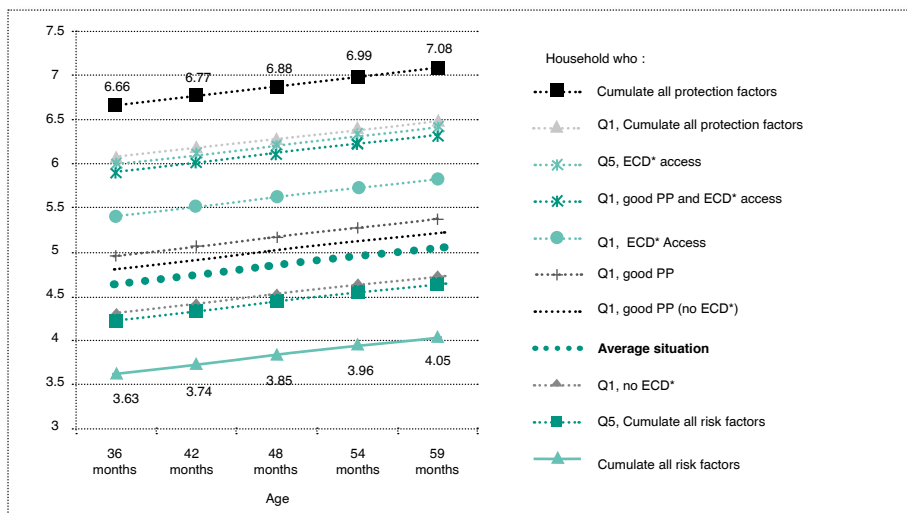
Source: MICS4 and authors' computations.

Note: The global score is out of 10. PP: parental practice. Coefficients are obtained by the linear regression of the Global ECD Score on age, gender and orphan status of children; household income (quintile), mothers' level of education (none, primary, secondary and above), gender of household head; the level of parental practices (good, average, bad) in health, hygiene, nutrition and stimulation; and access to a preschool/early learning activity. * ECD refers to early learning/preschool activities.

These observations suggest that there is real scope to positively influence early childhood development: encouraging the adoption of good parental practice, particularly in terms of stimulation, and expanding the participation of children in preschool/early learning activities should be favorable to children's development (translating into a higher Global ECD Score) and contribute to reduce the potentially detrimental impact of socioeconomic precarious contexts (household poverty and uneducated mothers). Early action is equally critical, as cumulated disadvantages are difficult to recover at later stages.

Section V

School Readiness

The previous analysis has highlighted the effect of good parental practices and of the access to preschool/early learning activities on children's holistic development. Here, the role that these variables may play on the level of children's readiness for primary school is examined. It is assumed that a child growing up in a family context marked by good parental practices and having attended preschool will be better prepared for primary school.

The analysis is based on the age of primary access for all new Grade 1 entrants at the time of the survey, the only dimension the MICS4 surveys enabled to appraise.[59] For these children, it is possible to determine: (i) their access to preschool programmes over the past year, and (ii) common parental practices, for children aged six to eight years who have siblings under the age of five years.[60]

The level of primary enrollment in the eight countries has been established on the basis of probabilistic profiles that illustrate the probability that a given generation of children will access different education levels, such as the primary grades covered here. The profiles provide information on levels of access and completion, represented by the first and last points of each curve in Figure 13.

Figure 13: Probabilistic Schooling Profiles, Primary Level, Eight Sample Countries, 2010-11

Percentage
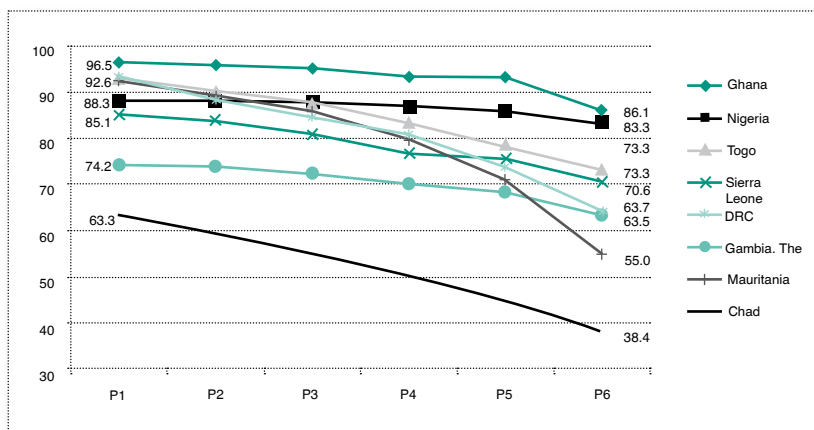
Source : MICS4 and authors' computations.

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[59] See Footnote 17 on the limitations of MICS4 surveys in appraising school readiness.

[60] The parental practice indexes are based on indicators that are computed mainly for children under five years.

The figure gives a contrasted picture of primary enrollment among countries. In Ghana, access to primary is almost universal with an access rate of 96.5 percent; in Chad only 63 percent of children had access to primary in 2010-11. The Gambia also displays some difficulty in enrolling all of its children at school, with 36 percent not gaining access.

Primary completion is problematic in most countries, under 75 percent in six out of eight. Only Ghana and Nigeria, with rates close to 85 percent, obtain good results in this area. Most countries face retention issues.[61] The situation is particularly critical in Chad, where barely 38 percent of a generation of children can expect to reach the last primary grade. Of the eight sample countries, Ghana is the only one on track to universal primary enrollment.

Box 3: Supply and Demand Factors Affecting School Access and Late Entry

> Various demand and supply factors explain weak primary access and retention rates. On the supply side: the distance to school, the quality of infrastructure and teaching, or the fact that schools offer the full cycle (of six years of education). On the demand side: the direct cost of schooling, household perceptions of the value of education and children's abilities, for instance.
>
> The late enrollment of a child in primary may be due to financial constraints, to the unavailability of a school nearby, or again to the lack of apparent interest for school on behalf of parents.
>
> The young age of children is a factor often mentioned by parents to explain their late entry to school. This is particularly pronounced in contexts marked by high malnutrition (World Bank, 2003). But children who start primary late will still be there when they reach adolescence, increasing the risk of early dropout. The older a child is, the greater the opportunity cost of education, especially if their family is poor and needs labor, or because of the risk of pregnancy and early marriage in the case of girls reaching puberty.

In the sample countries, 42 percent of children start school after the official age (six years in general, seven years in the Gambia) on average (See Figure 14 below). The magnitude of late entry varies from 24 percent in Togo to 64 percent in Mauritania. The gaps between the average age of primary access and the official age are greater than a year in Chad (1 year), DRC (1.2 years) and Ghana (1.2 years), with the highest difference being observed in Mauritania (1.4 years). It is not uncommon that some children access primary at the age of 11, 12 or 13 years in most of the countries of the region (See Annex Figure A2).

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[61] Retention is also illustrated, by the slope of the curve: the steeper the curve, the greater the level of dropout.

Figure 14: Proportion of New Primary Entrants above the Official Age and Average Gap between the Effective Age and the Official Age, Eight Sample Countries, 2010-11

Percentage and Years
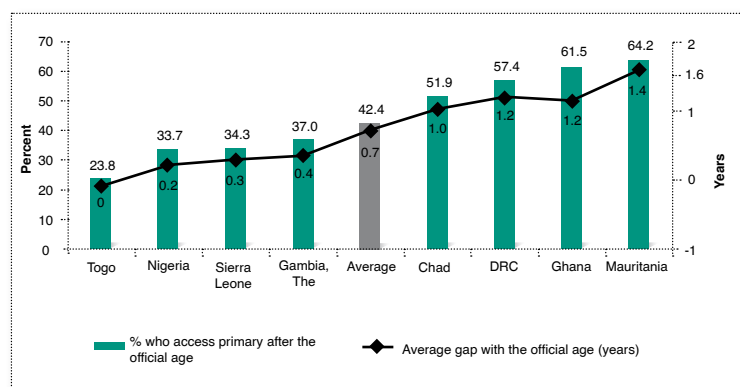
Source: MICS4 and authors' computations.

Note: The average is weighted. Pupils aged 7 years and above are considered to be above the official age (8 years and above for The Gambia).

Beyond the common factors listed in Box 3 that favor the late entry of children to school, this can also be due to the lack of their appropriate care during their preschool years, in particular in terms of preprimary education, that would enable them to be better prepared for their primary entry. Table 17 below explores the link between preprimary schooling and the age of first primary access for the countries of the sample:

- From 2 percent (Mauritania) to 98 percent (Ghana) of new primary entrants had attended preprimary.

- Children having attended preprimary are younger in Grade 1 than those not having attended (from 0.3 years in Nigeria to 1.8 years in Mauritania), except in The Gambia and Sierra Leone.

Two major facts nevertheless tend to confuse the expected link: (i) the highly variable effect of preprimary attendance on the age of primary access, which is at times negligible;[62] and (ii) similar age gaps for very dispersed levels of preprimary coverage. The cases of Ghana and Mauritania illustrate this perfectly. The differences in the preprimary enrollment rates are the widest, yet the gaps between the effective and official ages of primary access for those having attended preprimary and those who did not are similar. Conversely, very low preprimary enrollment rates (under 10 percent) are associated with very high age variations (from 0.6 years to 1.8 years).

The case of Ghana is particularly interesting. Late entry (+1.4 years) is associated with almost universal preprimary enrollment of new primary entrants (98.3 percent). This case further illustrates that although most children access primary at a later age, having attended preprimary reduces this age somewhat. With no preprimary attendance, primary entry would be later still (+3.1 years).

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[62] Preprimary enrollment could also encourage late primary entry, in particular where preprimary is compulsory, and if preprimary entry was late in the first place.

Table 17: Average Age of New Primary Entrants, by Preprimary Status, Eight Sample Countries, 2010-11

Years and Percentage

	With Preprimary Enrollment	No Preprimary Enrollment	Average	Gap (Without-With)	% that Attended Preprimary
Gambia, The *	7.3	7.2	7.2	- 0.1	40.8
Ghana	7.4	9.1	7.5	1.7	98.3
Mauritania	5.7	7.5	7.5	1.8	2.2
Nigeria	6.4	6.7	6.5	0.3	72.1
DRC	6.2	7.3	7.2	1.1	9.5
Sierra Leone *	6.5	6.6	6.6	0.1	12.0
Chad	6.6	7.2	7.2	0.6	5.6
Togo	5.6	6.1	6.0	0.6	20.6

Source : MICS4 and authors' computations.

Note: In The Gambia, the official age of first access to primary is 7 years, against 6 years for the remaining countries.
* All differences are significant at the 10 percent level, except for The Gambia and Sierra Leone, where they are not.

The Net Effects of Preprimary Enrollment on the Age of First Primary Access

The net effect of preprimary enrollment on the age of primary entry is studied thanks to *econometric modelization*. A logistic model relates the fact of being enrolled in primary at the official age with the fact of having attended preprimary.[63] The results covering the three variables of interest are represented in Figure 15 below by odds ratios that compare the likelihood of a child who attended preprimary entering primary at the official age to that of a child who did not attend preprimary.

