

# **The Independent Monitoring and Evaluation Project for the State Level Programmes (IMEP)**

Final Evaluation of the State Level Programmes:  
Comparative State Analysis

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Client: UK Department for International Development (DFID)

November 2016



Funded by UKaid from the Department for International Development

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## Executive summary

This report presents the results of the Comparative Analysis component of the Final Evaluation of DFID Nigeria's State Level Programmes (SLPs). The SLPs are a set of DFID programmes in Nigeria, which began in 2008 with the objective to help improve Nigeria's progress against the Millennium Development Goals (MDGs). The Comparative Analysis is one component of the Final Evaluation of the SLPs<sup>1</sup>.

The purpose of the analysis is to provide initial evidence around the extent to which the SLPs have met their high level objectives. It gives an overview of how development outcomes have evolved in SLP states compared with the rest of Nigeria, and whether these changes are consistent with the Theory of Change for the Suite. It uses a range of data sources to identify whether there is any evidence of systematic differences in trends in MDG and other indicators where the set SLPs (the "Suite") were implemented, compared with states where they were not.

The overarching logic behind the SLP Suite is that a complementary set of interventions designed to improve the effectiveness of state governments will jointly contribute toward greater progress toward attaining the MDGs in Nigeria. The intermediate objectives of the SLPs are to enhance state government effectiveness in terms of public financial management, accountability toward citizens and resource management, among other dimensions.

This analysis finds support for the claim that the SLPs were associated with some improvements in measures of resource management quality, in line with its aims. The suite of SLP states are found to have performed better on average than non-SLP states in five out of six indicators of public financial management quality. These changes indicate a positive shift toward greater resource mobilisation in priority areas in the Suite states, with health and education spending increasing more in SLP suite states than in non-SLP states.

There is also some evidence that citizens in Suite states have more favourable attitudes on certain aspects of governance, with perception on the extent of corruption and the quality and availability of health and education services improving in states where the SLPs were implemented relative to others according to one source covering the period 2005/6 to 2001/13. However the picture is not consistently positive, with another source of data on citizen attitudes reporting more mixed trends over a shorter period.

While these findings point to some success in the SLP states in achieving the intermediate objectives of the Suite, the evidence with respect to the attainment of final outcomes is modest. The analysis focuses on examining indicator in health and education-related MDGs, as these were the priority sectors targeted by the Suite.

With respect to health outcomes, the SLP states are shown to have experienced greater improvements in several indicators related to service use. Against a backdrop of positive progress nationally, SLP states are shown to have progressed significantly faster in increasing the percentage of children under 5 with diarrhoea who received oral rehydration therapy and the proportion of women who received ANC from a skilled provider. However there is one indicator of health-seeking behaviour that is found to improve significantly more in non-Suite states (the percentage of children sleeping under ITNs or in sprayed dwellings).

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<sup>1</sup> The other components of the Final Evaluation are the following: i. A summary assessment for each SLP (to provide information on the results achieved), ii. a summary assessment for each of the five SLP states iii. Analysis of SLP suite-level performance and iv. Studies of capacity development achievements in Education and Health (through ESSPIN and PATHS2).

The results on indicators of actual health status are mixed. There are greater declines in SLP states in child mortality than in non-SLP states over the period of the interventions, but the difference is not statistically significant, and no corresponding decreases are found in infant mortality. Anthropometric indicators appear to have actually deteriorated in SLP states relative to non-SLP states, although the evidence is not conclusive since these indicators are believed to suffer particularly from measurement error. On a more limited comparison of health outcomes focusing just on states in the North West, the results were similar as for the country as a whole.

Altogether, the picture that emerges from the analysis of health outcomes indicates that the SLPs may have been associated with some improvements in the utilisation of selected health services, in a manner that is consistent with the investments of the PATHS2 programme. However, this has not been accompanied by similar improvements in final health status of citizens.

The evidence on education-related indicators does not generally find the SLPs to be associated with larger improvements in school attendance. The analysis suggests that gross primary school attendance rates have increased faster in SLP states than in non-SLP states, but the increase is not statistically significant. There has been no positive changes in primary school attendance rates in either the SLP or non-SLP states. The results on secondary school attendance rates suggest deterioration in the SLP states relative to non-SLP states. In terms of the inclusivity of school attendance, the gender parity index for primary and secondary schools show a greater improvement in SLP states, but the differences are not statistically significant.

In sum, the findings do point to some improvements in the performance of the SLP suite states that are broadly consistent with the overall Suite logic, especially with regard to their intermediate objectives of improving state-level governance. However the analysis does not find compelling evidence to suggest that the Suite effectively achieved its final objectives in improving Nigeria's progress against the MDGs.

A final output of the Comparative Analysis is a summary of the analysis team's experience in accessing and using secondary data sources in Nigeria to attempt to understand and explain state-level development performance. A number of challenges were faced in obtaining data that met the requirements of the exercise, and the final analysis that was performed was constrained by limitations in the data, particularly compared with the wider range of sources that it had been intended to use initially. The study highlights the need to improve the range and quality of data on development performance at the state level in Nigeria.

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## List of Acronyms and Abbreviations

OPM	Oxford Policy Management
BCIA	Big Common Impact Areas
CUBE	Capacity for Universal Basic Education
DFID	Department for International Development
ESSPIN	Education Sector Support Programme in Nigeria
EQ	Evaluation Question
FEPAR	Federal Public Administration Reform Programme
GEMS	Growth, Employment and Markets in States
IMEP	Independent Monitoring and Evaluation Project
LGA	Local Government Area
MDG	Millennium Development Goal
MTR	Mid Term Review
MTSS	Medium Term Sector Strategy
PATHS	Partnership for Transforming Health Systems
SAVI	State Accountability and Voice Initiative
SLP	State Level Programme
SPARC	State Partnership for Accountability, Responsiveness and Capability

# 1 Introduction

## 1.1 The DFID State Level Programmes

This report presents the results of an analysis of evidence on the development performance of Nigerian states, focusing on comparing the performance of the five states (Enugu, Jigawa, Kaduna, Kano and Lagos) that have received support through DFID's State Level Programmes (SLPs) with other states<sup>2</sup>.

The SLPs are five DFID supported programmes with a combined budget of around £510 million, which have been implemented since 2008 (with the exception of GEMS, which began in 2010):

- The State Partnership for Accountability, Responsiveness and Capability Programme (SPARC), which focuses on public management and finance;
- The State Accountability and Voice Initiative (SAVI) which focuses on the development of civil society and State Houses of Assembly;
- The Education Sector Support Programme in Nigeria (ESSPIN);
- The Partnership for Transforming Health Systems (PATHS2); and
- Growth and Employment in States (GEMS) dealing with the business enabling environment and private sector development.

The overall objective of the SLPs was to improve Nigeria's progress towards the Millennium Development Goals (MDGs), particularly through encouraging the more effective and efficient use of Nigeria's own resources. Underpinning their design was the notion that the joint implementation of a complementary set of programmes, addressing service delivery but also aiming to improve governance and accountability, would increase their collective impact.

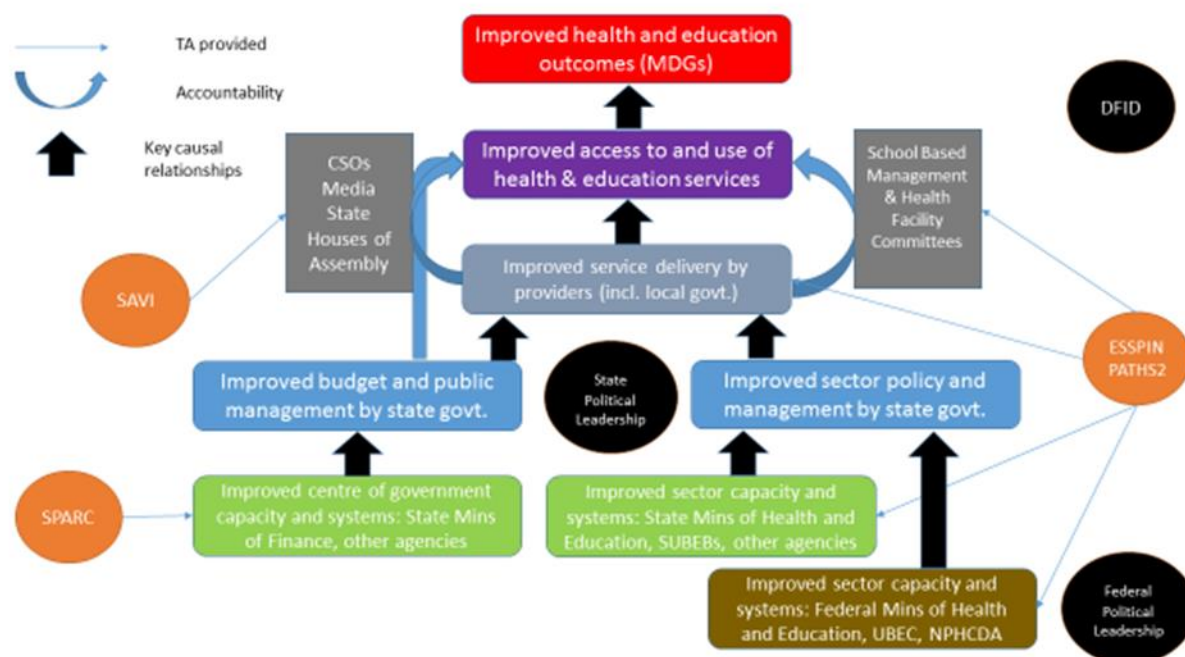
The intervention logic of the SLP Suite is summarised in Figure 1 below. Support to the improvement of the accountability and governance environment in the states and the management of public resources (through SAVI and SPARC) would enable sectorally-focused programmes to help states improve performance in growth, poverty reduction, and health and education indicators.

In practice, the Suite concept as initially envisaged was not implemented with respect to the growth focused programme (GEMS). The initial implementation of the GEMS programmes was delayed compared to the other SLPs, it took a different form from what was originally envisaged (focusing on specific sub-sectors), and it was implemented in different states.

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<sup>2</sup>In addition to these 5 SLP 'suite' states, SAVI and SPARC have subsequently expanded work into Anambra, Katsina, Niger, Yobe and Zamfara; ESSPIN works in Kwara, PATHS2 works exclusively in the SLP 'suite' states. Different components of the GEMS programme have different state coverage, including activities in Abuja, Abia, Lagos, Kaduna, Kano, Jigawa, Zamfara and Katsina under GEMS1; Cross River, Lagos, Kaduna, Kano, FCT, Kogi, Katsina and Zamfara under GEMS3; and Kano, Kaduna Lagos, Cross River, Abia and Anambra under GEMS4. However, only these five states have received support from SPARC, SAVI, ESSPIN and PATHS2 over the whole period since 2008.



**Figure 1. Summary of SLP Intervention Logic**

The SLP Suite as implemented, therefore, focused on improving health and education performance.

## 1.2 Purpose and Objectives of this Study

The Comparative State Analysis is one of a number of studies intended to contribute to the Final Evaluation of the SLPs. It contributes to answering the evaluation question on the impact of the SLPs. Specifically, it contributes to answering the following questions:

C. What has been the impact of the SLPs?

C.1 How far have the SLPs contributed to the achievement of the MDGs in Nigeria, and to addressing gender, poverty and equity issues?

