National and sub-national differences in birth registration by age and sex of under-five children in sub-Saharan Africa

## **Extended abstract**

## Introduction

Civil registration of vital events plays a pivotal role in securing fundamental human rights and establishing the legal identity of individuals. Primarily, birth registration serves as official acknowledgment of an individual's existence, verifies their familial connections, grants access to essential social services, and facilitates the monitoring of significant life events such as marriage and death throughout one's lifetime.

Within the context of the Sustainable Development Goals (SDGs), Goal 16.9 aims to achieve universal legal identification, including comprehensive birth registration, by the year 2030. Despite the global pursuit of this objective, significant disparities in the implementation and practice of birth registration exist among countries, especially in sub-Saharan Africa (SSA). Most of these countries have made significant strides towards universal birth registration by mandating it in the law. For instance, the legal frameworks for birth registration dates as back as 1961 for Madagascar to as late as 2016 in Central African Republic. However, despite these advances, official birth registration data for most countries are not yet accessible. Consequently, crucial vital statistics derived from birth registration remain unavailable, leading to a limited understanding of the levels and patterns of birth registration in the region.

Existing evidence from other regions indicates a persistent gender gap in legal identification, particularly in the context of birth registration, with variations observed across different countries. However, such gender-related disparities have yet to be thoroughly investigated in countries that are in the early stages of establishing civil registration systems. Therefore, the primary objective of this study is to examine national and subnational differences in birth registration in SSA, especially with regards to age and sex disparities in birth registration. The study utilizes data from nationally representative surveys in the absence of official civil registration records.

## Data

The data comes from the sixth round of Multiple Indicator Cluster Surveys (MICS). MICS are nationally representative household sample surveys conducted in over one hundred countries around the globe, especially in Africa and south Asia, with a standard methodology. MICS are among a few surveys dedicated to the production of information that promote the well-being of children and women, including information on birth registration. In addition, MICS collect rich information on demographic, social and economic characteristics of the surveyed sample.

This study utilizes the under-five children data module of the MICS. Although most MICS data cannot be analysed at the lowest geographical level such as village and traditional authority, the data can produce statistically reliable information at the regional level (subnational level 1). It uses data from 7 countries that have conducted data collection in the round 6 of the MICS. These include Chad, Central African Republic, Lesotho, Madagascar, Malawi, Nigeria and Togo.

#### **Variables**

The dependent variables include 1) birth registration, i.e., whether the child's birth was registered with the civil registry authority and 2) birth certificate, i.e., whether a child possesses a birth certificate. These are binary variables with a value of 1 if a child's birth was registered or has a birth certificate and 0 otherwise.

The independent variables of interest include age and sex of the child, type of place of residence (rural-urban) and region of residence (see Table 1 for sample distribution of these variables)

## **Analytical strategy**

The statistical analyses apply descriptive statistics based on frequency distributions.

# **Preliminary results**

Table 1 provides an overview of the samples for selected characteristics. Birth registration for under-five children ranges from 26% in Chad to 83% in Togo. While the births of over half of the children under the age of five are registered in Togo, Madagascar, Malawi, and Nigeria, less than 50% are registered in the Central African Republic, Lesotho and Chad.

However, not all children whose births are registered with the civil authority possess birth certificates. Children with birth certificates are fewer than those whose birth was registered. For example, in Malawi, while 67% of children are registered, only 22% have birth certificates. Similarly, only 32% of under-five children have birth certificates, despite 45% of them reporting being registered with the civil authority.

The distribution of children by sex and age is consistent across all seven countries. However, Malawi, Chad and Madagascar constitute larger proportion of children resident in rural than in urban areas (over 80%).

**Table 1**: Percentage distribution of under-five children by selected characteristics

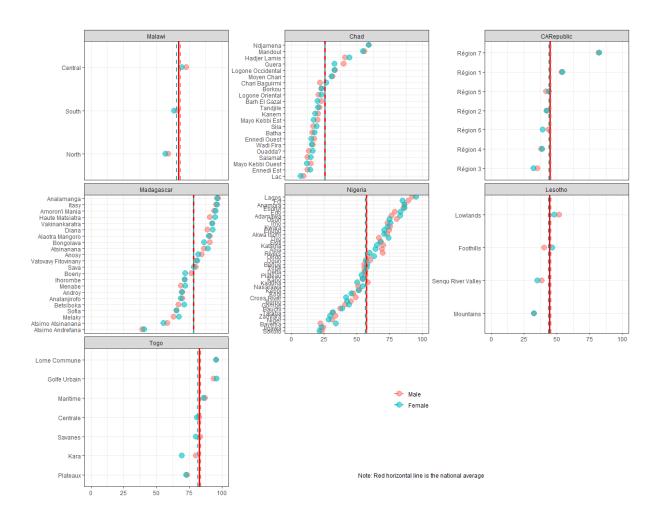
			Central African				
	Malawi	Chad	Republic	Madagascar	Nigeria	Lesotho	Togo
$n = \frac{1}{2}$	15455	21809	8923	12857	30804	3256	4942
Birth registered							
No	0.33	0.74	0.55	0.21	0.43	0.55	0.17
Yes	0.67	0.26	0.45	0.79	0.57	0.45	0.83
Birth certificate							
Not registered	0.33	0.74	0.55	0.21	0.43	0.55	0.17
Yes	0.22	0.23	0.32	0.63	0.54	0.37	0.76
No, but registered	0.45	0.03	0.13	0.15	0.03	0.07	0.07
Sex							
Male	0.49	0.50	0.49	0.51	0.50	0.49	0.51
Female	0.51	0.50	0.51	0.49	0.50	0.51	0.49
Age (years)							
1	0.22	0.22	0.22	0.23	0.21	0.18	0.22
2	0.21	0.17	0.19	0.20	0.19	0.21	0.21
3	0.21	0.20	0.20	0.19	0.20	0.22	0.19
4	0.20	0.22	0.21	0.19	0.21	0.20	0.20
5	0.17	0.19	0.18	0.18	0.19	0.19	0.18
Placeof residence							
Urban	0.13	0.16	0.30	0.20	0.37	0.34	0.38
Rural	0.87	0.84	0.70	0.80	0.63	0.66	0.62

## Birth registration differences

In all the countries, birth registration does not differ by sex of the child at the national level. Even at the sub-national level, sex differences are minor and only in a few regions of Nigeria and Togo (Figure 1).