The results are not conclusive for all countries. Preprimary attendance has a positive impact on the age of primary access in only two countries,[64] Togo and DRC. The odds ratios are 1.6 (Togo) and 2.5 (DRC).

In these two countries, *mothers' education* also has a positive impact on starting primary on time, with an effect that is all the stronger that the effect of preprimary attendance is weak. There appears to be some compensation between the two variables.

A strong and significant impact of household wealth on the age of primary entry is noted for three out of six countries; children from the wealthiest households face chances 2.0 (Chad) and 4.1 (Togo) times higher of entering primary at the official age than their peers from the poorest households. These results again confirm the reality of the considerable financial barriers to primary entry in these countries.[65]

---

[63] The dependent variable is to be enrolled at the official age (equal to 1 when this is the case, or 0 if not) and the preprimary attendance variable is a dummy (equal to 1 if the child attended preprimary, or 0 if not). The model also includes a series of control variables: child (gender and orphan status) and household characteristics (income, mothers' education, gender of household head and area and region of residence).

[64] For the six countries where the analysis was conducted. No analysis was conducted for Mauritania due to an excessively small sample size or for Ghana given that preprimary attendance is universal. See Annex Table A6 for the full results.

[65] The results were unable to show any significant effects on the likelihood of timely primary entry of gender. This result as such is very positive, underlining equal treatment by parents of girls and boys.

Figure 15: Modelized Odds Ratios of Timely Primary Access, New Entrants, Six Sample Countries, 2010-11

Odds Ratios
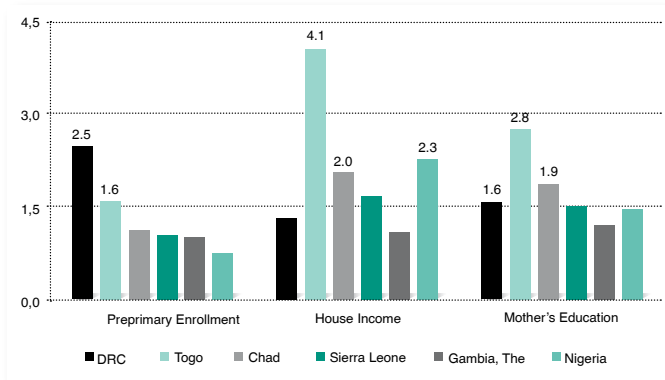
Source: MICS4 and authors' computations.

Note: Where values are shown, the coefficients are significant at the 5 percent level; otherwise they are not significant. No analysis was conducted for Mauritania due to an excessively small sample size or for Ghana given that preprimary attendance is universal.

A similar linear regression was performed on the six to eight years age-group, incorporating parental practices.[66] The results indicate that *the relation between the level of parental practices and the likelihood of entering primary at the official age is not generally significant*. Furthermore, those few positive effects that are noted do not enable to establish a coherent trend: good hygiene practices appear to have a positive impact in DRC and Nigeria, whereas health and nutrition practices do not, their effect being negative. In Togo, the situation would be the opposite: children from households observing good nutrition practices face stronger chances of attending primary at the official age.

> The explanatory power of the regressions is very weak, between 3 percent and 10 percent. This indicates that the variables used in the models explain relatively little of the variation in the probability of attending primary at the appropriate age and that several other factors come into play. The results have not identified the possible role of parental practices in the transition to primary school. Their predominant role in children's global development is not called into question in the slightest as a result, and should advocate for action to encourage good family practices from children's earliest ages.

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[66] The analyses were conducted on 5 out of 8 countries. Mauritania and Sierra Leone were not included given the small sample sizes, and Ghana because virtually all children attend preprimary, which removes all variation from the preprimary attendance variable.

Conclusions and Strategy Options

This section reviews some of the prominent points of the analysis carried out on ECD in eight countries of Central and Western Africa. The results, in particular in terms of children's readiness for primary school, highlight the limitations of MICS4 surveys in properly understanding this dimension of ECD, despite them being central to any analysis of the issue.

Children grow up in particularly precarious socioeconomic and health environments, characterized by parental practices that do not always favor their good development. Overall, the countries studied face global contexts that are particularly difficult, marked by sometimes worrying levels of poverty and precarious social and health environments. This directly affects families and their ability to cover the fundamental needs of their children. Thus, living conditions are globally poor and marked by over-crowding, limited access to basic infrastructure and low levels of ownership of communication and audio-visual equipment. In addition to this, practice levels in the areas of health, hygiene, nutrition and stimulation are not always ideal. Too numerous are the households in the region that do still not fully master basic health, hygiene and nutritional behaviors aiming to ensure the optimal and harmonious development of their children. The stimulation context in which children grow up is also characterized by low levels of ownership of books and toys, sometimes accentuated by the slight involvement of adults in children's learning, thus depriving young children of an effective stimulation environment.

The level of parental practices is all the higher that households are wealthy, located in urban areas and that mothers are educated, but the overall weight of these factors in explaining levels of parental practices is weak. Although significant variations are observed between countries in the level of household practices according to their socioeconomic and background characteristics, an overall trend is apparent. The results show that although the region of residence appears to be one of the most powerful factors of disparity (pointing to supply-side and cultural factors), the level of wealth is particularly discriminating, closely followed by mothers' education and the area of residence (urban/rural). Considering the level of household wealth as being illustrative of the economic constraint faced by households therefore leads to the finding that in many cases, the failure to adopt good practices within households is closely related to economic difficulties. This particularly holds in the area of hygiene, implying that access to drinking water, adequate sanitation and to hygiene products is greatly subject to households' level of wealth. However, the variables considered to appraise the level of good parental practices explain little of the variation observed in these practices, indicating that a significant number of unobserved factors are at play.

Access to early learning and stimulation services is generally low, with only a third of children aged three to five years benefitting in 2010-11. Considerable variations are however observed among countries, with access rates reaching 73 percent in Ghana on the one hand, compared to just 5 percent in Chad on the other.

Beyond supply considerations, access to preschool/early learning activities is greatly subject to the level of household wealth, although parental practices in the areas of nutrition and stimulation also play a significant part. The analysis of the main factors influencing the level of access of children aged three

to five years to preschool/early learning activities has shown the particularly important role played by the level of household wealth, followed by the level of mothers' education, and parental practices, in particular in the areas of stimulation and nutrition. The area of residence also has a significant impact on children's access, illustrating the potential effect of the supply of such services. The positive role played by mothers' education is noteworthy, as a potential lever for action. However, far from having individual impacts, these different effects tend to cumulate to sometimes create highly contrasted situations.

The development of sixty percent of the children aged three to four years of the eight countries under study is on track. This share increases with children's age, pointing to the cumulative nature of learning with age. Children's gender has a moderate influence, not being significant overall in six out of eight countries. Finally, the area of residence is not always discriminating, but when it is, it favors urban children.

Attending a preschool/early learning programme has the greatest impact on children's development, followed by good parental practices in terms of stimulation and the level of household wealth. The analyses of children's development have underlined the central role played by the attendance of a preschool/early learning programme. Good parental practices in terms of stimulation also play an important role (their effect is equivalent to half that of preprimary attendance) followed by good practices in the areas of nutrition and hygiene. Mothers' education continues to have a favorable impact on children's scores, but its effect is relatively more modest.

Protection and risk factors have both cumulative and compensatory effects. A gap of three points (out of ten) exists between children who benefit from all the protection factors and those who are exposed to all the risk factors. When combined however, the factors counterbalance each other. Thus, low levels of wealth may be compensated by good stimulation practices at home.

Disadvantages in terms of development are difficult to recover however: the score obtained by children aged under 59 months and who cumulate all the risk factors is below the average score of children aged 36 months.

Access to primary school is still far from universal and is marked by late entry: 42 percent of those entering primary Grade 1 for the first time in 2010-11 were older than the required age. The magnitude of late entry is variable, ranging from 24 percent in Togo to 64 percent in Mauritania. Furthermore, it is not uncommon that children start primary at the age of 11, 12 or even 13 years in many of the countries of the region.

Preprimary attendance has a modest effect on the age of primary access, as do parental practices. Preprimary attendance has a positive and significant effect on the age of first primary access in only two of the six countries where the analysis was conducted (Togo and DRC). In these two countries, mothers' education also has a positive impact, favoring children's access to primary at the required age, with an effect that becomes stronger as the effect of preschool attendance weakens. The two variables appear to mutually compensate each other. Finally, a strong and significant impact of wealth on the age of primary access is noted in three countries out of seven. These results suggest the existence of high financial barriers to primary access in these countries.

In the light of the previous findings, some strategic guidance can be offered, summarized as follows:

Seek a better understanding of the determinants of family practices to encourage the adoption of practices that favor children's development
The predominant role of good family practices in the overall development of children and in their access to early childhood stimulation activities advocates for their development and adoption by families. However, the

variables considered in the context of this study to appraise their levels have a very weak explanatory power overall, indicating that an important number of unobserved factors are in fact at play. Specific analyses merit being conducted to better understand the determinants affecting the level of good parental practices, to better identify the actions required to encourage their adoption.

Start early

Early interventions are critical, as cumulated disadvantages in terms of children's development are difficult to recover later on. Early learning and stimulation activities at home from during the very first years should particularly be promoted in the light of the strong positive effects (and modest costs) they have on young children's development. Encouraging the adoption of good parental practices in the areas of nutrition and hygiene also constitutes worthwhile leverage for action. The positive role played by mothers' education advocates for literacy campaigns targeting mothers as well as for the education of girls in general, as mothers to be.

Increase preschool access

The expansion of preschool should be favored by the implementation of interventions impacting both the supply of preschool services and the demand for them. On the demand side, this should include, among others, lifting the constraint on the most disadvantaged households (through cost-free measures or cheaper community approaches), the financial constraint having been identified as one of the strongest barriers to access. On the supply side, it will be important to eliminate disparities in the geographic distribution of preschool services, while prioritizing the areas where supply is the weakest; school mapping can be a very useful tool in this exercise.

Think local

Although overall, this guidance applies to the eight countries covered by the study, individual characteristics are noted for each of them, and specificities within each, which suggest the existence of strong background factors that underline the need for action that is appropriate at the national and subnational levels.

Harness appropriate analysis tools to better understand the stakes and improve the planning and monitoring of interventions

MICS4 surveys, despite some of the light they shed on ECD issues, do not enable their in-depth appraisal. This is particularly true with respect to the aspects relating to children's readiness for primary school, but also with respect to certain parental practices. Furthermore, they do not enable the analysis of specific interventions, as direct information on the supply of health, hygiene, nutrition and stimulation services is not provided. Although some options to improve MICS surveys are available, they will not globally address all ECD issues, especially in the short term. Further instruments are required. Initiatives like that promoted by UNICEF and Central Africa Regional Office (e.g., sub-sector financial model, skills assessment of child upon primary school entry, parental practices survey) fill some of these gaps. Surveys of children's learning outcomes at the primary level, such as EGRA/EGMA, PASEC or SACMEQ, also enable the analysis of the links that exist between preschool attendance and school careers, and the level of pupils' learning outcomes. School mapping is also a tool that can help to better understand the quantitative supply of preschool services.