C.2 To what extent have the SLPs contributed to more effective and efficient use of Nigeria's own resources?

The Final Evaluation report and other documents provide an overview of the evaluation as a whole and the fit of this study within it<sup>3</sup>. Other documents provide, amongst other things, state-level information on progress in output and outcome level indicators and an assessment of the role of each programme in these changes.

The Final Evaluation report also provides a more comprehensive description of the SLPs and their context than is given above.

<sup>3</sup> Final Evaluation of the DFID Nigeria State Level Programmes: Final Evaluation Report (draft), IMEP November 2016

## 1.3 Structure of the report

The remainder of the report is structured as follows. Section 2 outlines the approach for the analysis, including a review and commentary on the data sources used. Section 3 presents the main findings, first considering the set of MDG indicators (Evaluation Question C.1) relating to health and education (for Nigeria as a whole and then for the North West, where three of the five SLP Suite states were located), and second covering a range of indicators that capture different measures of resource management quality (Evaluation Question C.2).. Section 4 provides conclusions and discusses the results. Additional information is presented in Annexes. Annex A presents additional data tables. Annex B provides definitions of indicators.. Annex C describes the data sources used and data sources that were considered but did not match the criteria for inclusion.

## 2 Approach to the Analysis and Data Used

### 2.1 Approach

The Comparative State Analysis tests whether changes in MDG indicators in SLP states are consistent with the overall intervention logic of the SLPs: namely that progress in the MDG-related indicators will be greater due to the resources and technical assistance supplied by the SLPs. It also assesses whether changes in selected intermediate indicators of improved governance and accountability are consistent with the intervention logic.

It does this by comparing changes in aggregate values of these indicators, across the five 'suite' states, with changes in other states in Nigeria. These other states provide an approximate counterfactual for the SLP states. While there are limitations to this approach (discussed below), it provides an important check whether key indicators have moved in a direction consistent with the intervention logic and whether they have done so to a greater extent than in states where the SLPs have not been operating.

The core of the analysis presented here is a comparison between trends in key indicators in the five states where SPARC, SAVI, PATHS2 and ESSPIN have worked together - Jigawa, Enugu, Lagos, Kaduna and Kano - with trends in other Nigerian states. In practice the number of non-SLP states included as a comparison group varies by indicator according to the coverage of the dataset from which the indicator is drawn; where possible it included all non-SLP states. While some data for individual states is presented in the annex, the focus is on the trends in aggregated values of indicators. This provides an assessment across all of the suite states as a group and a larger sample size. Detailed state-level analysis is presented in other evaluation reports.

The analysis examines trends in health- and education-related MDG indicators. Some of these are SLP outcome or impact indicators, while others are not. All available sectoral indicators were examined because the SLPs included overall sector strengthening as part their strategy. Individual indicators vary in their relevance however and this is discussed where necessary in the findings.

This is complemented by examining whether there have also been corresponding changes in an additional set of indicators relating to resource management and governance, consistent with the intervention logic. This includes indicators of health and education budget allocations and releases as well as indicators of citizens' perceptions of government services and of 'voice'. A complete list of the indicators assessed is presented in Annex B.

For the purposes of the Comparative Analysis the main point of comparison is between the five states where the four SLPs have been implemented and all other states in Nigeria. These five states will be referred to as the 'Suite' states to distinguish them from other states where some of the SLPs also operate. Where estimates have been constructed for the Suite and non-Suite states as separate groups, weights have been calculated based on the relative population shares of the state groupings to adjust for their different population sizes. Additional analysis showed that the weighting does not makes a significant difference to the findings compared to the use of non-weighted data. This suggests, inter alia, that the findings are not driven only by the inclusion of Lagos in the analysis, a potential concern given its population size and unique characteristics.

The findings are presented in the form of pre- and post- values of indicators for the two groups (SLP-suite and non-SLP suite states), the differences between them and a difference-in-difference estimate. For population-based indicators where the raw data was available the significance of these differences and of the difference-in-difference estimate was tested. Where the latter is statistically different from zero and in the expected direction, trends in the two groups of states can

be said to have differed in line with the intervention logic i.e. MDG indicators have improved significantly more in the states where the SLPs are working. A visual check on the parallel trends assumption – that is, whether trends in the two groups were similar prior to the start of the SLPs - was also undertaken. More detailed methodological considerations around this approach are presented in Section 3.1

Since different datasets relate to different time periods, the number of years over which changes are measured varies between indicators. It is possible in some cases that further changes and different trends would be apparent if a longer time period had been covered. However the period covered is generally sufficient that we would expect to see an effect if the intervention logic holds. The time period covered for each data set is detailed in Section 2.2.

There are three main limitations to the approach.

The first relates to the fact that the states where SLPs are implemented were not chosen at random. The choice was based, at least in part, on the states that were thought to have the greatest commitment to reform, meaning that Suite and non-Suite states would have been likely to have systematic differences in their characteristics (a potential source of selection bias). They might also differ on a range of other characteristics; amongst other things, SLP suite states are more concentrated in the north. This could make the two groups less comparable, so the non-Suite states that form the comparison group are an imperfect counterfactual and do not accurately represent the situation that would have prevailed in Suite states had the programmes not been implemented. Additional analysis has been undertaken which helps to assess how likely this was to be a serious problem. A summary of the political economy analyses undertaken by the SLPS shows that the reform environment was in fact quite variable in the SLP-suite states at the start of the programmes, although it does not make a comparison with other states.<sup>4</sup> In addition, the difference in difference approach allows the analysis to take account for any time-invariant differences between the states. An assessment of parallel trends helps to identify whether any indicators had different trends prior to the start of the SLPs, where the data is available and for selected indicators. Finally, an additional analysis is undertaken for just the North West region of Nigeria which includes three SLP-suite states. The other states in this region are likely to be more similar to the three SLP suite states there, since there is more homogeneity within regions, and so the concerns about selection effects are reduced.

Second, the secondary data on which the analysis is based suffers from some significant limitations, in terms of coverage, scope and quality. The selection of data sets was undertaken so as to use the most relevant and reliable data and care has been taken to address data quality issues where possible. However these limitations may sometimes introduce some uncertainty about the findings. Issues around data quality are discussed in Section 2.2.

The third is that the approach does not provide a comprehensive test of the entire intervention logic. It is only able to examine particular elements where comparable, quantitative data are available. Other components of the evaluation were used to examine different elements of the interventions logic and complement the analysis presented here.

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<sup>4</sup> Overview of the Political Economy Context and Trends in the SLP States, Draft, June 2016

## 2.2 Overview of the data used

Since the evaluation approach is based on comparison of trends, the analysis draws on secondary data sources that contain health and education MDG indicator estimates and other indicators that measure dimensions of resource management quality.

Potential data sources were identified through a web search and key informant interviews and assessed as to whether they should be included in the analysis. There were three core requirements for the main data sources used for the Comparative Analysis:

- The data covers both SLP and non-SLP states and has, preferably, national coverage;
- The sample size is adequate for the group of SLP and non-SLP states taken separately;
- The data provides comparable estimates for at least two relevant points in time. This means one observation from before the SLPs were implemented (2008), or close to the beginning of operations when meaningful results would not yet started to emerge, and one observation from some point during the intervention period with a sufficient interval for changes to have occurred.

The Demographic and Health Survey (DHS) was the only data source that comprehensively meet the criteria given above for population-based indicators. It was considered as the principal source to for the comparative analysis. In order to allow trend comparisons of MDG indicators and statistical significance testing, the 2003, 2008, 2013 rounds of the DHS dataset has been used.

In order to estimate the extent in which the SLPs have contributed to a more effective use of Nigeria's resources (Evaluation Question C.2), the following data sources were included:

- World Bank Public Finance Management (2008, 2012)
- Citizen's Perception Survey (2013, 2015)
- Afrobarometer (2005, 2013)

These three secondary data sources do not have national coverage but they contain information for both SLP and Non-SLP and at least one pre-implementation and one post-implementation data point. Moreover, and relevant for the evaluation, they contain information on resource management indicators that were not covered elsewhere. The scope of analytical work using these additional datasets was more limited than for the DHS, and should be noted when inferring conclusions from the findings.

In the case of the CPS, a genuinely 'pre'-SLP data point was not available and the analysis covers the period between 2013 and 2015. The implications of doing so are that it is necessary to assume that the full effects of the SLPs were not yet evident close to the start of the implementation period, so that the earlier data point roughly approximates the situation that prevailed before the programmes began operating. This may be a strong assumption in this case and the observed trends may be less pronounced than they would otherwise have been if a pre-SLP data point had been available. In this way our results may underestimate trends over the entire period. The Afrobarometer survey provides some similar information over a longer time period however. The limitations around these data sources are discussed in more detail in Section 3.

A summary of the datasets used, the years to which they relate, and the states they cover is provided in Table 1 below.

A description of all data sources that were considered but not used given in Annex C. Some data sets were not used because they did not meet the criteria given above. Others were rejected because they were believed to be biased through under-reporting or because the information included did not have a clear and meaningful interpretation in the context of this analysis.

Table 1. Data sources and reference years for the Comparative State Analysis			
Data source	Summary description	Years Used	States covered
<b>MDG level indicators to respond evaluation question C.1</b>			
Demographic and Health Survey	Collects information on fertility levels, marriage, fertility preferences, awareness and the use of family planning methods, child feeding practices, nutritional status of women and children, adult and childhood mortality, awareness and attitudes regarding HIV/AIDS, FGM, and domestic violence	2013, 2008, 2003	All
<b>Resource Management indicators to respond evaluation question C.2</b>			
World Bank PFM database	The World Bank PFM database stores financial data for all Nigerian States (except for Nasarawa, Plateau, FCT-Abuja and Imo in the version shared with the analysis team). PFM indicators covered include sector expenditure and revenue performance across several years.	2008, 2012	All SLP and non-SLP suite states except for Nasarawa, FCT, Imo, Plateau
Citizens Perceptions Surveys	The objective of the CPS is to measure and track changes in the perception of Nigerian citizens on a range of governance and service delivery issues. These included perceptions on service delivery in education, health, security and basic infrastructure, the extent to which citizens feel they are currently able to claim their rights to government provided services and perceived access to effective mechanisms for holding state governments accountable for the effective delivery of services. Note that caution is required in making comparisons across the 2010 and 2013 surveys. The two surveys used different sample designs and the sample size was small at the state level in 2010. There were also some differences in the questionnaires.	2013, 2015	All SLP and five non-SLP suite states (Anambra, Katsina, Niger, Yobe, and Zamfara)
Afrobarometer Surveys in Nigeria	Afrobarometer Surveys measure public perceptions about the quality of democracy and governance. Includes service delivery (e.g electricity, water, schools and health facilities in the local area), infrastructure, perceptions about the economic condition of the country, living conditions, the overall direction of the country, food security, public affairs, political freedom, political participation and faith in institutions.	2005, 2013	All

Population data is also required to construct some of the indicators, and to calculate weights that adjust for relative population sizes of groups of states. As there is no up-to-date source of



population data for Nigeria, population estimates were constructed by applying state-specific growth rates to the 2006 census data.

## 2.3 Data limitations

General limitations around the data used are as follows.