However, there are important birth registration differences at the sub-national in almost all countries, especially in Chad, Central African Republic, Madagascar and Nigeria. In Nigeria for example, the national average is 57%, while birth registration is as high as 95% for female children in Lagos and as low as 21% for female children in Sokoto. Similarly, birth registration is a slow as 40% in Atsimo Andrefana, which below the national average of 79%. Subnational differences are minor is Malawi, Lesotho and Togo.

Figure 1: Percentage of births that are registered by sex and region



Important birth registration differences can also be observed when we consider the place of residence of the child's household. Birth registration rates are significantly higher in urban than in rural areas in all the countries. Figure 2 provides an overview of the birth registration by rural-urban location at the national and sub-national levels. Only in Malawi are differences by rural and urban not large enough. Largest rural-urban differences can be observed in Chad, Central African Republic and Nigeria. For example, while the national average is 57% in Nigeria, the urban rate of birth registration is 79% while that of the rural is 45%. Subnational differences are even more stark. For instance, Nigeria's region of Bayelsa, birth registration

in urban areas is complete (100%), whereas it is far from complete in rural areas (23%) (Figure 2). Such is also the case in provinces such Kaduna, Delta and Gombe. Similar rural-urban differences can also be observed in Chad's Mandoul, Wadi Fira, and Ouadda regions, for example.

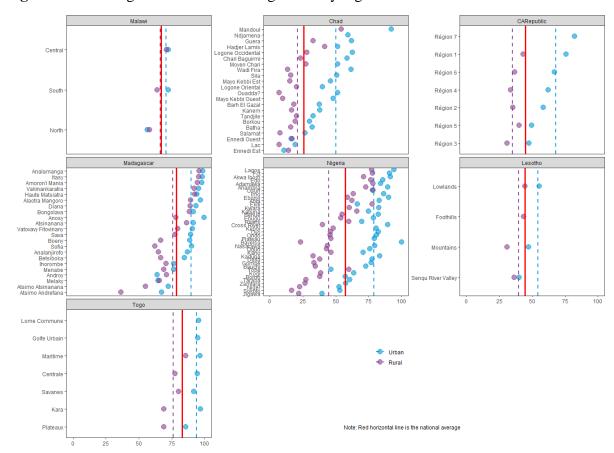
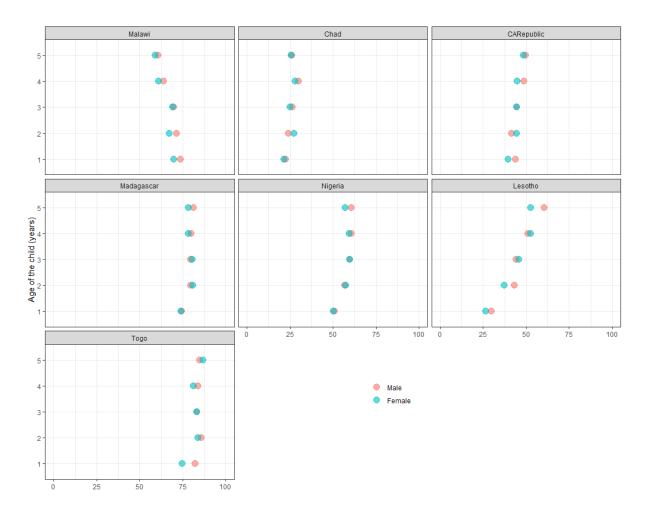


Figure 2: Percentage of births that are registered by region and urban-rural location

Registration differences by age are smaller than those observed at the sub-national level (Figure 3). However, in some countries such as Malawi and Lesotho, particularly the latter. There is a negative relationship between registration rages and age of the child in Malawi, while Lesotho has a positive relationship. In Malawi, there is an improvement in birth registration in Malawi with increasing time. Thus, registration rates are higher for children under the age of one than those aged between one and two, which is also higher that for children aged between two and three, and so forth. This suggests that great improvements in the level of registration of births since the inception of birth registration in 2015 in Malawi is being achieved. In contrast, registration rates are lower for the younger ones in Lesotho than the older children.

Figure 3: Percentage of birth that are registered by sex and age of the child



## **Conclusions**

Birth registration plays a pivotal role in securing fundamental human rights and establishing the legal identity of individuals. This study has shown huge between and within country variation in SSA. Unlike in other world regions such as in Asia, there are no important sex differences in birth registration. However, with respect to establishment of legal frameworks that govern birth registration, some countries appear to be behind in comparison with others.

Furthermore, looking at national averages alone can be misleading as there exist significant subnational differences in most of the countries. Civil registration authorities to need to address such differences for these countries to achieve sustainable development goal 16.9. rural-urban differences are even more stark, which calls for more action to improve birth registration in rural areas, which are lagging behind.

While there are some improvements in birth registration with time, as evidenced by registration by age of the child, this is not uniform across all countries. While there are ongoing efforts to increase registration of births in the region, championed by international organizations such as the United Nations, it is important to message across the salience of birth registration in specific sections of the population that exhibit large differences.