Annex

Annex 1: Notes

Note 1: The Age Issue: Target Population Groups for ECD Services (Source: Education Sector Analysis Methodological Guidelines, UNICEF et al., 2014)

ECD covers the period of a child's life that spans from its conception to the age of eight years, during which the essential stages of development take place. It is common to divide this period into three phases that reflect specific stages of growth and for which specific services are offered. Each of the three is critical for children's development and far from being exclusive or independent, they are incremental, each stage being consolidated by the following (Naudeau et al., 2011).

Children aged 0 to 2 years: This period is considered to be most critical for children's survival and development and is the one where children are most vulnerable to the lack of appropriate care. The absence or lack of appropriate care and interventions during this stage of children's life exposes them to sometimes irremediable damage, particularly in terms of their physical and cognitive development. Indeed, it is during this period that most of the brain's development occurs, as well as related aptitudes such as vision, hearing and emotional control. Appropriate nutrition, through balanced diets during pregnancy, exclusive breastfeeding until six months and complementary feeding thereafter are necessary to ensure the optimal development of these functions. Likewise, providing a stimulating, secure, protective and welcoming environment will enable children to develop strong relationships with their parents and care-givers and give children the foundations they need to develop further abilities.

Children aged 3 to 5 years: During this stage progress is mainly in terms of cognitive development, language, socio-emotional development and interaction with peers. More complex forms of linguistic and cognitive stimulation by parents and care-givers are important, in addition to continued attention to nutrition, health and protection. Preprimary education activities provide an appropriate framework.

Children aged 6 to 8 years: This phase is when the above aspects of children's development are consolidated and when the transition to primary school takes place. In practice, this age group is often ignored by ECD practitioners, mainly due to programme constraints that transfer responsibilities to the formal education system, through primary schools. Yet, this phase is capital, especially in countries where preschooling is limited. For this age group, ensuring that the school is ready to host them will prove critical (See Britto's work on school readiness (Britto, 2012)).

Note 2: Options for the Adaptation of MICS Surveys to Better Appraise ECD Issues

MICS4 (Multi Indicator Cluster Survey), while shedding some light on ECD issues, do not enable to appraise them in great depth; this is particularly true of aspects relating to children's readiness for primary school but also of some parental practices. This annex presents a brief overview of the limitations noted with MICS4 surveys and of some of the options for their improvement.

Measuring Children's Development

MICS4 surveys include an innovative instrument to measure the physical, linguistic, cognitive and socioaffective development of children aged three to four years, and an encompassing composite indicator, *the early childhood development index*, that helps to appraise the overall development of young children.

The limitations noted are:

  i. The questionnaires used are of the screening variety: children are not directly evaluated by investigators, questions rather being asked to their parents/guardians (usually the mother);

  ii. The same questions are asked to all children aged three to four years; yet some areas, such as preliteracy and prenumeracy are not relevant to the 3-4 year age group: indeed, children of this age are not expected to master such concepts;

  iii. They only cover children aged three to four years.

Parental Practices

Parental practices are evaluated through questions drawn from several of the MICS4 survey modules that provide information on household specifics, children under five years or the behavior of their guardians in the areas of health, hygiene, nutrition, stimulation, or protection.

The limitations noted are:

  i. The information used to characterize the quality of children's family environments (in particular the quantity and quality of interactions with parents/guardians and their peers, conversation habits, sleep patterns, and so on) is missing;

  ii. Little information is available on children aged five years and above, and on the practices concerning them, which limits the possibility of directly appraising the impact of parental practices on children's school readiness, and more generally to evaluate the evolution of parental practices in the different areas over the ECD period, that ranges from birth to eight years.

ECD Service Supply

No direct information on the supply (both in terms of quantity and quality) of health, hygiene, nutrition and preschool/early learning services is included.

School Readiness

MICS4 surveys do not enable a correct appraisal of the school readiness issue, despite it being at the heart of the ECD approach. This has therefore been dealt with by default in this study, through the age of children's first

access to primary Grade 1 at the time of the survey, the only dimension that MICS4 surveys enable to evaluate. The limitations noted are:

i. Information on preschool attendance and primary enrollment do not enable the adequate description of school readiness: preschool attendance data is only provided for children accessing primary for the first time, and cannot be related to repetition or primary retention;

ii. Some key information is not supplied, such as personal repetition history, the duration and type (public, private or community) of preschool programme attended, or the age of first access to primary.

This, among others, impedes any analysis of the private and social returns on investment in preprimary attendance, which is an important analysis to support advocacy in this field. The length of preschool is also a key data to better understand the optimum number of preschool years, in particular in relation to children's knowledge at the beginning of primary Grade 1, repetition and early dropout, as well as other social and health considerations (external efficiency).

Global Limitations

A major issue faced whey wanting to analyze early childhood issues with MICS4 survey results is related to the fact that questions are asked of children of different ages **that do often not overlap**. Whereas parental practice questions are generally asked in relation to children aged under five years, or those aged three to four years, and this only to compute the early childhood development index or for questions correlated to this module (the EC module), those relating to enrollment are generally asked of children aged five years and above. It therefore becomes difficult to establish a link between family practices and children's development on the one hand, and their impact on school readiness on the other.

Options for Improvement

- Extend the questions of the early childhood (EC) module, as well as some pertaining to parental practices, to cover all children from birth to the age of eight years,;

- Better define/introduce questions relating to parental practices, for instance;

    ◊ The question on toys (EC2) could be reviewed: instead of the number of types of toys, it would be more interesting to know the total number of toys available at home;

    ◊ Introduce questions on the quantity and quality of interactions with parents/guardians and their peers (including affective practices); conversation habits; sleep patterns; parents'/tutors' perceptions on the role of parental education and on the role of parents in child rearing, etc.

- Introduce questions relating to the supply of ECD services (type, availability, distance from home, attendance, cost, satisfaction and so on);

- Complement these with questions on household education spending. It would be important to systematically include this dimension in the questionnaires, and to take care to ensure that spending is included for preschool through to higher education;

- Ensure that preschool attendance constitutes a separate question (providing detail of the length and type of service attended), and that it is asked of all children aged three years and above;

- Introduce a question on children's age of first primary access.

Annex 2: Further Tables and Figures

Figure A1: Disparities in the Share of Households Adopting Good Practice Levels in the Areas of Health, Hygiene, Nutrition and Stimulation, Eight Sample Countries, 2010-2011

Parity Indexes

Health

Urban/Rural PI: 1.0 Ghana: 0.6 Chad: 1.6	Mothers' Education PI: 1.2 Gambia. SL. Ghana: 0.9 Chad: 1.8
	Households Adopting Good Health Practices	
Q5/Q1 PI: 1.2 Ghana: 0.5 Chad: 2.5	Region (Max/Min) PI : 3.1 Sierra Leone: 1.2 Chad: 17.2

Hygiene

Urban/Rural PI: 3.9 Sierra Leone: 2.1 DRC: 10.1	Mothers' Education PI: 2.9 Gambia: 1.9 DRC: 5.3
	Households Adopting Good Hygiene Practices	
Q5/Q1 PI: 27.5 Gambia: 7.6 Togo: 224.6	Region (Max/Min) PI: 9.9 Sierra Leone: 3.3 DRC: 113.1

Nutrition

Urban/Rural PI: 1.5 Sierra Leone: 1.2 Ghana: 2.3	Mothers' Education PI: 1.7 Gambia. Sierra Leone: 1.2 Nigeria: 4.3
	Households Adopting Good Nutrition Practices	
Q5/Q1 PI: 2.3 Gambia: 1.3 Nigeria: 5.1	Region (max/min) PI: 5.5 Sierra Leone: 1.6 Chad: 21.9

Stimulation

Urban/Rural PI: 1.1 Gambia: 0.7 Nigeria. Ghana : 1.4	Mothers' Education PI: 1.3 Gambia. Chad. Togo: 1.1 Nigeria: 2.1
	Households Adopting Good Stimulation Practices	
Q5/Q1 PI: 1.4 Gambia: 0.9 Nigeria: 2.4	Region (max/min) PI: 2.2 Sierra Leone: 1.3 Nigeria: 7.2

Source : MICS4 and authors' computations.

Figure A2: Age Distribution of New Primary Grade 1 Entrants, Eight Sample Countries, 2010-11

Percentage
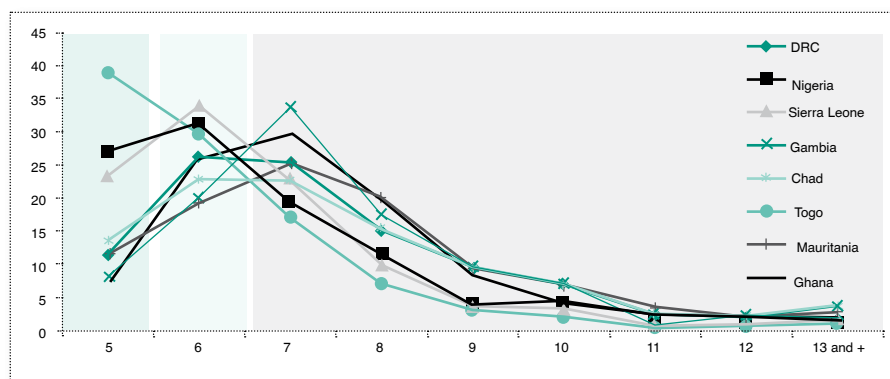
Source: MICS4 and authors' computations.

Table A1: Level of Inertia in Relation to the Primary Axis, Factor Analysis by Area of Parental Practice.

	Gambia, The	Ghana	Mauritania	Nigeria	DRC	Sierra Leone	Chad	Togo
Health	71.3	80.7	78.1	75.8	83.2	74.7	50.9	75.5
Hygiene	100.0	95.7	97.4	93.0	95.8	97.1	97.0	96.5
Nutrition	98.4	86.3	93.6	96.1	92.4	81.1	73.3	82.7
Stimulation	64.6	79.0	72.0	79.0	71.7	75.2	72.7	70.9

Source: MICS4 and authors' computations.

Table A2: Matrix of the Correlations among the Synthetic Indexes

Gambia. The	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.0705	1.0000		
Nutrition	0.1908	0.0783	1.0000	
Stimulation	- 0.0237	- 0.0109	- 0.0157	1.0000

Ghana	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.0524	1.0000		
Nutrition	0.1083	0.2302	1.0000	
Stimulation	0.0462	0.2296	0.2458	1.0000

Mauritania	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.0211	1.0000		
Nutrition	0.1117	0.2152	1.0000	
Stimulation	0.0800	0.1249	0.1634	1.0000

Nigeria	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.1470	1.0000		
Nutrition	0.2477	0.2535	1.0000	
Stimulation	0.0380	0.907	0.1520	1.0000

DRC	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.1422	1.0000		
Nutrition	0.2461	0.1532	1.0000	
Stimulation	0.0314	0.0353	0.0198	1.0000

Sierra Leone	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.0626	1.0000		
Nutrition	0.1406	0.2000	1.0000	
Stimulation	- 0.0239	0.0965	0.0332	1.0000

Chad	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.1525	1.0000		
Nutrition	0.056	0.1482	1.0000	
Stimulation	0.0339	0.0630	0.1508	1.0000

Togo	Health	Hygiene	Nutrition	Stimulation
Health	1.0000			
Hygiene	0.0828	1.0000		
Nutrition	0.1492	0.2294	1.0000	
Stimulation	0.0372	0.1326	0.0501	1.0000

Source: MICS4 and authors' computations.