In some cases sources were used which did not have fully national coverage. These were the Citizens Perception Survey (CPS) and the World Bank Public Finance Management (PFM) data. This meant that they did not represent the entire national population. For the PFM data, this difference was modest, with only three states missing in the version received by the analysis team. Four additional states were dropped because they did not have data for the beginning and end of the period. The implications of this are that the comparison of SLP suite states with non-SLP states was restricted to only those covered by the data. The results from these data sources do not therefore fully capture the actual difference in trend outcomes for these whole population. For the PFM data, the effect of this likely to be small.

An additional limitation is that some of the SLPs have worked in states outside of the five SLP-suite states. SPARC and SAVI have worked in five states additional to the core group of five states in the SLP suite. ESSPIN has worked in one additional state. These are a small fraction of all states and so this is of limited concern for most of the analysis which uses data representative of the national population (or close to it). However, the CPS data covers only the ten states where SPARC and SAVI work. As a result it is possible that changes in the non-Suite states reflect some of the work done by them in these states, which could tend to reduce any differential observed compared with a group of similar states where they had not worked. Nevertheless, the programmes have worked for less time in this group of states so any effects are likely to be much smaller.

Where group estimates were developed from published state-level values (for the Afrobarometer and CPS surveys), weights needed to be constructed. State-level weights were not reported in published data sources. Ideally the calculation of weights would be done using sub-population sizes corresponding to each indicator (i.e. the size of the population group to which the indicator refers) would have been used, but these were not available. This meant that group-level weights were estimated on the basis of the overall population shares given in the 2006 census. In addition, since there is no up-to-date source of population information for Nigeria available, approximate values were calculated on the basis of a constant (state-level) growth rate applied to the 2006 census data.<sup>5</sup>

For these sources, sample sizes and standard errors were not consistently provided. The implications of this were that significance tests to assess whether changes over time and differences between SLP and non-SLP states could not be conducted. However tests were conducted for the estimates calculated from the DHS (using the raw data) and are not necessary for the PFM data, which between them provide the majority of the results.

Additional issues around specific data sources and indicators are identified where relevant in Section 3.

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<sup>5</sup> The inaccuracy that may be anticipated from this crude estimation process is reflected in the fact that some of the net enrolment rates calculated on the basis of this data emerged as being higher than one (a conceptual impossibility)

### 3 Findings

This section presents the findings of the Comparative Analysis on trend differences between the set of SLP 'suite' states (Enugu, Jigawa, Lagos, Kaduna and Kano) and as many other non-SLP states as possible, subject to the coverage of the data sources. We begin by describing changes in MDG indicator estimates, comparing with all other states, and states in North West Nigeria. The final section examines whether the differences observed are consistent with the underlying intervention logic of the SLP Suite by examining a second set of indicators related to governance, accountability and resource management.

- Three main results are presented:
- Values for each indicator in each group of states (SLP and non-SLP) at two periods of time.
- The difference, for each indicator in each group of states, between the two periods in time reported as percentage point changes.
- The difference between the two differences –the Differences-in-Differences estimator. This figure indicates whether there have been systematic improvements in Suite states over and above the difference observed in non-Suite states.

The direction and magnitude of changes are colour-coded to enable patterns across indicators and states to be readily identified. In this way, better- and worse-performing groups of states are easily identified. Note that depending on the type of indicator, sometimes negative numbers correspond to improvements. The Annexes contain further tables which show changes at the state level.

In total, nineteen MDG indicators were identified: thirteen of them cover health-related issues, while the other six cover education.

#### 3.1 Trends in MDG indicators in SLP suite and non-SLP states

Section 3.1.1 presents results for health-related indicators, and 3.1.2 presents education-related indicators.

##### 3.1.1 MDG performance in health: SLP suite and non-SLP suite states

In general terms, according to DHS there was a positive trend nationally in health-related indicators between 2008 and 2013. However, Table 2 suggests that the Suite states only performed slightly better than non-SLP suite overall.

It is useful to distinguish between indicators of health status/outcomes (mortality, anthropometrics) and indicators of service utilisation (the other seven). These indicators sit at different points along the results chain.

Of the seven indicators of service uptake, six have improved more in SLP-suite states than in the others, two of which are statistically significant: the percentage of children under five with diarrhoea who received oral rehydration therapy and the proportion of pregnant women who received ANC from a skilled provider. One indicator improves significantly more in non-SLP states (the percentage of children sleeping under ITNs or in sprayed dwellings).



Table 2. Weighted trends for health-related MDG indicators for SLP and non-SLP suite states (DHS, 2008-2013)

Indicator	SLP suite states			Non-SLP suite states			Diff-Diff	p-value
	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)		
Percentage of children under 5 stunted	40.7	43.0	2.3	40.6	34.9	-5.8	8.1***	0.000
Percentage of children under 5 underweight	25.4	43.1	17.7	22.4	24.3	1.8	15.9***	0.000
Percentage of children under 5 wasted	16.1	28.2	12.1	13.2	14.8	1.6	10.5***	0.000
Under 5 mortality rate per 1000 live births	171.0	103.1	-67.9	144.6	100.9	-43.7	-24.2	0.587
Infant mortality rate	74.0	66.2	-7.8	73.6	61.7	-11.9	4.2	0.729
Measles immunisation rate	39.0	40.3	1.2	42.1	42.7	0.6	0.6	0.811
Full immunisation rate	20.7	24.3	3.7	23.4	25.8	2.4	1.3	0.597
Percentage of children under 5 with diarrhoea who received oral rehydration therapy	36.9	48.4	11.5	29.4	34.8	5.4	6.1*	0.102
Proportion of births attended by skilled health personnel	32.1	34.5	2.4	41.0	42.2	1.2	1.1	0.311
Percentage of women who received antenatal care from a skilled provider	57.6	66.7	9.1	57.8	58.5	0.7	8.4***	0.000
Percentage of pregnant women tested for HIV	22.5	37.5	14.9	18.1	31.1	13.0	1.9	0.254
Percentage of children under 5 sleeping under ITNs or in dwelling sprayed with IRS	6.2	13.2	7.0	5.2	17.7	12.5	-5.5***	0.000

**Source: DHS 2008 and 2013**

Note: DHS includes information for all SLP and non-SLP suite states

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

Significance stars indicate statistically significant differences at significance level of p<.01 (\*\*\*), p<.05 (\*\*), and p<.1 (\*)

Of the indicators relating to health status, changes in infant and child mortality were mixed. There is a substantial overall decline in child mortality over the period in both groups of states. Child mortality declines more in the SLP states, although infant mortality does not and the differences are not statistically significant. It should be noted that infant and child mortality are difficult to measure and are affected by many factors, so a limited change in this indicator is not surprising.

Based on the available data, it appears as though anthropometric status deteriorated significantly more in SLP states; however these indicators are known to suffer particularly from measurement error.<sup>6</sup>

### 3.1.2 MDG performance in education: SLP suite and non-SLP suite states

Table 3 Weighted trends for education-related MDG indicators by SLP and non-SLP suite states. DHS, period 2008-2013

Indicator	SLP suite states			Non-SLP suite states			Diff-Diff	p-value
	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)		
Net Primary School Attendance Ratio	59.8	59.8	0.0	60.1	59.9	-0.2	0.2	0.851
Net Secondary School Attendance Ratio	49.9	47.7	-2.2	49.2	49.6	0.5	-2.7*	0.073
Gross Primary School Attendance Ratio	83.0	90.9	7.9	88.1	93.0	4.9	3.0	0.812
Gross Secondary School Attendance Ratio	72.1	76.8	4.7	71.0	79.7	8.7	-4.0	0.848
Gender Parity Index for primary schools	0.84	0.94	0.10	0.91	0.92	0.01	0.10*	0.062
Gender Parity Index for secondary schools	0.75	0.80	0.05	0.83	0.84	0.01	0.04	0.805

Source: DHS 2008 and 2013

Note: DHS includes information for all SLP and non-SLP suite states

Label description: Light red for  $0 > \text{Annual average growth} > -5$ ; darker red for  $-5 > \text{Annual average growth}$ ; light green for  $0 < \text{Annual average growth} < 5$ ; darker green  $5 < \text{Annual average growth}$ .

Significance stars indicate statistically significant differences at significance level of  $p < .01$  (\*\*\*),  $p < .05$  (\*\*), and  $p < .1$  (\*)

As shown in Table 3, SLP suite states experienced positive trends in all but two of the education-related indicators reported by the DHS. These positive results are consistent with the national trend observed for some indicators.

Improvements appear to be larger for SLP suite states in comparison to non-Suite states for four out of the six indicators. Differences are however often modest and sometimes in the opposite direction to what would be expected.

The largest improvement in terms of magnitude is observed for the gross primary school attendance ratio, for which the improvement in Suite states between 2008 and 2013 was almost 8 percentage points. Although non-Suite states also had a positive trend for this indicator, the difference was 3 percentage points larger for the first group of states. However this difference was not statistically significant. Net primary school attendance ratios are flat in both groups of states.

<sup>6</sup> See an analysis of the quality of DHS anthropometric data in 'Quality Assessment of Anthropometric Data in the NDHS 2013', (2016); ORIE project: Martina Garcia Aisa and Paul Jasper

Non-Suite states performed considerably better than SLP suite ones with regards to the gross secondary school attendance ratio: 8.7 and 4.7 percentage points increases respectively, which leads to a diff-in-diff estimate of -4.0. The net secondary school attendance ratio declines in SLP states and increases slightly in non-SLP states. This difference in favour of the non-SLP states is statistically significant.

The Gender Parity Index (a measure of the balance of boys and girls attending school) for primary schools in Suite states was 0.1 percentage points larger than for non-SLPs in 2008. In 2013, however, the ratio of girls to boys in attendance in primary education was around 0.9 for both groups of states. The gender parity indices for both primary and secondary schools show greater improvement in SLP suite states than in the rest, but these differences are not statistically significant.

The interpretation of the difference in trends between the two groups of states is not straightforward. As noted in section 2, the two groups of states were not identified randomly and it is possible that differences between them would have meant that trends in the MDG indicators were different in any case, even in the absence of the SLPs. An interpretation of the difference-in-difference measure as a measure of impact would require a 'parallel trends' assumption i.e. that the two groups would have shown the same trends in the absence of the SLPs. This cannot be directly tested. A visual inspection of trends in health indicators prior to 2008, shown in annex C, shows that indicators do not generally have parallel trends. However, neither are they consistently better in any given group of states. Since there is insufficient data to estimate trends fully (two points each), and no statistical tests are done, these findings are not conclusive but further support the case for caution in interpreting the findings.

### **3.1.3 North West: MDG performance in health – SLP and non-SLP suite states**

The findings presented above show that the SLP suite states and non-SLP suite states. The analysis was replicated exclusively for those Nigerian states that comprise the North West Region (which contains three Suite States and four non-Suite states). These states are likely to be more similar to one another than are the SLP and non-SLP states in the country as a whole. Results are presented in the tables and graphs below.

Table 4 still suggests that SLP suite states in the North West only performed slightly better than the regional non-Suite states overall: greater improvements were observed in only seven out of the twelve health-related indicators, and some of these improvements are marginal. The indicators for which the SLP suite performed best compared to non-SLP states in the North West are the percentage of children under 5 with diarrhoea who received oral rehydration therapy, the proportion of women who received antenatal care from a skilled health personnel, the percentage of pregnant women tested for HIV, and full immunisation rates. There were also non-statistically significant improvements in SLP suite states compared with non-SLP states in under five mortality rate, infant mortality rate, and proportion of births attended by skilled health personnel.