Table A3: Official Preprimary Attendance Ages and Cycle Length in Sub-Saharan Africa, by Country

Age of Preprimary Access (years)	Length of Preprimary (Years)			
	1	2	3	4
3		Mauritius	Botswana, Burkina Faso, Cape Verde, Central African Republic, Chad, Comoros, Congo, Ivory Coast, **Democratic Republic of Congo**, Gabon, Kenya, Lesotho, Liberia, Madagascar, Malawi, **Mauritania**, Mozambique, **Nigeria**, Sao Tomé and Principe, **Sierra Leone**, Somalia, Swaziland, **Togo**, Tunisia, Uganda, Zimbabwe	Equatorial Guinea, **Gambia**, Mali, Zambia
4		Benin, Cameroon, Djibouti, Egypt, Libya, Morocco, Seychelles, **Ghana**	Burundi, Ethiopia, Guinea, Guinea Bissau, Niger, Rwanda, Senegal	
5	Angola, Algeria	Eritrea, Namibia, United Republic of Tanzania		
6	South Africa			

Source : UIS, authors.

Table A4: Factors Affecting Access to Preschool/Early Learning Activities, Eight Sample Countries, 2010-11

	Gambia, The	Ghana	Mauritania	Nigeria	DRC	Sierra Leone	Chad	Togo
Gender (Ref. Girl)								
Boy		0.85					1.32	
Age (Ref. 3 years)								
4 years	3.20	3.04	2.76	2.29	2.02	2.54	2.76	5.02
5 years	4.96	4.27	0.39	1.51	2.83	2.20	1.61	1.48
6 years	6.04	-	-	-	-	-	-	-
OVC Status (Ref. Not OVC)								
OVC					0.53			
Area of Residence (Ref. Rural)								
Urban			1.64		2.66		1.33	1.48
Wealth Quintiles (Ref. Q1)								
Q2		2.07	2.16	1.54				2.12
Q3		2.89	3.88	2.51		1.66	1.61	2.40
Q4	1.31	4.75	5.34	3.89		2.42	2.07	5.54
Q5	2.27	11.72	10.68	6.06	3.24	6.66	2.38	9.26
Level of Mothers' Education (Ref. None)								
Primary	1.77	1.60	1.32	1.80	2.12		1.89	1.92
Sec. +	1.80	1.91	2.28	2.64	3.18	2.42	3.58	2.90
Gender of Head of Household (Ref. Male)								
Female	1.88		1.34	1.86				1.68
Good Parental Practices (Ref. Bad practices)								
Health	1.87	1.38		1.14		1.33		
Hygiene	1.31	1.49	1.43	1.46	1.89	1.33	2.46	
Nutrition	0.79	1.59		2.11		1.01	1.96	1.49
Stimulation	1.44	1.58	1.78	2.13	1.62	1.87	1.95	2.20
R^2	13.7%	19.5%	34.1%	39.9%	20.5%	19.2%	20.6%	23.3%

Source: MICS4 and authors' computations.

Note: Covers children aged 3-6 years for The Gambia. (1) Households belonging to the first tercile are considered to have good practices. Only coefficients that are statistically significant up to 5 percent level are presented in the table. The average is computed on only the significant coefficients.

Reading Note: In Nigeria, children from the wealthiest households (Q5) are six times more likely to gain access to a preprimary/early learning activity than those from the poorest households (Q1).

Table A5: Factors Affecting the Global Development Score of Children Aged 3-4 Years, Eight Sample Countries, 2010-11

Points

	Gambia, The	Ghana	Mauritania	Nigeria	DRC	Sierra Leone	Chad	Togo	Gap (Max/ Min)
Child Characteristics									
Child's Age	0.018	0.033	0.026	0.038	0.038	0.018	0.019	0.028	0.021
Is a boy						0.152		0.141	0.010
Is an OVC							0.253		-
Household Characteristics									
Is urban	0.221	0.163							0.058
Household head is female				0.178			0.148		0.029
Wealth Quintile (Q2/Q1)				0.114					-
Wealth Quintile (Q3/Q1)	0.183			0.367					0.187
Wealth Quintile (Q4/Q1)	0.162	0.420	0.294	0.547	0.244		0.250		0.385
Wealth Quintile (Q5/Q1)	0.287	0.654	0.366	0.677	0.334	0.591	0.371		0.390
Mothers' Education (Primary/None)	0.160		0.231		0.175		0.185	0.173	0.071
Mothers' Education (Sec.+/None)	0.217		0.355	0.233	0.219	0.198	0.363	0.301	0.166
ECD Practices									
Attends an ECD programme	1.263	0.527	0.913	1.094	1.119	1.104	1.400	0.632	0.873
PP Health (Good/Bad)	0.167					0.171			0.003
PP Hygiene (Good/Bad)	-0.190			0.307			0.351		0.541
PP Nutrition (Good/Bad)		0.271		0.314			0.312		0.043
PP Stimulation (Good/ Bad)	0.116		0.397	0.552	0.593	0.651	0.631	0.236	0.536
R^2	21.0%	20.3%	12.8%	29.9%	12.6%	16.1%	14.6%	13.4%	

Source: MICS4 and authors' computations.

Note: The global score is out of 10. PP: parental practice. Coefficients are obtained by the linear regression of the Global ECD Score on age, gender and orphan status of children; household income (quintile), mother/carers' level of education (none, primary, secondary and above), gender of household head; the level of parental practices (good, average, bad) in health, hygiene, nutrition and stimulation; and access to a preschool/early learning activity. The maximum significance threshold is set at 5 percent.

Table A6: Modelization of the Probability of Timely Primary Access

Odds Ratios

	Gambia, The	Nigeria	DRC	Sierra Leone	Chad	Togo
Preschool Access *(Ref. None)*						
Child attended preschool	1.00 (n.s)	0.75 (n.s)	2.24	1.03 (n.s)	1.13 (n.s)	1.60
Gender *(Ref. Girl)*						
Boy	1.04 (n.s)	0.80	0.96 (n.s)	1.05 (n.s)	1.04 (n.s)	1.17 (n.s)
OVC Status *(Ref. Not OVC)*						
OVC	0.64 (n.s)	0.77 (n.s)	0.72	1.19 (n.s)	0.84 (n.s)	0.94 (n.s)
Area of Residence *(Ref. Rural)*						
Urban	0.85 (n.s)	1.05 (n.s)	1.91	1.54	1.16 (n.s)	1.24 (n.s)
Wealth Quintiles *(Ref. Q1)*						
Q2	0.95 (n.s)	1.35	0.97 (n.s)	0.92 (n.s)	0.90 (n.s)	1.74 (n.s)
Q3	0.96 (n.s)	1.46	1.13 (n.s)	1.02 (n.s)	1.15 (n.s)	3.57
Q4	0.85 (n.s)	1.43	1.30 (n.s)	1.79	1.20 (n.s)	3.57 (n.s)
Q5	1.08 (n.s)	2.27		1.66 (n.s)	2.05	4.07
Level of Mothers' Education *(Ref. None)*						
Primary	1.37 (n.s)	0.97 (n.s)	0.99 (n.s)	0.98 (n.s)	1.44	1.54
Sec. +	1.19 (n.s)	1.45	1.58	1.50	1.86	2.76
Gender of Head of Household *(Ref. Male)*						
Female	1.84 (n.s)	1.04	0.95 (n.s)	1.07 (n.s)	1.16 (n.s)	1.21 (n.s)
R^2	2.31%	5.80%	9.95%	2.84%	5.21%	8.11%

Source: MICS4 and authors' computations.
Note: n.s: not significant. Significance threshold up to 5%.

Annex 3: The Schooling Status of Children Aged 6-8 Years

A broad overview of the status of children aged six to eight years with respect to school is drawn in Figure A3. Although on average 70 percent of children aged six to eight years are currently enrolled, close to 28 percent have never been to school. The situation of Chad is amongst the most critical: over half of children aged six to eight years has never been to school. In Ghana the situation is less alarming, with eight percent of the age group having never touched a school bench. Dropout is marginal, affecting 2.5 percent of children on average, with variations between 1 percent in Togo and 4.6 percent in DRC. It is however remarkable to observe that in some countries, such as Ghana, The Gambia and Nigeria, a significant number of children are in fact enrolled at the preschool level. These three countries are those where the preschool enrollment rates are among the highest. For these children, preprimary enrollment could translate into later primary entry, following late entry to preprimary before that. In the case of Ghana, it is interesting to note that although an important share of children enter primary late (See Figure 14), preprimary nevertheless has a positive impact on the age of first access, as Table 17 illustrates.

Figure A3: Schooling Status of Children Aged 6-8 Years,* 2010-2011

Percentage
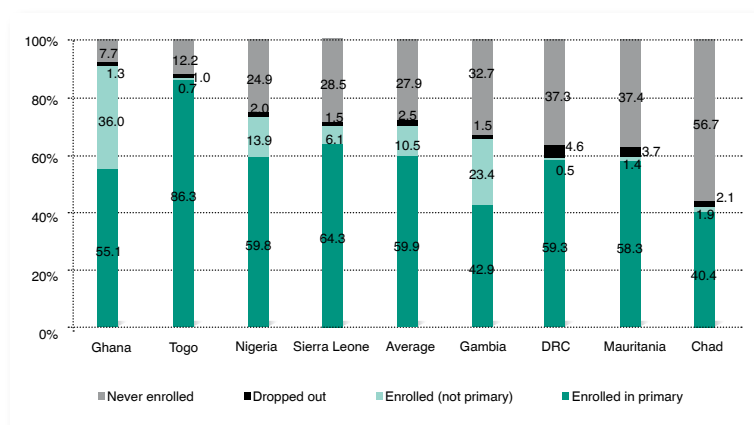
Source: MICS4 and authors' computations.
*Note: The average is weighted. * For The Gambia, children aged 7-9 years are included, as primary access is at 7 years, against 6 years in other countries.*

Annex 4: Country Sheets

Chad

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**4.5**	5.1	3.9	14.7	2.0	1.1	22.8	2.4	22.6	1.1	15.6
% of 6-8 year children enrolled	**42.3**	45.2	39.4	65.2	36.9	11.5	72.2	34.5	82.0	31.2	69.1
% of 6-8 year children attending P1 at the required age	**55.2**	55.4	54.9	63.5	52.4	65.1	24.4	51.9	63.5	52.0	66.5
% of P1 enrolled children having attended preschool	**5.7**	6.7	4.4	17.7	2.1	0.0	23.9	3.4	19.4	2.2	19.4
Average age of P1 entry	**6.9**	6.9	6.9	6.4	7.1	6.2	8.0	7.1	6.2	7.3	6.2
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**5.9**	5.9	5.9	12.6	4.2	1.8	17.0	4.6	17.6	2.0	13.5
Motor Skills	**86.8**	86.4	87.1	89.5	86.1	60.0	98.0	85.8	90.8	84.8	90.7
Socioaffective	**57.1**	59.2	55.1	64.5	55.2	38.1	70.5	55.0	71.2	55.8	64.6
Learning	**48.6**	48.7	48.6	60.1	45.8	35.1	67.4	45.8	65.0	42.5	61.2
Overall	**33.0**	34.1	32.0	45.4	29.9	23.3	54.1	30.2	54.0	28.7	45.5
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**40.0**	n.a	n.a	53.5	36.3	19.4	62.2	35.8	55.2	31.2	56.2
ARI	**32.1**	n.a	n.a	61.7	23.6	12.5	74.7	27.5	69.0	21.1	62.4
Fever	**19.2**	n.a	n.a	21.7	18.5	6.5	35.3	16.2	30.4	16.1	25.1
All mothers/carers recognize pneumonia warning signs (1)	**3.8**	n.a	n.a	4.0	3.8	0.0	18.5	3.6	3.7	3.7	4.1
All children under 5 years are fully vaccinated (2)	**2.9**	n.a	n.a	5.6	2.1	0.0	6.5	1.8	9.9	1.0	6.5
All children under 5 years sleep under a mosquito net	**11.4**	n.a	n.a	30.7	6.1	0.5	52.8	10.1	24.5	4.3	33.2
Synthetic Index of Health Practices	**17.5**	n.a	n.a	23.1	14.1	3.1	53.9	16.0	28.1	12.2	29.8
Parity Index	**n.a**	n.a		1.6		17.2		1.8		2.5	
Hygiene: % of households where:											
Hand-washing soap is available	**55.0**	n.a	n.a	75.8	49.3	40.2	84.5	52.1	76.2	37.0	82.8
No hand-washing soap is available	**51.7**	n.a	n.a	84.1	42.9	18.0	97.2	49.7	75.6	22.5	90.7

Disposent de latrine	**13.3**	n.a	n.a	49.5	3.5	1.7	70.1	44.2	44.2	61.4	61.4
Synthetic Index of Hygiene Practices	***14.7***	*n.a*	*n.a*	*33.5*	*3.3*	*3.5*	*69.8*	*11.4*	*41.5*	*0.0*	*55.9*
Parity Index	**n.a**	n.a		10.1		20.2		3.7		n.a	
Nutrition: % of households who:											
Use iodized salt appropriately	**58.6**	n.a	n.a	64.9	56.9	1.5	87.8	54.8	68.4	46.6	69.4
All children aged 0-23 months are appropriately fed	**38.3**	n.a	n.a	34.8	39.3	22.2	69.7	37.8	37.8	41.7	33.5
All children under 5 years received vitamin A supplement	**33.6**	n.a	n.a	44.3	30.7	14.2	77.9	28.8	28.8	27.6	48.0
No child under 5 years suffers from stunting	**37.3**	n.a	n.a	49.8	33.9	15.5	56.2	32.4	32.4	35.7	50.9
Synthetic Index of Nutrition Practices	***30.0***	*n.a*	*n.a*	*34.8*	*27.1*	*2.5*	*53.7*	*26.7*	*42.0*	*23.3*	*38.4*
Parity Index	**n.a**	n.a		1.3		21.9		1.6		1.6	
Stimulation: % of households where:											
Toys											
No child has one	**25.5**	n.a	n.a	20.5	26.8	14.5	55.5	27.3	18.4	29.4	18.6
Each child has at least one	**55.2**	n.a	n.a	63.9	52.8	30.7	67.7	53.2	66.6	52.4	65.3
Books											
No child has one	**97.6**	n.a	n.a	90.8	99.4	85.0	99.9	99.0	87.6	99.6	89.8
Each child has at least one	**0.9**	n.a	n.a	3.8	0.2	0.0	6.1	0.3	4.6	0.0	4.1
Learning Support											
No child receives support	**18.2**	n.a	n.a	17.8	18.2	5.0	31.1	20.6	9.6	22.2	16.2
All children receive support	**41.7**	n.a	n.a	37.3	42.9	31.9	50.7	41.7	34.4	38.8	40.2
Fatherly Support											
No child receives fatherly support	**42.7**	n.a	n.a	38.4	43.9	23.8	58.7	46.5	27.0	48.3	37.4
Fathers are active with their children	**17.0**	n.a	n.a	16.9	17.0	8.7	34.6	15.8	17.3	13.0	18.8
Synthetic Index of Stimulation Practices	***33.3***	*n.a*	*n.a*	*34.9*	*32.2*	*26.2*	*43.0*	*32.1*	*33.9*	*29.0*	*36.4*
Parity Index	**n.a**	n.a		1.1		1.6		1.1		1.3	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

Democratic Republic of the Congo (DRC)

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**6.0**	5.8	6.3	15.7	2.6	0.8	22.9	1.3	13.3	1.5	23.2
% of 6-8 year children enrolled	**59.8**	61.9	57.7	78.4	52.1	47.0	84.9	44.8	77.9	48.4	86.3
% of 6-8 year children attending P1 at the required age	**46.9**	44.8	49.4	63.2	39.5	33.9	68.2	41.6	55.6	38.0	69.6
% of P1 enrolled children having attended preschool	**9.9**	9.3	10.7	26.0	2.3	2.5	34.0	2.4	18.9	2.0	33.9
Average age of P1 entry	**7.2**	7.2	7.2	6.5	7.5	6.1	7.8	7.6	6.5	7.8	6.2
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**10.9**	9.8	12.0	16.1	9.1	1.9	22.3	7.5	16.8	6.7	21.7
Motor Skills	**89.8**	90.1	89.5	93.3	88.6	84.2	96.9	89.0	90.4	89.8	94.7
Socioaffective	**66.0**	66.2	65.8	65.1	66.3	60.2	72.2	67.4	63.8	68.0	64.6
Learning	**72.2**	71.8	72.6	80.0	69.4	57.4	89.9	65.4	78.5	64.9	84.8
Overall	**49.4**	49.3	49.5	56.6	46.8	39.9	69.5	44.0	55.2	46.0	62.7
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**38.2**	n.a	n.a	35.6	39.0	24.5	57.6	33.6	41.1	38.4	41.9
ARI	**42.1**	n.a	n.a	51.0	39.4	16.0	64.5	31.1	46.5	22.7	51.6
Fever	**17.9**	n.a	n.a	24.2	16.0	10.3	31.1	13.3	22.4	14.2	27.8
All mothers/carers recognize pneumonia warning signs (1)	**6.8**	n.a	n.a	5.1	7.3	1.5	18.5	8.9	5.6	5.9	4.8
All children under 5 years are fully vaccinated (2)	**23.2**	n.a	n.a	27.3	21.8	5.6	43.7	19.5	29.3	20.1	32.2
All children under 5 years sleep under a mosquito net	**34.7**	n.a	n.a	40.7	32.5	12.4	52.3	27.2	41.4	30.5	45.4
Synthetic Index of Health Practices	***18.8***	*n.a*	*n.a*	*21.3*	*17.8*	*5.4*	*36.6*	*15.3*	*24.1*	*16.5*	*25.5*
Parity Index	**n.a**	n.a		1.2		6.7		1.6		1.5	
Hygiene: % of households where:											
Hand-washing soap is available	**49.9**	n.a	n.a	66.7	43.5	13.0	74.8	38.1	63.7	27.7	79.3
No hand-washing soap is available	**45.2**	n.a	n.a	83.0	30.9	12.4	87.7	35.1	62.8	11.3	92.8

Improved sanitation facility is available	**11.6**	n.a	n.a	32.7	3.6	0.5	54.5	6.1	24.3	0.1	53.2
Synthetic Index of Hygiene Practices	***10.6***	*n.a*	*n.a*	*32.2*	*2.4*	*0.5*	*54.3*	*4.5*	*23.8*	*0.0*	*52.8*
Parity Index	**n.a**	n.a		13.2		113.1		5.3		na	
Nutrition: % of households who:											
Use iodized salt appropriately	**72.5**	n.a	n.a	70.1	73.4	38.0	92.1	71.1	73.8	74.4	74.7
All children aged 0-23 months are appropriately fed	**49.0**	n.a	n.a	44.9	50.4	34.0	64.0	46.6	48.7	52.7	39.1
All children under 5 years received vitamin A supplement	**67.0**	n.a	n.a	70.8	65.7	51.6	83.2	63.6	71.4	62.8	72.1
No child under 5 years suffers from stunting	**47.7**	n.a	n.a	58.7	43.9	28.1	71.5	41.0	56.2	42.9	67.1
Synthetic Index of Nutrition Practices	***30.6***	*n.a*	*n.a*	*37.8*	*27.9*	*13.3*	*54.5*	*27.2*	*37.3*	*26.8*	*45.7*
Parity Index	**n.a**	n.a		1.4		4.1		1.4		1.7	
Stimulation: % of households where:											
Toys											
No child has one	**22.6**	n.a	n.a	17.6	24.3	10.1	39.4	28.3	18.4	26.9	14.0
Each child has at least one	**59.9**	n.a	n.a	66.9	57.4	47.5	73.0	56.4	63.7	57.8	70.5
Books											
No child has one	**96.9**	n.a	n.a	93.8	98.0	93.8	98.4	98.9	94.2	98.1	91.6
Each child has at least one	**1.7**	n.a	n.a	3.2	1.1	0.5	3.4	0.5	3.2	1.0	4.5
Learning Support											
No child receives support	**38.0**	n.a	n.a	30.2	40.7	21.3	50.9	46.8	30.4	37.9	23.5
All children receive support	**61.0**	n.a	n.a	68.7	58.2	48.8	78.3	52.1	68.1	61.3	75.4
Fatherly Support											
No child receives fatherly support	**62.4**	n.a	n.a	64.9	61.6	45.7	82.7	64.6	61.4	61.0	61.8
Fathers are active with their children	**36.3**	n.a	n.a	33.5	37.3	17.0	54.1	34.0	36.8	37.7	36.7
Synthetic Index of Stimulation Practices	***26.1***	*n.a*	*n.a*	*27.4*	*25.6*	*21.4*	*33.3*	*23.5*	*28.2*	*26.9*	*27.7*
Parity Index	**n.a**	n.a		1.1		1.6		1.2		1.0	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 4-6 year children having benefited from an activity	**30.8**	29.5	32.1	38.9	25.1	13.8	50.0	24.8	44.6	20.5	47.8
% of 7-9 year children enrolled	**66.3**	64.9	67.6	78.8	57.9	37.9	88.2	59.1	84.8	50.7	86.6
% of 7-9 year children attending P1 at the required age	**56.1**	52.2	59.9	53.2	58.2	43.3	65.7	55.2	58.1	58.8	55.8
% of P1 enrolled children having attended preschool	**48.1**	47.7	48.4	57.4	41.0	15.8	67.1	41.7	60.8	48.1	62.5
Average age of P1 entry	**7.4**	7.2	7.5	7.4	7.3	6.9	7.9	7.4	7.3	7.1	7.1
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**11.9**	11.5	12.3	16.2	8.7	2.5	22.6	7.5	23.2	6.7	25.0
Motor Skills	**99.0**	99.0	99.1	98.6	99.3	97.8	99.4	98.9	99.0	99.1	98.1
Socioaffective	**71.4**	72.2	70.6	71.6	71.3	63.5	84.0	71.4	70.7	71.9	75.8
Learning	**95.1**	94.2	96.0	96.9	93.8	84.7	98.7	94.3	96.6	92.7	98.1
Overall	**71.8**	71.8	71.8	74.1	70.1	62.9	86.5	69.8	75.7	69.3	80.7
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**42.6**	n.a	n.a	44.4	41.1	22.9	62.2	40.4	45.3	39.7	42.5
ARI	**67.5**	n.a	n.a	72.6	62.5	55.6	80.2	66.4	66.1	57.7	80.8
Fever	**24.4**	n.a	n.a	23.3	25.5	15.4	49.2	22.9	23.4	28.7	23.1
All mothers/carers recognize pneumonia warning signs (1)	**1.9**	n.a	n.a	2.0	1.8	0.0	3.7	1.8	2.4	0.6	1.5
All children under 5 years are fully vaccinated (2)	**48.8**	n.a	n.a	50.6	47.0	41.1	55.3	49.9	48.2	50.8	54.2
All children under 5 years sleep under a mosquito net	**38.1**	n.a	n.a	40.2	36.0	27.1	60.6	39.9	33.5	37.1	37.4
Synthetic Index of Health Practices	*18.5*	*n.a*	*n.a*	*19.0*	*17.9*	*13.2*	*27.0*	*19.2*	*16.4*	*18.8*	*19.0*
Parity Index	**n.a**	n.a		1.1		2.1		0.9		1.0	
Hygiene: % of households where:											
Hand-washing soap is available	**50.8**	n.a	n.a	65.9	34.3	9.7	72.3	43.0	67.6	26.3	79.3
No hand-washing soap is available	**87.2**	n.a	n.a	95.4	78.2	72.8	100.0	84.1	93.7	71.0	99.3