Diff-in-diff estimates show, however, that north western SLP suite states performed worse than non-SLPs in some measures of infant and child health during the period of interest, including all anthropometric indicators. These results are consistent with the ones observed for the whole country.

Table 4. North West Region. Weighted trends for health related MDG indicators by SLP and non-SLP suite states. DHS, period 2008-2013

Indicator	SLP suite states			Non-SLP suite states			Diff-Diff	p-value
	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)		
Percentage of children under 5 stunted	49.5	52.9	3.4	56.6	56.7	0.0	3.4*	0.077
Percentage of children under 5 underweight	32.4	54.5	22.0	38.8	40.2	1.4	20.6***	0.000
Percentage of children under 5 wasted	18.5	34.5	16.0	21.8	19.6	-2.1	18.1***	0.000
Under 5 mortality rate per 1000 live births	223.4	118.2	-105.2	237.8	157.9	-79.9	-25.4	0.712
Infant mortality rate	82.2	66.7	-15.5	74.9	82.0	7.1	-22.6	0.251
Measles immunisation rate	27.7	27.4	-0.2	10.4	17.0	6.6	-6.8**	0.027
Full immunisation rate	9.5	15.0	5.6	2.5	3.8	1.4	4.2**	0.049
Percentage of children under 5 with diarrhoea who received oral rehydration therapy	33.1	46.8	13.7	23.6	24.0	0.5	13.2***	0.005
Proportion of births attended by skilled health personnel	13.3	17.7	4.4	5.7	8.5	2.8	1.6	0.135
Percentage of women who received antenatal care from a skilled provider	46.2	58.1	11.8	13.6	21.9	8.3	3.5*	0.050
Percentage of pregnant women tested for HIV	8.1	26.5	18.5	0.9	5.7	4.7	13.7***	0.000
Percentage of children under 5 sleeping under ITNs or in dwelling sprayed with I	5.8	11.1	5.3	2.2	19.1	16.9	-11.6***	0.000

Source: DHS 2008 and 2013

Note: This table includes information for North Western States: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara

Label description: Light red for  $0 > \text{decline} > -5$ ; darker red for  $-5 > \text{decline}$ ; light green for  $0 < \text{improvement} < 5$ ; darker green for  $5 < \text{improvement}$ .

Significance stars indicate statistically significant differences at significance level of  $p < .01$  (\*\*\*),  $p < .05$  (\*\*), and  $p < .1$  (\*)

### 3.1.4 North West MDG performance in education – SLP suite and non-SLP suite states

Table 5 below show that both North Western Suite and non-Suite states experienced positive trends in all the education-related indicators reported by the DHS. Nevertheless, and unlike the national comparison in Table 3, improvements appear to be larger for non-SLP suite states in comparison to SLP suite ones for all of the attendance indicators. Differences are, however, only significant in the case of Net Primary and Secondary Attendance Ratios.

SLP suite states appear to have performed slightly better than SLP suite ones with regards to Gender Parity Index, but these results are not statistically significant.

Table 5. North West Region. Weighted trends for education-related MDG indicators by SLP and non-SLP suite states. DHS, period 2008-2013

Indicator	SLP suite states			Non-SLP suite states			Diff-Diff	p-value
	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)	Period 1 (2008)	Period 2 (2013)	Change (P2-P1)		
Net Primary School Attendance Ratio	51.5	54.0	2.5	29.1	36.1	7.0	-4.5***	0.004
Net Secondary School Attendance Ratio	36.0	39.2	3.3	15.7	23.8	8.1	-4.9**	0.016
Gross Primary School Attendance Ratio	73.8	81.2	7.4	41.9	55.6	13.8	-6.3	0.631
Gross Secondary School Attendance Ratio	53.0	55.7	2.7	25.5	34.0	8.5	-5.8	0.628
Gender Parity Index for primary schools	0.81	0.93	0.12	0.67	0.73	0.06	0.07	0.503
Gender Parity Index for secondary schools	0.57	0.66	0.09	0.43	0.50	0.07	0.01	0.943

Source: DHS 2008 and 2013

Note: This table includes information for North Western States: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara

Label description: Light red for  $0 > \text{decline} > -5$ ; darker red for  $-5 > \text{decline}$ ; light green for  $0 < \text{improvement} < 5$ ; darker green for  $5 < \text{improvement}$ .

Significance stars indicate statistically significant differences at significance level of  $p < .01$  (\*\*\*),  $p < .05$  (\*\*), and  $p < .1$  (\*)

### 3.2 Assessment of the SLP contribution to more effective and efficient use of Nigeria's resources

The change observed for all MDG-related indicators over time is complemented by analysis of an additional set of indicators relating to governance (Evaluation Question C.2).

These include measures of the allocation of resources, public financial management and public perception of the accountability of, and service delivery by, state governments. These indicators are chosen to help assess whether there is evidence to support the realisation of the SLP suite results chain, in which final outcomes are achieved through improvements in the mobilisation and use of public resources and a strengthening of government accountability (see section 2). As a consequence, these indicators are also often programme performance targets of the SLPs themselves.

### 3.2.1 State public financial management in health and education

According to Public Financial Management figures reported by the World Bank, during the period 2008-2012, SLP suite states exhibited more positive improvements than non-SLP suite states in almost every indicator analysed.<sup>7</sup>

The share of government expenditure on health and education increased more in SLP states than non-SLP states, with the share of education increasing by more than 5 percentage points in SLP states. The utilisation of the health and education budgets also improved in SLP states, with a larger proportion of the allocated budget actually being spent. This was true particularly in education, where the average utilisation rate increased by more than 15 percentage points, although from a low base. For both health and education, the improvements in the percentage of the budget spent was larger than for non-SLP states (see Table 6).

Table 6. Trends for state resource allocation and public financial management related indicators. PFM, period 2008-2012

	SLP suite states			Non-SLP suite states			Dif-in Dif
	Period 1 (2008)	Period 2 (2012)	Change (P2-P1)	Period 1 (2008)	Period 2 (2012)	Change (P2-P1)	
Share of total government expenditure on health	5.4	6.2	1.0	4.8	4.8	0.0	0.9
Share of total government expenditure on education	8.6	13.6	5.0	11.6	13.0	1.5	3.6
Ratio of actual to budgeted expenditure in health	66.6	69.0	2.4	70.1	64.2	-5.9	8.3
Ratio of actual to budgeted expenditure in education	54.9	70.0	15.1	69.3	82.4	13.0	2.1
Per capita expenditure on health *	1,059	1,588	529	1,292	1,563	271	258
Per capita expenditure on health - percentage change			50			21	29
Per capita expenditure on education*	1,713	3,292	1,579	2,712	4,561	1,849	-270
Per capita expenditure on education - percentage change			92			68	24

Source: PFM 2008 and 2012

Note: PFM includes information for all SLP and non-SLP suite states except for the following, which are excluded due to missing data for one or both points in time: Borno, FCT, Imo, Katsina, Kwara, Nasarawa, Plateau, Sokoto

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

Label description for \*: Light red for 0 > decline > -500; darker red for -500 > decline; light green for 0 < improvement < 500; darker green for 500 < improvement.

<sup>7</sup> Note that these indicators are calculated as means of the state-level values and differences are not tested statistically since it is not a sample.

Average per capita expenditure on health and education increased (in nominal terms) in both SLP and non-SLP states over the period. The increase in spending on education was largest, with increases in average spend per capita of over 1,500 N in both groups. In terms of absolute values, increases in per capita expenditure were slightly larger in SLP states in health and in non-SLP states in education. However, since per capita spending was lower in the SLP states than in the non-SLP states at the beginning of the period, the percentage increase in per capita spend was larger in the SLP states in both cases. Overall, health expenditure per capita increased 29 percentage points more in SLP states than non-SLP states and 24 percentage points in education.

There are some qualifications to these findings. The data covers only the period to 2012, so we do not know what has happened after that time. It is also possible that SLP states improved their reporting of expenditure more than other states, given the support that they were receiving from SPARC in financial management. We have not assessed if this occurred or any possible impact it might have had on the findings. Finally, while allocating and releasing resources is an important prerequisite for improving services, the absolute values per head are quite low and the data provides no information on whether the resources were used effectively to improve the quality and/or quantity of services provided.

Nevertheless, this data is supportive of the overall theory of change in which resources are increasingly allocated and released to priority sectors.

### 3.2.2 Citizens' perceptions of government performance

Table 7 shows trends of citizens' perceptions of service delivery in education and health identified by the Citizens' Perception Survey for the original five SLP suite states and five states where SPARC and SAVI but not any of the other programmes operate.

The CPS findings report that citizens' perception have worsened in almost every aspect of government's performance on providing services in SLP suite states. This is especially true when citizens were asked how well they thought the government does in providing access to a clean supply of water and on maintaining roads. Both indicators report a negative trend of -7.3 and -8.3 respectively. Although, citizens' perception trend for these two items is also negative in non-SLP suite states, the magnitude of the negative trend is smaller for the latter.

In terms of perception of different aspect of children's schooling, opinions across citizens improved in SLP suite states in three out of the five indicators: teachers' competence (4.0 percentage points change), affordability of school (3.6 percentage points change), and teaching materials (3.2 percentage points change). In non-Suite (SPARC and SAVI) states, however, all these items experienced a positive change in citizen's perception.

It is noteworthy that in 2013, citizens' perceptions were more positive in Suite states than in non-Suite ones for every indicator related to government service delivery. However, between 2013 and 2015, non-SLP suite states reduced the gap for every indicator except for the performance of the government in keeping the community clean. In this case, the difference in difference estimator is equal to 3.0. Thus, according to CPS data, government performance, measured by citizens' perceptions, had a better performance in non-SLP suite than in SLP suite states.

It should be noted that the data cover only a short period of SLP implementation – 2013 to 2015, and so is a relatively weak assessment of the overall trend during the whole period of the programme. In addition, 2015 was an election period and it is possible that some of the changes in perceptions reflect the political debates that were taking place in that period. Another survey, the Afrobarometer survey, which is discussed below, covers a longer period.



Table 7. Trends in the perceptions of availability, quality and uptake of essential services to the population. CPS, period 2013-2015

	Original 5 SLP suite states			Non SLP suite states			Dif-in-Dif
	Period 1 (2013)	Period 2 (2015)	Change (P2-P1)	Period 1 (2013)	Period 2 (2015)	Change (P2-P1)	
<b>Citizens perception of government performance: % answering "very well" &amp; "well":</b>							
Road maintenance	47.8	39.6	-8.3	34.7	33.6	-1.1	-7.2
Keeping the community safe	49.7	47.5	-2.2	44.1	38.9	-5.2	3.0
Providing access to a clean supply of water	41.1	33.8	-7.3	31.7	30.4	-1.3	-6.0
Ensuring a place in primary school for each child	51.0	52.8	1.8	38.6	42.8	4.2	-2.4
Providing medical treatment at a nearby government health facility	51.6	50.6	-1.0	37.5	42.9	5.3	-6.4
<b>Parents' perceptions of performance at child's school : % answering "very good" &amp; good":</b>							
Quality of education	78.7	78.2	-0.6	63.9	68.1	4.2	-4.8
Teachers' competence	75.4	79.4	4.0	59.4	67.9	8.5	-4.5
Affordability of school	76.2	79.8	3.6	61.5	73.1	11.5	-7.9
Classrooms, toilets, teaching materials	69.9	73.1	3.2	51.2	60.8	9.7	-6.5
'Community's ability to influence school management	67.4	67.3	-0.1	58.9	61.0	2.1	-2.2
Source: CPS 2013-2015							
Note: CPS includes information for all the SLP suite states and for five non-SLP (Anambra, Katsina, Niger, Yobe, and Zamfara)							
Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.							