Improved sanitation facility is available	**78.3**	n.a	n.a	91.7	63.7	39.4	99.8	75.3	86.4	54.2	97.7
Synthetic Index of Hygiene Practices	*39.4*	*n.a*	*n.a*	*58.7*	*18.3*	*7.4*	*70.1*	*31.2*	*58.0*	*10.1*	*77.0*
Parity Index	**n.a**	n.a		3.2		9.5		1.9		7.6	
Nutrition: % of households who:											
Use iodized salt appropriately	**24.3**	n.a	n.a	26.7	21.6	6.3	41.8	23.1	27.6	24.1	29.0
All children aged 0-23 months are appropriately fed	**43.0**	n.a	n.a	41.4	44.6	35.7	52.1	36.5	46.3	45.6	33.5
All children under 5 years received vitamin A supplement	**53.9**	n.a	n.a	52.5	55.3	37.4	85.4	50.8	55.7	58.6	58.1
No child under 5 years suffers from stunting	**68.4**	n.a	n.a	77.9	58.6	51.9	81.7	65.5	75.5	57.3	83.5
Synthetic Index of Nutrition Practices	*16.2*	*n.a*	*n.a*	*18.0*	*14.2*	*5.7*	*30.0*	*15.6*	*18.1*	*16.4*	*21.0*
Parity Index	**n.a**	n.a		1.3		5.2		1.2		1.3	
Stimulation: % of households where:											
Toys											
No child has one	**10.3**	n.a	n.a	7.9	12.7	5.9	16.8	11.7	6.9	12.2	5.7
Each child has at least one	**67.1**	n.a	n.a	75.2	58.7	49.3	79.0	65.3	73.4	61.0	76.8
Books											
No child has one	**95.0**	n.a	n.a	92.7	97.5	86.5	99.3	97.7	87.7	99.6	84.5
Each child has at least one	**2.1**	n.a	n.a	3.6	0.5	0.0	6.2	0.8	5.3	0.2	7.7
Learning Support											
No child receives support	**48.7**	n.a	n.a	52.6	45.4	25.1	63.0	50.4	40.7	46.1	41.3
All children receive support	**46.1**	n.a	n.a	44.5	47.5	33.6	70.4	44.0	54.9	49.2	54.5
Fatherly Support											
No child receives fatherly support	**75.6**	n.a	n.a	79.9	71.8	59.1	94.6	75.2	77.6	72.5	73.8
Fathers are active with their children	**19.2**	n.a	n.a	17.7	20.6	4.4	35.4	19.6	18.8	20.8	23.2
Synthetic Index of Stimulation Practices	*15.9*	*n.a*	*n.a*	*12.8*	*19.3*	*6.5*	*25.3*	*15.4*	*16.7*	*19.3*	*17.5*
Parity Index	**n.a**	n.a		0.7		3.9		1.1		0.9	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**72.9**	70.3	75.5	84.6	64.1	55.5	87.7	60.5	86.2	47.9	96.5
% of 6-8 year children enrolled	**91.1**	90.9	91.2	95.3	87.9	74.4	97.4	85.0	97.5	77.1	98.9
% of 6-8 year children attending P1 at the required age	**41.4**	40.3	42.5	50.9	34.0	55.0	26.6	37.6	44.4	31.2	52.6
% of P1 enrolled children having attended preschool	**99.0**	99.2	98.9	99.4	98.7	87.1	100.0	98.8	98.9	98.0	98.1
Average age of P1 entry	**7.2**	7.1	7.0	6.7	7.3	6.5	7.5	7.3	6.7	7.5	6.4
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**28.0**	25.5	31.7	40.9	19.0	13.7	46.8	18.6	41.3	7.6	58.0
Motor Skills	**94.9**	94.3	95.6	95.3	94.6	71.5	98.7	95.0	94.8	93.7	96.0
Socioaffective	**64.7**	68.8	60.6	67.6	62.5	51.9	84.8	64.8	63.9	64.2	66.1
Learning	**89.5**	90.3	88.7	90.8	88.5	64.8	96.4	88.2	90.5	87.9	92.3
Overall	**65.5**	66.5	64.4	73.3	59.3	53.0	76.0	60.5	71.5	55.7	78.4
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**43.6**	n.a	n.a	51.2	39.1	25.3	58.3	37.1	53.7	44.8	36.5
ARI	**56.7**	n.a	n.a	72.4	50.6	38.9	77.2	53.5	56.5	54.9	65.0
Fever	**30.6**	n.a	n.a	37.5	26.5	20.6	43.7	25.2	34.1	23.9	35.5
All mothers/carers recognize pneumonia warning signs (1)	**0.8**	n.a	n.a	0.9	0.7	0.0	2.7	0.9	0.7	0.4	1.2
All children under 5 years are fully vaccinated (2)	**53.1**	n.a	n.a	60.2	46.9	43.0	60.6	49.6	55.9	43.7	61.4
All children under 5 years sleep under a mosquito net	**39.1**	n.a	n.a	30.7	46.3	22.6	74.9	41.1	37.2	51.4	24.4
Synthetic Index of Health Practices	***32.7***	*n.a*	*n.a*	*23.1*	*37.3*	*17.8*	*58.5*	*34.2*	*29.8*	*38.7*	*18.3*
Parity Index	**n.a**	n.a		0.6		3.3		0.9		0.5	
Hygiene: % of households where:											
Hand-washing soap is available	**54.6**	n.a	n.a	63.8	46.4	24.6	73.1	47.2	63.3	34.6	71.9
No hand-washing soap is available	**82.5**	n.a	n.a	95.0	71.3	65.4	97.1	75.3	90.1	55.8	99.7

Improved sanitation facility is available	**60.5**	n.a	n.a	78.4	44.4	9.8	82.0	46.6	75.5	19.9	93.1
Synthetic Index of Hygiene Practices	***23.5***	*n.a*	*n.a*	*47.1*	*12.4*	*58.4*	*6.0*	*13.7*	*43.8*	*3.5*	*66.7*
Parity Index	**n.a**	n.a		3.8		0.1		3.2		19.2	
Nutrition: % of households who:											
Use iodized salt appropriately	**32.7**	n.a	n.a	44.3	22.4	12.8	56.7	24.2	42.4	15.0	66.6
All children aged 0-23 months are appropriately fed	**28.1**	n.a	n.a	30.0	26.7	21.8	50.4	30.4	30.4	26.7	30.0
All children under 5 years received vitamin A supplement	**62.1**	n.a	n.a	63.0	61.4	48.4	80.9	63.6	63.6	63.2	66.4
No child under 5 years suffers from stunting	**75.8**	n.a	n.a	81.8	70.6	57.6	83.8	70.0	70.0	61.3	85.7
Synthetic Index of Nutrition Practices	***24.3***	*n.a*	*n.a*	*39.7*	*17.2*	*11.2*	*54.4*	*18.1*	*37.9*	*14.1*	*64.9*
Parity Index	**n.a**	n.a		2.3		4.9		2.1		4.6	
Stimulation: **% of households where:**											
Toys											
No child has one	**13.5**	n.a	n.a	11.4	15.4	5.6	25.4	13.6	13.1	15.0	7.0
Each child has at least one	**74.7**	n.a	n.a	80.1	70.1	63.4	87.1	72.1	77.8	68.3	83.4
Books											
No child has one	**83.0**	n.a	n.a	73.4	91.3	60.7	95.5	88.6	74.5	97.2	54.8
Each child has at least one	**11.0**	n.a	n.a	17.9	5.1	3.1	25.9	7.2	16.4	1.7	29.8
Learning Support											
No child receives support	**30.4**	n.a	n.a	22.8	37.0	16.9	47.3	38.9	22.6	45.2	10.3
All children receive support	**20.7**	n.a	n.a	25.7	16.3	12.1	31.3	18.6	24.2	13.4	36.5
Fatherly Support											
No child receives fatherly support	**35.8**	n.a	n.a	32.8	38.4	32.0	41.9	41.7	31.4	43.8	25.1
Fathers are active with their children	**15.3**	n.a	n.a	15.6	15.0	12.9	18.5	15.8	15.3	14.9	21.6
Synthetic Index of Stimulation Practices	***29.2***	*n.a*	*n.a*	*37.1*	*25.6*	*48.5*	*24.1*	*26.4*	*36.5*	*24.4*	*52.1*
Parity Index	**n.a**	n.a		1.4		0.5		1.4		2.1	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**10.8**	10.2	11.4	21.7	4.5	1.5	22.0	4.5	28.5	1.2	34.2
% of 6-8 year children enrolled	**59.8**	59.4	60.1	69.9	53.4	44.3	88.1	43.8	79.8	38.9	84.2
% of 6-8 year children attending P1 at the required age	**37.5**	39.0	37.5	41.3	35.1	58.4	16.8	37.9	51.0	31.9	53.7
% of P1 enrolled children having attended preschool	**2.3**	1.8	2.7	4.9	0.7	0.0	12.8	1.2	4.7	0.0	7.4
Average age of P1 entry	**7.3**	7.2	7.4	6.7	7.6	6.5	7.4	7.5	6.4	8.1	6.3
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**19.4**	19.9	18.9	29.8	13.9	1.5	45.6	11.3	41.3	7.9	43.5
Motor Skills	**97.5**	97.0	98.1	97.4	97.6	92.4	100.0	97.7	96.8	97.6	96.4
Socioaffective	**75.3**	75.0	75.7	75.5	75.3	62.6	91.6	71.8	76.4	78.4	76.2
Learning	**91.1**	90.7	91.6	90.7	91.4	72.0	96.8	89.5	91.6	89.2	92.9
Overall	**73.7**	74.6	72.8	76.0	72.5	62.8	86.2	66.4	80.4	69.9	81.2
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**38.5**	n.a	n.a	43.0	35.5	14.2	44.7	37.9	44.4	31.2	43.4
ARI	**31.6**	n.a	n.a	41.5	26.7	0.0	53.5	22.7	29.9	17.7	42.8
Fever	**7.8**	n.a	n.a	11.9	5.1	2.0	11.3	5.9	5.2	5.1	11.1
All mothers/carers recognize pneumonia warning signs (1)	**8.4**	n.a	n.a	13.5	5.0	0.2	48.7	7.1	14.4	2.4	16.8
All children under 5 years are fully vaccinated (2)	**7.4**	n.a	n.a	9.6	6.0	4.2	15.5	5.4	11.2	4.3	11.4
All children under 5 years sleep under a mosquito net	**24.8**	n.a	n.a	22.7	26.1	0.0	34.8	27.1	22.5	27.5	25.1
Synthetic Index of Health Practices	*24.6*	*n.a*	*n.a*	*24.2*	*24.8*	*13.2*	*34.4*	*25.0*	*26.2*	*25.8*	*24.2*
Parity Index	**n.a**	n.a		1.0		2.6		1.1		0.9	
Hygiene: % of households where:											
Hand-washing soap is available	**65.5**	n.a	n.a	78.4	57.0	20.9	90.8	55.3	86.5	38.4	87.1
No hand-washing soap is available	**61.7**	n.a	n.a	77.2	51.4	28.8	97.3	53.3	82.6	30.7	87.6

Improved sanitation facility is available	**41.4**	n.a	n.a	72.2	21.0	7.0	85.7	26.6	75.6	0.1	91.9
Synthetic Index of Hygiene Practices	***27.7***	*n.a*	*n.a*	*53.0*	*12.6*	*4.1*	*74.8*	*14.9*	*61.6*	*0.0*	*74.3*
Parity Index	**n.a**	n.a		4.2		18.4		4.1		n.a	

Nutrition: % of households who:

Use iodized salt appropriately	**7.9**	n.a	n.a	10.8	6.1	1.0	16.7	7.9	11.7	4.4	12.9
All children aged 0-23 months are appropriately fed	**43.6**	n.a	n.a	38.3	47.0	35.6	62.0	43.2	43.2	52.0	36.7
All children under 5 years received vitamin A supplement	**67.2**	n.a	n.a	70.7	64.9	38.9	85.3	58.8	58.8	59.5	71.2
No child under 5 years suffers from stunting	**56.8**	n.a	n.a	63.6	52.4	39.5	72.1	52.1	52.1	46.2	70.9
Synthetic Index of Nutrition Practices	***9.3***	*n.a*	*n.a*	*12.7*	*7.2*	*1.6*	*17.3*	*8.0*	*13.4*	*5.0*	*15.0*
Parity Index	**n.a**	n.a		1.8		10.5		1.7		3.0	

Stimulation: % of households where:

Toys											
No child has one	**23.3**	n.a	n.a	21.8	24.3	7.7	46.5	27.4	17.9	22.7	16.9
Each child has at least one	**57.9**	n.a	n.a	62.5	55.0	34.8	70.6	53.4	64.7	54.8	67.0
Books											
No child has one	**91.8**	n.a	n.a	84.5	96.4	80.7	99.0	97.4	78.4	97.8	76.8
Each child has at least one	**4.1**	n.a	n.a	8.5	1.3	0.0	10.6	1.3	10.5	1.0	12.8
Learning Support											
No child receives support	**25.8**	n.a	n.a	22.6	27.8	13.1	51.1	34.2	16.2	27.8	17.6
All children receive support	**30.7**	n.a	n.a	29.0	31.7	8.7	49.0	27.6	32.6	33.9	32.0
Fatherly Support											
No child receives fatherly support	**40.5**	n.a	n.a	32.9	45.3	18.7	56.5	46.8	29.6	44.3	27.5
Fathers are active with their children	**15.9**	n.a	n.a	18.4	14.3	3.8	39.2	14.8	18.5	17.1	21.9
Synthetic Index of Stimulation Practices	***30.2***	*n.a*	*n.a*	*33.2*	*28.4*	*7.5*	*51.8*	*26.7*	*34.2*	*29.9*	*37.3*
Parity Index	**n.a**	n.a		1.2		6.9		1.3		1.2	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**42.5**	42.7	42.3	65.4	32.7	5.8	92.9	14.1	73.8	9.2	82.0
% of 6-8 year children enrolled	**73.7**	75.6	71.7	91.5	66.0	29.5	99.3	51.5	95.9	38.2	97.4
% of 6-8 year children attending P1 at the required age	**61.9**	60.4	63.7	61.9	61.9	45.4	90.3	64.9	61.9	61.9	67.1
% of P1 enrolled children having attended preschool	**75.2**	74.7	75.8	81.3	71.4	0.0	100.0	49.0	88.0	40.6	89.9
Average age of P1 entry	**6.2**	6.3	6.1	6.1	6.3	5.0	7.2	6.3	6.0	6.4	6.1
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**32.9**	32.4	33.4	56.5	23.1	4.3	78.2	10.5	60.8	5.3	74.2
Motor Skills	**93.2**	93.4	93.0	94.5	92.7	78.0	100.0	91.6	95.3	90.6	94.4
Socioaffective	**68.3**	69.3	67.3	66.6	69.0	39.0	95.8	67.9	67.3	67.8	63.3
Learning	**79.4**	78.5	80.3	86.0	76.7	57.7	96.8	75.4	83.8	72.1	89.0
Overall	**64.5**	64.4	64.7	77.5	59.0	32.0	91.1	53.5	78.1	48.3	84.8
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**25.8**	n.a	n.a	31.9	24.0	4.5	74.9	20.4	34.9	18.7	37.6
ARI	**44.8**	n.a	n.a	56.7	41.5	na	na	35.3	65.3	33.3	73.7
Fever	**24.6**	n.a	n.a	35.0	21.0	7.4	71.3	16.1	35.5	11.8	45.4
All mothers/carers recognize pneumonia warning signs (1)	**9.4**	n.a	n.a	8.2	10.0	0.1	32.4	9.1	9.2	7.6	8.5
All children under 5 years are fully vaccinated (2)	**16.8**	n.a	n.a	28.9	11.0	0.3	57.0	5.1	28.8	5.2	36.2
All children under 5 years sleep under a mosquito net	**16.9**	n.a	n.a	16.4	17.1	4.3	38.2	16.4	17.9	13.6	17.4
Synthetic Index of Health Practices	*30.7*	*n.a*	*n.a*	*35.8*	*28.0*	*12.7*	*47.0*	*23.3*	*39.1*	*21.7*	*41.1*
Parity Index	**n.a**	n.a		1.3		3.7		1.7		1.9	
Hygiene: % of households where:											
Hand-washing soap is available	**60.7**	n.a	n.a	71.1	55.2	5.3	97.8	47.6	72.2	37.8	83.3
No hand-washing soap is available	**66.2**	n.a	n.a	89.5	54.2	20.2	95.5	48.9	83.6	30.3	95.1

Improved sanitation facility is available	**50.4**	n.a	n.a	78.2	36.0	10.2	83.2	32.7	69.8	12.2	95.6
Synthetic Index of Hygiene Practices	*42.1*	*n.a*	*n.a*	*72.8*	*26.2*	*5.9*	*92.5*	*21.7*	*64.2*	*4.2*	*91.1*
Parity Index	**n.a**	n.a		2.8		15.7		3.0		21.6	
Nutrition: % of households who:											
Use iodized salt appropriately	**82.4**	n.a	n.a	89.3	78.8	34.2	97.9	72.9	89.5	72.1	92.2
All children aged 0-23 months are appropriately fed	**32.7**	n.a	n.a	30.2	33.8	15.5	48.3	37.0	29.1	37.6	25.1
All children under 5 years received vitamin A supplement	**60.4**	n.a	n.a	73.8	53.9	22.0	85.6	43.7	75.2	40.5	80.9
No child under 5 years suffers from stunting	**57.3**	n.a	n.a	71.3	50.4	21.0	87.9	35.4	76.0	34.7	81.6
Synthetic Index of Nutrition Practices	*27.3*	*n.a*	*n.a*	*38.5*	*21.5*	*2.6*	*55.5*	*10.1*	*43.2*	*9.4*	*47.9*
Parity Index	**n.a**	n.a		1.8		21.5		4.3		5.1	
Stimulation: **% of households where:**											
Toys											
No child has one	**17.5**	n.a	n.a	13.4	19.5	5.6	58.4	22.8	13.1	22.4	9.4
Each child has at least one	**67.9**	n.a	n.a	76.3	63.8	30.4	84.3	58.6	76.4	59.0	82.2
Books											
No child has one	**79.3**	n.a	n.a	64.8	86.4	47.2	99.2	95.6	63.4	97.6	53.1
Each child has at least one	**11.1**	n.a	n.a	20.3	6.6	0.1	25.4	2.0	20.0	1.3	27.4
Learning Support											
No child receives support	**32.6**	n.a	n.a	19.5	38.3	5.5	68.8	47.4	16.1	50.2	10.0
All children receive support	**65.5**	n.a	n.a	79.9	59.2	30.1	94.2	50.0	82.8	47.3	89.5
Fatherly Support											
No child receives fatherly support	**61.5**	n.a	n.a	59.8	62.3	39.7	89.6	66.7	54.6	69.2	56.8
Fathers are active with their children	**36.9**	n.a	n.a	39.6	35.7	10.0	54.1	30.9	44.6	29.1	42.7
Synthetic Index of Stimulation Practices	*21.2*	*n.a*	*n.a*	*26.2*	*18.7*	*4.6*	*33.1*	*13.7*	*28.5*	*13.1*	*31.3*
Parity Index	**n.a**	n.a		1.4		7.2		2.1		2.4	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**13.9**	13.2	14.6	23.2	10.5	6.8	36.2	10.0	31.7	5.5	39.9
% of 6-8 year children enrolled	**70.5**	68.6	72.4	77.9	67.7	64.8	87.5	66.0	86.3	55.3	89.7
% of 6-8 year children attending P1 at the required age	**63.3**	63.9	62.8	71.7	60.7	58.3	70.5	59.0	81.3	57.4	75.2
% of P1 enrolled children having attended preschool	**10.3**	9.4	11.2	16.3	8.5	4.4	32.0	8.4	18.8	7.8	28.8
Average age of P1 entry	**6.3**	6.3	6.2	6.1	6.2	6.0	6.4	6.3	5.7	6.4	6.1
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**9.4**	9.1	9.6	16.1	6.9	5.3	27.1	6.4	22.8	3.8	28.8
Motor Skills	**85.8**	87.4	84.3	87.7	85.2	80.8	93.6	85.4	87.3	83.3	92.3
Socioaffective	**65.3**	66.7	63.9	66.5	64.8	60.7	75.1	65.0	65.4	59.9	67.3
Learning	**77.8**	79.4	76.1	78.9	77.4	71.0	86.4	76.7	81.4	70.4	83.5
Overall	**53.4**	55.4	51.3	55.8	52.5	44.7	67.2	51.2	59.1	45.1	63.6
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**52.3**	n.a	n.a	53.2	52.1	49.2	54.2	52.0	53.2	52.5	51.8
ARI	**55.7**	n.a	n.a	59.4	54.5	44.4	80.0	56.3	51.6	58.4	65.5
Fever	**41.3**	n.a	n.a	38.1	42.3	39.9	42.7	42.6	37.5	38.6	35.0
All mothers/carers recognize pneumonia warning signs (1)	**7.7**	n.a	n.a	7.3	7.9	2.0	12.7	8.0	8.2	9.6	7.8
All children under 5 years are fully vaccinated (2)	**25.7**	n.a	n.a	23.4	26.6	21.3	32.3	25.7	23.3	28.5	24.4
All children under 5 years sleep under a mosquito net	**29.5**	n.a	n.a	26.7	30.6	21.2	34.6	29.4	29.8	27.2	29.9
Synthetic Index of Health Practices	***19.3***	*n.a*	*n.a*	*17.0*	*20.3*	*16.3*	*19.9*	*19.3*	*16.6*	*20.7*	*16.8*
Parity Index	**n.a**	n.a		0.8		1.2		0.9		0.8	
Hygiene: % of households where:											
Hand-washing soap is available	**40.3**	n.a	n.a	55.4	34.2	30.9	73.6	35.0	60.3	24.5	69.4
No hand-washing soap is available	**56.7**	n.a	n.a	76.4	48.9	41.9	91.1	50.2	79.6	21.0	91.0