In contrast to the CPS findings, rounds 3 and 6 of Afrobarometer report that improvements in perceptions on the availability and quality of services were larger in magnitude among citizens living in Suite states than those in non-Suite states for every indicator related to the availability, quality, and uptake of education and health services. However there are some caveats attached to interpreting findings from the Afrobarometer data given that sample sizes are small when it is disaggregated (the sample analysed for the SLP suite states is around 550).

Although citizens' perception regarding government service delivery was poorer in SLP suite states in 2005/6, the difference in every education and health-related indicator had already reduced by 2011/13. In some cases, such as citizens' perception of experiencing absent doctors, the difference was reduced 21.9 percentage points (see Table 8). Positive trends of considerably large magnitude are also observed in SLP suite states for quality of teaching and the perception of health facilities being dirty (21.0 and 17.9 percentage point changes, respectively).



According to Afrobarometer, the difference-in-difference estimate is favourable to SLP suite states for every indicator related to the availability and quality of health and education service.

Table 8. Trends for improvements in the availability, quality and uptake of essential services to the population. Afrobarometer, period 2005/6-2011/13							
	SLP suite states			Non-SLP suite states			Dif-in Dif
	Period 1 (2005/6)	Period 2 (2011/13)	Change (P2-P1)	Period 1 (2005/6)	Period 2 (2011/13)	Change (P2-P1)	
In the past 12 months, at a public school, have you ever faced (...)? (% answering "a few times" and "often")							
Lack of textbooks or other supplies	28.3	18.6	-9.8	19.4	14.7	-4.7	-5.1
Poor teaching	36.3	15.3	-21.0	20.0	14.8	-5.2	-15.8
Absent teachers	35.3	12.0	-23.3	17.4	14.3	-3.1	-20.2
In the past 12 months, at your local clinic have you ever faced (...)? (% answering "a few times" and "often")							
Unable to pay	25.7	10.7	-15.0	15.4	14.0	-1.4	-13.6
Long waiting times	48.1	34.5	-13.6	27.9	30.7	2.8	-16.4
Lack of medicines or other supplies	41.7	19.3	-22.4	21.6	18.9	-2.8	-19.7
Absent doctors	43.6	17.1	-26.4	22.0	17.4	-4.6	-21.9
Dirty facilities	28.4	10.6	-17.9	17.0	13.6	-3.3	-14.5
Source: Afrobarometer rounds 6 and 3							
Note: Afrobarometer includes information for all SLP and non-SLP suite states							
Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.							

### 3.2.3 Citizens' perception of government responsiveness, transparency, accountability, freedom, and culture of lawfulness

Results in **Table 9** show the existence of a negative trend in all indicators for citizen's perceptions on the responsiveness of state governments both in SLP suite and non-SLP suite states.

In two out of the total six indicators for accountability the negative trend in perceptions is less pronounced in SLP suite states than in non-Suite states. These two indicators relate to the ability of the government to inform citizens in an effective way. In the other four, the negative trend is larger in the SLP suite states.

In the case of service delivery-related indicators, Afrobarometer's findings show that perceptions trends among citizens in Suite states were more positive and larger in magnitude than non-Suite states. The largest difference can be observed for the perception of the proportion of local government officials involved in corruption for which the percentage point change was -9.5 in Suite states and 9.3 in non-Suite states; a total difference-in-difference of -18.8 percentage points. It is also noteworthy the case tax officials, for which perception improved 12.8 percentage points in SLP states and decreased 0.3 in non-SLPs (**See Table 10**).

Table 9. Trends for level of accountability and responsiveness of state government. CPS, period 2013-2015							
	Original 5 SLP suite states			Non SLP suite states			Dif-in Dif
	Period 1 (2013)	Period 2 (2015)	Change (P2-P1)	Period 1 (2013)	Period 2 (2015)	Change (P2-P1)	
<b>Citizens' perceptions of responsiveness of state government (% answering "very well" &amp; "well"):</b>							
Deciding which of our needs to spend money on	34.7	24.9	-9.7	25.8	21.3	-4.5	-5.2
regularly asking people what they think of its plans to improve services	28.7	21.8	-6.9	21.0	17.6	-3.4	-3.5
Civil service is working to solve our problems	34.0	25.7	-8.2	26.3	20.5	-5.8	-2.4
<b>Citizens' perception of transparency and accountability of state government in (% answering "very well" &amp; "well")</b>							
Informing people on how it spent money effectively	32.1	27.1	-5.0	36.9	20.4	-16.6	11.6
Regularly sharing information about progress in improving services	32.2	30.5	-1.7	27.2	20.3	-6.8	5.1
Doing what it promised to do improve public services	30.8	23.3	-7.5	22.9	17.3	-5.7	-1.8
Source: CPS 2013-2015							
Note: CPS includes information for all the SLP suite states and for five non-SLP (Anambra, Katsina, Niger, Yobe, and Zamfara)							
Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.							

In terms of the perception of freedom both Suite and non-Suite states had positive trends; the proportion of citizens that feel free to choose who to vote rose from 78.1% in period 1 to 85.6 % in period 2 in Suite states. Although this also increases in non-Suite states, the magnitude of the change was 1.3 percentage point larger in SLP suite states.

Additionally, the proportion of citizens that paid a bribe, gave a gift, or did a favour for government officials in order to get a document or to avoid a problem with the police decreased, in Suite states, 2.5 and 4.0 percentage points respectively while increased 2.8 and 0.3 percentage points in non-Suite. Therefore, it is interesting to observe that, in SLP states, the perception of the amount of government workers involved in corruption has decreased.

From Table 10, it is noticeable, that according to Afrobarometer, Suite states have a better performance than non-Suite states in terms of accountability and responsiveness of state government-related indicators.

Table 10. Trends for level of accountability and responsiveness of state government. Afrobarometer, periods 2008/9-2014/2015 and 2005/6-2014/15

	SLP suite states			Non-SLP suite states			Dif-in Dif
	Period 1	Period 2	Change (P2-P1)	Period 1	Period 2	Change (P2-P1)	
Citizens' perception of how many of the following are involved in corruption (% answering "most of them" and "all of them"):							
Local government officers *	65.8	56.2	-9.5	55.3	64.6	9.3	-18.8
Local government councillors	59.3	54.5	-4.9	57.7	59.3	1.6	-6.4
Members of the national assembly	69.5	62.9	-6.6	58.2	61.0	2.8	-9.4
Members of the police	78.6	66.0	-12.6	76.1	75.0	-1.1	-11.5
Tax officials	65.1	52.4	-12.8	56.3	56.6	0.3	-13.1
Judges and magistrates	52.3	44.4	-7.8	39.5	45.3	5.8	-13.6
In Nigeria, how free are you to (...) (% answering "somewhat free" & "completely free")							
Say what you think*	49.6	53.8	4.2	59.6	62.0	2.4	1.8
Choose who to vote*	78.1	85.6	7.5	72.1	78.4	6.2	1.3
Whether citizens have had to pay a bribe in the past year to (only answers "few times" & "often"):							
Pay a bribe, give a gift, or do a favour to government officials in order to get a document or permit	12.3	9.8	-2.5	8.4	11.1	2.8	-5.2
Pay a bribe, give a gift, or do a favour to government officials in order to avoid a problem with the police	14.6	10.6	-4.0	12.0	12.3	0.3	-4.3
Source: Afrobarometer rounds 6, 4, and 3							
Note: Afrobarometer includes information for all SLP and non-SLP suite states							
*Time period for these indicators is 2008/9-2014/2015. For the rest is 2005/6-2014/15							
Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement..							

## 4 Conclusion

This study has contributed towards answering two evaluation questions on the impact of the SLPs. It does so by assessing whether changes in MDG indicators in SLP states are consistent with the overall intervention logic of the SLPs: namely that progress in the MDG-related indicators will be greater due to the resources and technical assistance supplied by the SLPs. It also assesses whether changes in selected intermediate indicators of improved resource allocation, governance and accountability are consistent with the intervention logic. Other evaluation reports assess other components of the intervention logic and the final report integrates the various findings.

This section summarises the findings and draws conclusions.

### C.1 How far have the SLPs contributed to the achievement of the MDGs in Nigeria, and to addressing gender, poverty and equity issues?

Of the seven health-related MDG indicators of service uptake, six have improved more in SLP-suite states than in the others, two of which are statistically significant: the percentage of children under five with diarrhoea who received oral rehydration therapy and the proportion of pregnant women who received ANC from a skilled provider. One indicator improves significantly more in non-SLP states (the percentage of children sleeping under ITNs or in sprayed dwellings).

Of the indicators relating to health status, changes in infant and child mortality were mixed. In the context of rapidly declining mortality nationally, child mortality declines more in the SLP states, although infant mortality does not and the changes are not statistically significant. Based on the available data, it appears as though anthropometric status deteriorated significantly more in SLP states; however these indicators are believed to suffer particularly from measurement error.

Where the comparison is limited to the states in the North West, although differences in changes in immunisation rates are in opposite directions (measles improving less, fully vaccinated improving more) and the improvement in HIV testing rates is significantly better in SLP states. Child and infant mortality both show more substantial declines in SLP suite states but again these changes are not statistically significant.

The evidence with regard to education-related indicators does not generally suggest that the SLPs have been associated with improvements. Gross primary school attendance rates improve more than in non-SLP states, but the increase is not statistically significant, and net primary school attendance rates are flat in both groups of states. Gross secondary school attendance rates increase more in non-SLP states than in SLP states; net rates show a statistically significant deterioration in SLP-suite states. Gender parity indices at both primary and secondary level do show greater improvement in SLP suite states; however these differences are not statistically significant.

Where the analysis is limited to the states in the North West, there are overall improvements in both primary and secondary attendance rates in both groups of states. However, improvements in the non-SLP states are larger than for SLP states and these differences are statistically significant for both net attendance rates. Gender parity indices again show greater improvement in SLP suite states, but the differences are also not statistically significant.

Overall, there is limited support for the SLP suite states having seen a larger-than-expected improvement in MDG indicators. In the health sector there have been some significant improvements in the uptake of services that are consistent with the theory of change and which correspond to areas where PATHS2 has invested. Improvements in mortality are broadly consistent with the intervention logic, but not significant. There is no evidence for the SLP suite

states having seen significantly better improvements in education-related MDG indicators than non-SLP states and where the comparison is limited to the North West region then the opposite is the case.

These findings must be interpreted in the light of the caveats discussed in the report around the comparability of the two groups and data quality, so that the supplementation and triangulation of these findings with other approaches is important. This analysis also did not specifically address equity issues.

## **C.2 To what extent have the SLPs contributed to more effective and efficient use of Nigeria's own resources?**

The analysis assessed the extent to which changes in indicators of resource management and accountability were consistent with the overall intervention logic of the SLP suite, in which final MDG impacts are intended to be achieved through improvements in the use of public resources and a strengthening of government accountability. These indicators are also often programme performance targets of the SLPs themselves.

Of six indicators of public finance, SLP suite states performed better than non-SLP in all but one. Over the period 2008 to 2012, budget shares allocated to health and education increased in SLP states more than in non-SLP states, as did budget execution rates. Expenditure per capita on health and education increased in both SLP and non-SLP states. In percentage terms, expenditure increased substantially more in SLP states than in non-SLP states. These findings are consistent with the overall theory of change in which resources are allocated and released to priority sectors, although the data cover only the earlier years of SLP operation.

The results on set of indicators related to citizen's perceptions of resource management quality are mixed and inconsistent between data sources.

According to the Citizens' Perception Survey, citizens' perceptions of the performance of government in providing basic services did not improve relative to citizens in non-SLP states over the period 2013 to 2015. Trends in most indicators of government responsiveness were also less positive, although those on government transparency were generally more positive. This may in part reflect a higher than average starting point in SLP suite states at the beginning of the SLP implementation period. However, it should be noted that the period covered between surveys was short and the final survey was undertaken in a pre-election period. The non-suite states had also benefitted from (recent) support from SPARC and SAVI (but not the other SLPs).

The Afrobarometer survey found a more positive picture, for a longer time period (2004/6-2014/15) and a much wider group of comparator states. According to this data, perceptions about the quality of supplies in health facilities and public schools, there were substantially larger improvements in SLP suite states across the board relative to non-SLP states. There were also modestly above-trend improvements in the suite states in citizens' perceptions of the extent of corruption at various levels. Given the longer time period and wider coverage, these findings are more relevant than the findings from the CPS.

Overall, the findings point to some improvements in governance-related measures in the SLP suite states that are broadly consistent with the intervention logic. There has been an improved mobilisation of resources for priority sectors, a key part of the intervention logic. There have also been some improvements in the perceived quality of services. Measures of accountability, outside of corruption, present an unclear picture.

The analysis has also demonstrated concerns about the limited quality and range of data that is available for assessing development performance for Nigerian states. Improving this data should be a priority for strengthening understanding of the factors influencing Nigeria's prospects for achieving the Sustainable Development Goals, as well as for measuring the impact of development programmes that are state-focused.

## Annex A: Additional tables

### A.1 MDG performance in health-related indicators by individual states

Table 11. Percentage point changes by individual states for health-related indicators. DHS, period 2008, 2013

	SLP state	Percentage of children under 5 stunted	Percentage of children under 5 underweight	Percentage of children under 5 wasted	Under 5 mortality rate per 1000 live births	Infant mortality rate	Measles immunisation rate	Full immunisation rate	Percentage of children under 5 with diarrhoea who received oral rehydration therapy	Proportion of births attended by skilled health personnel	Percentage of women who received antenatal care from a skilled provider	Percentage of pregnant women tested for HIV	Percentage of men and women ever tested for HIV	Percentage of children under 5 sleeping under ITNs or in dwelling sprayed with IRS in the past 12 months
Abia	No	-6.8	0.6	2.5	-22	-13	11.9	10.9	-6.5	-9.9	1.0	12.3	4.7	20.1
Adamawa	No	-8.1	-7.6	-6.9	-62	-32	27.3	21.3	9.9	21.7	23.9	38.8	35.0	10.5
Akwa Ibom	No	-5.3	-1.5	-3.6	-47	-26	25.0	15.6	15.7	1.6	6.5	2.6	12.3	1.4
Anambra	No	6.0	6.0	11.0	-22	-13	4.0	-0.3	-6.5	-7.6	-9.3	-2.6	7.8	1.9
Bauchi	No	22.1	-11.6	-18.1	-62	-32	5.4	5.1	9.9	0.6	10.9	4.8	5.4	3.0
Bayelsa	No	-8.2	2.0	-2.2	-47	-26	42.4	31.1	15.7	10.5	12.7	19.8	21.8	16.1
Benue	No	-14.5	-1.9	2.3	-35	-11	-0.6	1.2	3.6	-0.7	-5.8	14.1	27.4	27.8
Borno	No	-22.4	-4.8	14.8	-62	-32	4.8	8.2	9.9	9.1	6.6	5.0	6.9	9.6
Cross River	No	-9.8	-1.1	3.6	-47	-26	13.5	14.1	15.7	-2.9	4.6	19.5	18.7	13.1
Delta	No	-19.9	2.0	10.8	-47	-26	-0.9	12.3	15.7	-1.7	-5.6	20.2	18.2	4.0
Ebonyi	No	-16.2	-3.2	2.1	-22	-13	0.9	1.1	-6.5	15.8	9.4	25.9	23.2	17.8
Edo	No	-21.7	-3.3	2.3	-47	-26	2.5	13.4	15.7	-1.6	-6.6	13.7	11.5	19.6
Ekiti	No	-13.7	1.6	3.5	1	2	0.0	-8.3	-6.5	3.5	-6.6	14.2	22.7	7.9
Enugu	Yes	-8.3	0.5	-7.6	-22	-13	24.8	16.6	-6.5	26.0	27.5	36.3	24.1	13.1
FCT	No	-9.6	1.5	4.8	-35	-11	-3.9	5.5	3.6	5.9	-0.7	7.8	14.4	12.9
Gombe	No	-4.8	3.6	-3.0	-62	-32	-0.9	6.9	9.9	8.3	13.7	14.5	14.6	-0.1

Table 11. Percentage point changes by individual states for health-related indicators. DHS, period 2008, 2013

	SLP state	Percentage of children under 5 stunted	Percentage of children under 5 underweight	Percentage of children under 5 wasted	Under 5 mortality rate per 1000 live births	Infant mortality rate	Measles immunisation rate	Full immunisation rate	Percentage of children under 5 with diarrhoea who received oral rehydration therapy	Proportion of births attended by skilled health personnel	Percentage of women who received antenatal care from a skilled provider	Percentage of pregnant women tested for HIV	Percentage of men and women ever tested for HIV	Percentage of children under 5 sleeping under ITNs or in dwelling sprayed with IRS in the past 12 months
Imo	No	-6.6	2.8	3.9	-22	-13	8.9	22.1	-6.5	-1.5	-0.4	2.7	14.0	16.5
Jigawa	Yes	5.6	-7.0	-17.4	-32	-2	2.6	3.6	9.0	2.5	29.6	5.0	7.8	13.1
Kaduna	Yes	4.8	35.8	32.3	-32	-2	-0.5	13.9	9.0	13.7	-7.5	16.4	22.5	-1.0
Kano	Yes	2.0	27.3	22.6	-32	-2	7.5	7.7	9.0	1.0	14.5	18.3	13.6	4.0
Katsina	No	0.1	8.3	4.0	-32	-2	34.7	7.8	9.0	3.0	8.3	2.2	3.0	27.8
Kebbi	No	-2.9	-15.2	-17.0	-32	-2	-17.9	-2.0	9.0	3.1	12.0	2.3	2.4	20.0
Kogi	No	-12.7	-0.6	2.7	-35	-11	5.6	-3.7	3.6	-4.9	5.9	32.0	29.3	7.3
Kwara	No	-24.3	-13.1	-5.7	-35	-11	-4.0	12.0	3.6	26.4	31.1	16.3	26.3	12.7
Lagos	Yes	-4.0	2.8	1.5	1	2	6.6	1.1	-6.5	4.4	6.3	-1.8	15.9	12.9
Nasarawa	No	-9.6	4.3	4.2	-35	-11	6.8	4.0	3.6	6.9	-9.4	24.5	25.3	8.9
Niger	No	-12.4	-6.7	-2.2	-35	-11	5.7	10.7	3.6	11.4	23.3	6.5	6.0	9.3
Ogun	No	-17.7	0.1	2.7	1	2	9.1	1.3	-6.5	12.9	4.9	13.9	9.1	14.9
Ondo	No	-8.0	2.1	0.6	1	2	-3.7	10.2	-6.5	16.7	8.5	18.3	24.4	21.2
Osun	No	-10.7	-1.8	-1.3	1	2	-9.2	-3.4	-6.5	5.0	4.6	22.8	31.6	6.2
Oyo	No	-10.0	0.6	-1.6	1	2	-14.2	-4.8	-6.5	1.9	-0.4	18.8	19.9	19.5
Plateau	No	-23.0	2.1	5.1	-35	-11	-17.8	-7.6	3.6	5.1	-21.0	16.0	23.9	10.0
Rivers	No	-12.8	0.8	5.7	-47	-26	30.8	19.0	15.7	-0.2	8.9	24.6	22.0	7.9
Sokoto	No	-2.0	-8.1	-5.1	-32	-2	0.1	0.4	9.0	0.3	3.6	4.4	3.5	9.8
Taraba	No	0.4	6.3	-1.5	-62	-32	-7.8	0.3	9.9	-11.6	-7.5	12.7	30.8	10.4
Yobe	No	-4.7	-2.8	2.7	-62	-32	-15.0	2.9	9.9	0.9	-2.8	10.4	10.7	17.1
Zamfara	No	1.9	18.7	4.9	-32	-2	-6.2	-3.3	9.0	-1.6	9.3	2.4	3.5	6.3

Source: Source: DHS 2008 and 2013.

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.



## A.2 MDG performance in education-related indicators by state

Table 12. Percentage point change by state for education-related indicators. DHS, period 2008-2013

	SLP state	Net Primary School Attendance Ratio	Net Secondary School Attendance Ratio	Gross Primary School Attendance Ratio	Gross Secondary School Attendance Ratio	Gender Parity Index for primary schools (based on attendance)	Gender Parity Index for Secondary Schools (based on attendance)
Abia	No	-4.1	-1.1	0.8	7.1	-0.1	0.1
Adamawa	No	13.9	12.2	22.6	12.3	0.0	-0.1
Akwa Ibom	No	-4.9	-0.5	2.7	1.9	0.0	0.1
Anambra	No	-5.6	0.8	5.1	1.3	-0.1	-0.1
Bauchi	No	6.8	11.5	16.0	20.4	0.0	0.0
Bayelsa	No	-2.4	-1.4	8.1	5.7	0.1	0.0
Benue	No	-1.5	14.9	6.0	12.9	0.0	0.2
Borno	No	12.2	10.1	21.9	12.9	0.1	-0.3
Cross River	No	-7.0	2.0	-2.4	16.6	0.1	-0.2
Delta	No	-5.2	0.7	3.4	3.9	0.0	0.0
Ebonyi	No	9.4	8.1	11.6	6.9	0.0	0.1
Edo	No	-2.7	-2.3	1.3	-7.5	-0.1	-0.2
Ekiti	No	-11.9	-1.8	-5.0	4.0	0.0	-0.2
Enugu	Yes	4.3	5.4	11.3	-4.2	0.1	-0.1
FCT	No	-5.7	3.6	-1.7	10.4	0.1	-0.1
Gombe	No	-10.9	-0.8	-7.5	-0.8	-0.2	-0.2
Imo	No	-11.4	-73.8	8.6	13.3	0.0	0.0
Jigawa	Yes	8.2	4.5	23.3	13.2	0.1	0.2
Kaduna	Yes	-12.4	-4.4	-16.4	-7.6	0.1	0.0
Kano	Yes	6.4	8.3	15.4	4.4	0.2	0.1
Katsina	No	4.6	3.0	12.0	0.5	0.2	0.3
Kebbi	No	7.3	12.3	11.7	14.6	-0.1	0.0
Kogi	No	-9.8	5.1	-10.1	3.2	0.2	-0.1
Kwara	No	5.9	24.6	14.0	46.0	-0.1	-0.1
Lagos	Yes	-5.3	-2.6	7.7	12.2	0.1	0.0
Nasarawa	No	0.7	4.7	6.1	9.6	0.1	0.0
Niger	No	13.5	11.3	20.7	16.4	0.1	0.3
Ogun	No	-6.0	12.9	-4.0	28.5	-0.1	-0.1
Ondo	No	-6.6	-3.6	2.9	-10.5	0.0	-0.1
Osun	No	-6.2	-0.1	2.0	6.6	0.1	0.0
Oyo	No	-4.4	2.1	0.8	12.4	0.0	0.2
Plateau	No	-18.3	8.6	-29.3	11.1	-0.1	0.2
Rivers	No	-6.7	-3.1	0.0	9.4	-0.1	0.0
Sokoto	No	1.6	7.3	4.9	11.2	0.1	0.1
Taraba	No	1.7	-9.2	12.3	-8.7	0.1	-0.1
Yobe	No	-20.1	-11.7	-25.7	-15.4	-0.1	0.6
Zamfara	No	14.5	7.4	28.9	13.7	-0.1	-0.3