Disposent de latrine	**39.2**	n.a	n.a	55.7	32.6	31.5	76.5	32.4	63.8	7.4	80.5
Synthetic Index of Hygiene Practices	***33.4***	*n.a*	*n.a*	*52.9*	*25.6*	*22.3*	*74.1*	*26.4*	*59.1*	*3.2*	*78.2*
Parity Index	**n.a**	n.a		2.1		3.3		2.2		24.5	
Nutrition: % of households who:											
Use iodized salt appropriately	**66.2**	n.a	n.a	67.4	65.8	54.7	83.0	63.9	73.3	59.5	71.4
All children aged 0-23 months are appropriately fed	**38.6**	n.a	n.a	33.2	40.7	29.0	45.8	33.2	40.4	37.5	29.0
All children under 5 years received vitamin A supplement	**84.8**	n.a	n.a	85.9	84.4	83.0	88.3	83.0	86.9	81.7	88.1
No child under 5 years suffers from stunting	**46.5**	n.a	n.a	50.6	45.0	42.0	53.7	44.2	53.6	43.0	57.7
Synthetic Index of Nutrition Practices	***17.2***	*n.a*	*n.a*	*19.0*	*16.5*	*12.9*	*20.9*	*16.9*	*20.2*	*14.9*	*22.3*
Parity Index	**n.a**	n.a		1.2		1.6		1.2		1.5	
Stimulation: % of households where:											
Toys											
No child has one	**25.2**	n.a	n.a	20.8	26.9	12.6	30.1	27.7	16.3	30.9	12.1
Each child has at least one	**64.8**	n.a	n.a	70.0	62.8	57.0	82.8	62.9	73.7	59.1	81.0
Books											
No child has one	**92.2**	n.a	n.a	85.7	94.7	75.7	96.1	95.2	80.4	98.0	75.1
Each child has at least one	**5.6**	n.a	n.a	10.2	3.9	2.5	18.9	3.5	14.1	1.1	17.9
Learning Support											
No child receives support	**45.1**	n.a	n.a	37.4	47.8	21.4	51.2	49.8	25.4	54.3	21.1
All children receive support	**53.2**	n.a	n.a	60.5	50.6	46.9	78.1	48.6	73.1	44.0	77.4
Fatherly Support											
No child receives fatherly support	**56.6**	n.a	n.a	60.6	55.2	43.1	67.6	56.6	61.7	50.8	62.1
Fathers are active with their children	**41.9**	n.a	n.a	37.6	43.4	30.7	55.1	42.0	36.0	47.2	35.6
Synthetic Index of Stimulation Practices	***23.8***	*n.a*	*n.a*	*25.0*	*23.3*	*22.0*	*28.9*	*22.6*	*26.9*	*23.0*	*28.4*
Parity Index	**n.a**	n.a		1.1		1.3		1.2		1.2	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

Indicators / Dimensions	Total	Gender		Area of Residence		Region		Mothers' Education		Wealth	
		Boy	Girl	Urban	Rural	Min	Max	None	Secondary and higher	20% poorest (Q1)	20% richest (Q5)
Access to Preschool/Early Learning Services											
% of 3-5 year children having benefited from an activity	**24.7**	23.4	26.1	40.0	17.9	21.1	42.3	15.6	44.8	8.2	47.3
% of 6-8 year children enrolled	**87.0**	88.2	85.6	94.6	83.9	80.6	95.2	80.3	96.5	75.6	96.9
% of 6-8 year children attending P1 at the required age	**69.3**	70.8	67.6	76.4	68.1	64.1	84.9	65.1	81.3	63.5	91.8
% of P1 enrolled children having attended preschool	**14.4**	14.3	14.5	33.5	11.6	6.2	39.5	12.1	25.1	7.3	38.9
Average age of P1 entry	**5.9**	5.8	5.9	5.5	5.9	5.4	6.1	6.0	5.4	6.1	5.4
Early Childhood Development: % of 3-4 year children whose development is on track in the areas of:											
Early numeracy and reading	**10.7**	10.8	10.6	19.0	6.8	4.5	25.4	6.7	18.4	3.0	24.2
Motor Skills	**98.6**	98.7	98.4	98.9	98.4	95.4	99.7	97.9	99.7	98.5	98.5
Socioaffective	**76.0**	78.2	73.7	75.3	76.3	71.2	87.5	75.9	72.4	81.2	71.7
Learning	**80.9**	80.8	81.0	87.2	77.9	71.7	86.7	77.0	85.3	78.1	87.1
Overall	**66.6**	68.3	64.6	72.6	63.8	58.0	73.0	62.1	70.0	65.3	73.6
Parental Practices:											
Health: % of households where:											
All children under 5 years receive appropriate care in cases of:											
Diarrhea	**21.9**	n.a	n.a	21.6	22.0	11.7	29.8	22.4	22.2	18.9	15.3
ARI	**40.6**	n.a	n.a	62.1	33.1	27.9	48.2	36.9	50.5	37.5	52.0
Fever	**19.2**	n.a	n.a	22.9	17.9	15.2	29.2	17.6	28.4	15.0	30.0
All mothers/carers recognize pneumonia warning signs (1)	**4.7**	n.a	n.a	6.1	3.9	1.0	8.2	3.6	7.1	3.6	6.4
All children under 5 years are fully vaccinated (2)	**26.9**	n.a	n.a	30.4	25.0	22.1	40.2	22.5	32.5	20.2	30.6
All children under 5 years sleep under a mosquito net	**53.9**	n.a	n.a	49.4	56.5	43.6	71.2	53.7	54.9	51.2	52.2
Synthetic Index of Health Practices	**22.2**	n.a	n.a	23.2	21.8	17.1	33.2	19.3	25.8	17.9	23.4
Parity Index	**n.a**	n.a		1.1		1.9		1.3		1.3	
Hygiene: % of households where:											
Hand-washing soap is available	**65.1**	n.a	n.a	80.7	56.1	52.5	86.2	56.1	79.8	42.1	86.6
No hand-washing soap is available	**61.9**	n.a	n.a	93.3	43.9	41.1	96.4	51.3	82.7	22.3	98.0

Improved sanitation facility is available	**33.0**	n.a	n.a	70.7	11.3	12.1	85.6	19.2	59.9	0.8	92.1
Synthetic Index of Hygiene Practices	***26.6***	*n.a*	*n.a*	*71.1*	*8.3*	*9.1*	*86.1*	*14.6*	*55.4*	*0.4*	*92.9*
Parity Index	**n.a**	n.a		8.6		9.5		3.8		224.6	
Nutrition: % of households who:											
Use iodized salt appropriately	**31.0**	n.a	n.a	36.1	28.2	12.7	41.3	25.4	34.8	26.6	39.3
All children aged 0-23 months are appropriately fed	**63.0**	n.a	n.a	61.0	64.0	54.2	67.0	60.3	60.3	65.4	56.7
All children under 5 years received vitamin A supplement	**77.1**	n.a	n.a	81.2	74.9	74.7	79.8	74.5	74.5	71.7	81.4
No child under 5 years suffers from stunting	**67.7**	n.a	n.a	79.9	60.8	52.6	81.6	59.0	59.0	53.8	85.1
Synthetic Index of Nutrition Practices	***20.1***	*n.a*	*n.a*	*28.5*	*16.7*	*7.9*	*31.4*	*15.6*	*26.1*	*14.9*	*31.9*
Parity Index	**n.a**	n.a		1.7		4.0		1.7		2.1	
Stimulation: % of households where:											
Toys											
No child has one	**18.9**	n.a	n.a	15.7	20.7	12.7	21.0	20.8	17.6	22.5	12.3
Each child has at least one	**67.0**	n.a	n.a	75.6	62.1	60.3	81.1	62.9	75.4	58.8	79.2
Books											
No child has one	**92.8**	n.a	n.a	84.8	97.4	84.5	96.8	96.7	84.6	99.2	77.0
Each child has at least one	**4.3**	n.a	n.a	9.4	1.4	2.0	11.3	1.8	10.0	0.0	14.7
Learning Support											
No child receives support	**19.5**	n.a	n.a	18.0	20.4	9.8	23.2	22.9	11.6	25.9	14.6
All children receive support	**31.9**	n.a	n.a	28.5	33.9	25.9	43.6	33.4	30.9	30.7	32.2
Fatherly Support											
No child receives fatherly support	**32.0**	n.a	n.a	27.7	34.5	26.7	40.5	36.3	23.1	35.0	22.6
Fathers are active with their children	**19.1**	n.a	n.a	18.9	19.3	16.1	21.3	19.4	19.2	20.6	23.7
Synthetic Index of Stimulation Practices	***32.4***	*n.a*	*n.a*	*33.7*	*31.9*	*26.1*	*36.3*	*31.7*	*35.5*	*31.8*	*41.3*
Parity Index	**n.a**	n.a		1.1		1.4		1.1		1.3	

Note: (1) The two signs are: a child's difficulty to breathe or fast breathing (2) The following list is considered here: BCG, measles, yellow fever and three doses of DTP and polio, in addition to the polio jab administered at birth.

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The early childhood years, in particular the period from birth to the age of eight years, are today recognized as a crucial period for early childhood development, both in terms of children's physical health and in terms of their motor, socio-emotional, cognitive and language development.

This study aims to better understand the family and environment context in which the young children of West and Central Africa grow up and the way in which this affects their development and their access to primary school. On the basis of the findings, the study aims to provide the sector's players with a basis for reflection, be it in the countries covered by the study or other countries in the region, to identify options for the development or reorientation of ECD programmes (preschool and parental education).

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