Source: DHS 2008 and 2013. Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

## A.3 Resource Management performance by individual states

### A.3.1 Resource Management performance in state public financial management related indicators by individual states

Table 13. Change in state public financial related indicators by individual states. PFM, period 2008-2012

	SLP state	Share of total government expenditure on health	Share of total government expenditure on education	Ratio of actual to budgeted expenditure in health	Ratio of actual to budgeted expenditure in education	Per capita expenditure on health	Per capita expenditure on education
Abia	No	-19.08	-23.89	4.01	-5.60	6.35	0.01
Adamawa	No	25.27	5.92	2.06	8.48	31.31	11.02
Akwa Ibom	No	-11.53	-4.87	-8.57	6.47	-4.72	2.45
Anambra	No	-16.91	-7.85	-17.27	-15.77	-7.85	2.20
Bauchi	No	-0.96	6.47	-10.84	-11.63	-5.47	1.62
Bayelsa	No	-0.89	19.42	-1.75	4.07	2.75	23.81
Benue	No	0.05	1.32	9.62	-9.73	6.47	7.83
Borno	No	.	.	.	.	.	.
Cross River	No	-15.68	5.70	12.73	17.45	-11.59	10.83
Delta	No	2.29	11.99	-16.27	-3.34	8.09	18.33
Ebonyi	No	31.42	49.48	52.50	92.52	35.51	54.14
Edo	No	-6.71	-0.23	3.32	3.08	11.16	18.89
Ekiti	No	6.52	36.30	32.02	74.95	16.74	49.37
Enugu	Yes	-0.13	7.90	-5.03	9.79	9.57	18.37
FCT	No	.	.	.	.	.	.
Gombe	No	16.12	34.69	-0.93	16.79	21.77	41.25
Imo	No	.	.	.	.	.	.
Jigawa	Yes	10.28	10.12	1.56	0.04	14.76	14.59
Kaduna	Yes	-8.98	2.98	-5.38	-6.65	-0.11	13.02
Kano	Yes	31.13	54.68	15.99	45.98	55.43	83.35
Katsina	No	.	.	.	.	.	.
Kebbi	No	1.48	6.94	-8.16	-1.02	7.17	12.93
Kogi	No	24.51	-20.45	13.10	-24.22	27.76	-18.38
Kwara	No	.	.	.	.	.	.
Lagos	Yes	-3.20	1.14	4.74	8.34	7.40	12.22
Nasarawa	No	.	.	.	.	.	.
Niger	No	-23.70	-5.83	-16.33	1.86	-22.33	-4.15
Ogun	No	6.28	9.55	-17.64	-8.42	14.62	18.15
Ondo	No	14.34	-7.14	-12.41	-9.04	21.22	-1.55
Osun	No	0.92	-5.91	-7.57	-10.68	18.23	10.23
Oyo	No	-11.19	6.57	-3.42	-3.36	-8.13	10.24
Plateau	No	.	.	.	.	.	.
Rivers	No	-8.02	13.72	-17.38	-11.91	-10.09	11.17
Sokoto	No	.	.	.	.	.	.
Taraba	No	3.80	20.65	-3.27	16.78	7.12	24.50
Yobe	No	10.56	7.27	19.99	11.40	12.84	9.48
Zamfara	No	-3.07	-5.10	10.18	15.84	4.62	2.43

Source: PFM 2008 and 2012

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

### A.3.2 Resource Management performance in availability, quantity, and uptake of essential services to the population related indicators by individual states

Table 14. Change in citizens' perceptions of availability, quality, and uptake of essential services to the population. Afrobarometer, period 2005/6-2011/13

	SLP state	only answers "A few times" and "Often"							
		Lack of textbooks or other supplies	Poor teaching	Absent teachers	Unable to pay	Long waiting times	Lack of medicines or other supplies	Absent doctors	Dirty facilities
Abia	No	20.60	14.00	9.50	22.30	-6.80	20.80	-24.80	-7.30
Adamawa	No	-25.90	-21.20	-19.30	-19.50	-16.10	-33.70	-22.90	-14.90
Akwa Ibom	No	-1.70	1.10	-3.70	9.00	-2.00	8.40	-7.80	5.30
Anambra	No	-1.90	4.90	-1.00	-12.50	-16.40	-14.10	0.60	-2.40
Bauchi	No	-0.10	16.30	5.30	-0.90	37.50	30.90	20.50	14.30
Bayelsa	No	-4.10	-6.60	-6.40	4.60	10.20	-15.00	-22.80	-8.50
Benue	No	-14.80	-18.90	6.50	11.50	-14.90	-15.20	0.40	-17.60
Borno	No	9.10	12.50	11.50	18.00	15.10	9.80	13.00	2.70
Cross River	No	5.90	-9.60	-16.20	-4.90	-13.30	-9.50	-23.80	-2.20
Delta	No	4.20	9.60	15.10	-6.70	24.30	5.40	9.90	11.20
Ebonyi	No	.	.	.	.	.	.	.	.
Edo	No	13.00	16.00	13.90	6.10	20.60	5.90	27.10	21.10
Ekiti	No	-25.10	-23.40	-9.50	2.60	-3.40	-10.10	-3.30	-10.30
Enugu	Yes	-17.10	-49.10	-44.90	-21.30	-44.30	-22.90	-31.30	-11.70
FCT	No	8.80	-9.20	-5.20	22.00	53.20	-6.40	29.80	11.10
Gombe	No	8.80	-9.20	-5.20	22.00	53.20	-6.40	29.80	11.10
Imo	No	9.40	0.30	-4.90	20.90	-23.10	11.70	-21.70	-12.60
Jigawa	Yes	.	.	.	.	.	.	.	.
Kaduna	Yes	5.20	5.50	3.70	-9.60	-5.40	-14.60	-1.70	5.60
Kano	Yes	-21.50	-24.70	-32.40	-17.40	-11.70	-31.40	-37.20	-34.40
Katsina	No	-7.80	-34.70	-34.00	-22.40	-5.60	-8.60	-29.30	-23.60
Kebbi	No	.	.	.	.	.	.	.	.
Kogi	No	-2.20	-15.60	-9.30	-3.50	9.80	-6.30	-3.60	-5.00
Kwara	No	-24.70	-29.80	-23.80	-2.10	-9.50	-11.80	-15.90	-20.60
Lagos	Yes	-7.40	-5.40	-1.50	-4.50	9.30	-6.80	-5.00	-2.30
Nasarawa	No	.	.	.	.	.	.	.	.
Niger	No	-27.70	-23.80	-10.90	3.50	0.30	-15.30	-10.10	14.30
Ogun	No	-15.60	-11.10	-11.10	-5.40	16.30	-0.90	-4.40	-1.00
Ondo	No	-3.50	-8.70	-3.70	-0.30	-4.00	0.40	-1.60	-1.80
Osun	No	-6.00	-10.80	-4.80	9.20	10.40	7.70	-19.20	-12.50
Oyo	No	-17.60	-14.40	-9.60	-2.90	-6.10	-8.70	-14.60	-14.00
Plateau	No	-3.50	5.20	3.50	12.00	-0.80	19.50	21.00	-8.10
Rivers	No	-12.50	-11.10	-11.80	-7.90	-0.90	-20.70	-26.20	-23.70
Sokoto	No	-15.00	7.30	14.40	-28.60	-1.20	-15.10	16.10	9.40
Taraba	No	-9.70	-19.80	-11.90	-3.90	1.00	-23.30	-17.70	-20.90
Yobe	No	.	.	.	.	.	.	.	.
Zamfara	No	0.00	-0.10	5.10	-4.30	-7.10	-6.40	-8.10	2.30

Source: Afrobarometer 2005/6 and 2011/13

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

Table 15. Change in citizens' perceptions of availability, quality, and uptake of essential services to the population. CPS, period 2013-2015

	SLP state	Citizens' perception (Only answers "very well" & "well")					Parents' perception (only answers "very good" & "good")				
		Road maintenance	Keeping the community safe	Providing access to a clean supply of water	Ensuring a place in primary school for each child	Providing medical treatment at a nearby government health facility	Quality of education	Teachers' competence	Affordability of school	Classrooms, toilets, teaching materials	Community's ability to influence school management
Anambra	No	12	17	4	17	22	-5	-5	-10	-6	-19
Enugu	Yes	-16	-16	-21	-15	-21	-24	-17	-4	-28	-30
Jigawa	Yes	-3	3	12.00	17	18	-22	-9	-11	-2	-8
Kaduna	Yes	-26	-29	-18	-9	-15	-1	1	-5	-7	-11
Kano	Yes	-20	-8	-20	-9	-13	10	13	15	15	8
Katsina	No	-16	-15	0	5	3	9	11	9	18	6
Lagos	Yes	16	24	9	19	19	7	10	7	11	13
Niger	No	-1	-23	-22	-19	-22	-13	-9	4	-15	-14
Yobe	No	-16	-8	-6	-8	4	-9	1	22	7	5
Zamfara	No	20	9	19	25	24	38	48	44	47	39

Source: CPS 2013 and 2015

Label description: Light red for 0 &gt; decline &gt; -5; darker red for -5 &gt; decline; light green for 0 &lt; improvement &lt; 5; darker green for 5 &lt; improvement .

### A.3.3 Resource Management performance in level of accountability and responsiveness of state government related indicators by individual states

Table 16: Change in citizens' perceptions of level of accountability and responsiveness of state government. Afrobarometer, periods 2008/9-2014/2015 and 2005/6-2014/15

	SLP state	Change in citizens perceptions: How many of the following are involved in corruption (only answers "most of them" and "all of them") Period: 2005/6-2014/15					how free are you to (...) (only answers "somewhat free" & "completely free") Period 2008/9-2014/16		Whether citizens have had to pay a bribe in the past year to (only answers "few times" & "often") Period: 2005/6-2014/15	
		Local government councillors	Members of the national assembly	Members of the police	Tax officials	Judges and magistrates	Say what you think*	Choose who to vote*	Pay a bribe, give a gift, or do a favour to government officials in order to get a document or permit	Pay a bribe, give a gift, or do a favour to government officials in order to avoid a problem with the police
Abia	No	12.10	19.10	22.70	13.20	45.60	52.60	43.80	10.10	-8.60
Adamawa	No	.	.	.	.	.	.	.	.	.
Akwa Ibom	No	-37.40	-43.70	-8.90	-62.00	-26.80	21.70	20.20	-6.80	-14.10
Anambra	No	-1.70	11.90	9.80	0.80	-7.70	-1.60	15.70	1.40	0.40
Bauchi	No	6.70	15.80	0.20	2.90	10.00	-18.10	-6.10	-1.90	-8.30
Bayelsa	No	12.10	-34.10	27.50	9.30	-11.80	57.30	37.00	30.60	34.30
Benue	No	13.40	31.60	11.80	17.80	-12.40	-10.70	6.90	28.80	34.10
Borno	No	.	.	.	.	.	.	.	.	.
Cross River	No	4.20	-2.20	-14.20	7.20	13.50	17.10	30.20	-2.60	-21.30
Delta	No	-13.00	-20.70	-24.50	-18.50	-21.40	4.70	16.80	-15.90	-20.10
Ebonyi	No	.	.	.	.	.	3.30	21.80	.	.
Edo	No	27.00	26.90	25.60	8.20	24.50	7.90	10.70	-10.40	-3.40
Ekiti	No	52.60	54.60	-8.90	2.00	23.30	-7.70	4.00	13.70	27.60
Enugu	Yes	-20.10	-20.90	-26.70	-9.00	5.70	1.20	8.50	21.00	12.60
FCT	No	40.10	38.70	9.50	22.60	35.30	26.80	6.70	36.80	38.80
Gombe	No	.	.	.	.	.	-33.70	6.50	36.80	38.80
Imo	No	1.20	-7.80	-14.60	3.00	4.00	-1.50	15.70	-6.30	-12.70
Jigawa	Yes	.	.	.	.	.	58.30	36.10	.	.
Kaduna	Yes	7.10	18.10	-12.30	-5.50	3.00	-28.40	-18.20	1.80	-8.70
Kano	Yes	-10.50	-18.10	-3.50	-7.00	-13.00	1.20	10.80	-16.40	-5.60
Katsina	No	-10.00	-5.60	0.50	-21.90	-21.70	-21.00	-21.00	4.90	4.50
Kebbi	No	.	.	.	.	.	29.80	17.50	.	.
Kogi	No	-22.70	-4.00	2.20	20.20	-0.50	4.60	5.10	-4.30	-9.10
Kwara	No	-22.40	-6.90	-9.40	6.70	-0.70	-42.70	-30.10	-0.10	-13.60
Lagos	Yes	9.50	-2.90	-5.30	-1.50	16.60	-8.80	-17.60	2.30	7.00
Nasarawa	No	.	.	.	.	.	6.60	7.50	.	.
Niger	No	22.80	1.30	2.70	7.90	-2.70	-13.80	-5.20	-2.10	1.90

Ogun	No	26.00	32.50	18.30	41.60	51.70	-0.40	2.60	8.50	7.80
Ondo	No	9.90	35.90	7.90	12.00	9.30	26.20	25.00	-3.70	-0.40
Osun	No	4.50	31.90	-3.20	14.50	10.10	20.70	0.10	-10.80	-13.20
Oyo	No	-8.70	4.00	-11.70	12.20	29.50	27.40	51.00	-16.90	-20.00
Plateau	No	-42.40	-28.00	-8.40	-7.60	25.80	22.40	-23.70	15.70	28.90
Rivers	No	-25.90	-27.10	-15.90	-25.50	-16.20	-6.60	13.10	0.30	-21.30
Sokoto	No	5.70	-13.60	1.90	-23.00	-4.90	-10.00	8.50	8.60	9.00
Taraba	No	7.80	19.30	0.10	0.80	18.50	-32.70	-2.00	4.30	9.10
Yobe	No	.	.	.	.	.	.	.	.	.
Zamfara	No	18.10	21.90	16.80	4.10	-19.40	-28.10	-14.50	15.20	9.20

Source: Afrobarometer 2005/6, 2008/9, and 2011/13

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

Table 17. Change in citizens' perceptions of level of accountability and responsiveness of state government. CPS, period 2013-2015

	SLP state	Citizens' perceptions of responsiveness of state government (only answers "very well" & "well"):			Citizens' perception of transparency and accountability of state government in (only answers "very well" & "well")		
		Deciding which of our needs to spend money on	Regularly asking people what they think of its plans to improve services	Civil service in working to solve our problems	Informing people on how it spent money effectively	Regularly sharing information about progress in improving services	Doing what it promised to do improve public services
Anambra	No	2	-3	4	3	-2	1
Enugu	Yes	-20	-24	-28	-16	-27	-23
Jigawa	Yes	10	-8	-13	13	-6	-8
Kaduna	Yes	-21	-16	-14	-24	-9	-19
Kano	Yes	-24	-13	-15	-23	-16	-18
Katsina	No	-15	-23	-27	-19	-24	-26
Lagos	Yes	7	12	12	22	29	17
Niger	No	-13	1	0	-10	-12	
Yobe	No	-8	8	-12	-7	-4	-7
Zamfara	No	19	17	17	-51	22	16

Source: CPS 2013 and 2015

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

## Annex B: Indicator definitions and data sources

Table 18. MDG Indicators for the comparative state analysis			
Indicator	Indicator definition	Data source	Years available
<b>MDG1: Eradicate extreme poverty and hunger</b>			
Percentage of children under 5 stunted	Percentage of children under 5 with HAZ below -2 SDs from the median of the reference population.	DHS	2013, 2008
		SMART	2010, 2012
Percentage of children under 5 underweight	Percentage of children under 5 with WAZ below -2 SDs from the median of the reference population.	DHS	2013, 2008
		SMART	2010, 2012
Percentage of children under 5 wasted	Percentage of children with WHZ below -2 SDs from the median of the reference population.	DHS	2013, 2008
		SMART	2010, 2012
<b>MDG2: Achieve universal primary education</b>			
Net enrolment rate for primary education	Number of children of primary school going age who are enrolled in primary education as a percentage of the official primary school going age population.	ASC	2009, 2010, 2011, 2012, 2013 (only available for Enugu, Jigawa, Kaduna, Kano, Katsina, Kwara, Lagos, Niger and Sokoto)
Gross enrolment rate in primary education	Total enrolment in primary school, regardless of age, expressed as a percentage of the eligible official primary school age population (6-11 years of age in Nigeria) in a given school year.	ASC	2009, 2010, 2011, 2012, 2013 (only available for Enugu, Jigawa, Kaduna, Kano, Katsina, Kwara, Lagos, Niger and Sokoto)
Net enrolment rate for secondary education	Number of children of secondary school going age who are enrolled in secondary school as a percentage of the official secondary going age	ASC	2009, 2010, 2011, 2012, 2013 (only available for Enugu, Jigawa, Kaduna, Kano, Katsina, Kwara, Lagos, Niger and Sokoto)
Gross enrolment rate in secondary education	Total enrolment in secondary school, regardless of age, expressed as a percentage of the eligible official secondary school age population (12-17 years of age in Nigeria) in a given school year.	ASC	2009, 2010, 2011, 2012, 2013 (only available for Enugu, Jigawa, Kaduna, Kano, Katsina, Kwara, Lagos, Niger and Sokoto)
Net Primary School Attendance Ratio	The percentage of primary school age (6-11 years) population that is attending primary school.	DHS	2013, 2008

Table 18. MDG Indicators for the comparative state analysis			
Indicator	Indicator definition	Data source	Years available
Net Secondary School Attendance Ratio	The percentage of secondary school age (13-18 years) population that is attending secondary school.	DHS	2013, 2008
Gross Primary School Attendance Ratio	The total number of primary school students expressed as a percentage of the official primary school age population	DHS	2013, 2008
Gross Secondary School Attendance Ratio	The total number of secondary school students expressed as a percentage of the official secondary school age population.	DHS	2013, 2008
Gender Parity Index for primary schools (based on attendance)	The GPI for primary school is the ratio of the primary school NAR (GAR) for females to the NAR (GAR) for males	DHS	2013, 2008
Gender Parity Index for Secondary Schools (based on attendance)	The GPI for primary school is the ratio of the secondary school NAR (GAR) for females to the NAR (GAR) for males	DHS	2013, 2008
<b>MDG4: Reduce child mortality rates</b>			
Under 5 mortality rate per 1000 live births	The likelihood of a child dying before reaching five years of age expressed as a number of deaths per 1000 births.	DHS	2013, 2008
Infant mortality rate	The likelihood of a child dying before reaching one year of age expressed as a number of deaths per 1000 births.	DHS	2013, 2008
Measles immunisation rate	Percentage of children aged 12-23 months who received measles immunisation any time before the survey	DHS	2013, 2008
Full immunisation rate	Percentage of children aged 12-23 months who received all basic vaccinations any time before the survey	DHS	2013, 2008
Percentage of children under 5 with diarrhoea who received oral rehydration therapy	Percentage of children under 5 years old who had diarrhoea in the last 2 weeks who were treated with ORS or RSH	DHS	2013, 2008
<b>MDG 5: Improve maternal health</b>			
Proportion of births attended by skilled health personnel	Percentage of births managed by a health professional trained in managing deliveries and their complications (note traditional birth attendants are not considered skilled birth attendants).	DHS	2013, 2008



Table 18. MDG Indicators for the comparative state analysis			
Indicator	Indicator definition	Data source	Years available
Percentage of women who received antenatal care from a skilled provider	Percentage of pregnant women who have had at least 4 visits for ANC (care specifically related to pregnancy)	DHS	2013, 2008
Percentage of pregnant women tested for HIV	Percentage of women between 15-49 years who were pregnant in the last 5 years who got tested for HIV as part of antenatal visit	DHS	2013, 2008
<b>MDG 6: Combat HIV/AIDs, malaria and other diseases</b>			
Percentage of men and women ever tested for HIV	Percentage of individual that have been tested for HIV/AIDS	DHS	2013, 2008
Percentage of children under 5 sleeping under ITNs or in dwelling sprayed with IRS in the past 12 months	Percentage of children under 5 sleeping under ITNs or in dwellings sprayed with IRS in past 12 months	DHS	2013, 2008

Table 19. Resource Management indicators for the comparative state analysis			
Indicator definition	Data source	Years available	State coverage
<b>Sustainable improvements in the availability, quality and uptake of essential services to the population (health, education, other).</b>			
Number of outpatients visits per 10,000 population.	HMIS, reported by PATHS2	Annual	National
Trends in mean number of outpatient consultations per month per facility, for facilities reporting.	HMIS, reported by PATHS2	Annual	National
Percentage of health facilities submitting timely and complete HMIS forms.	HMIS, reported by PATHS2.	Annual	National
<b>State public financial management improved, particularly in health and education.</b>			
Share of total state government expenditure on health & education (separately).	World Bank PFM database.	Continuous	All (3 states missing)
Per capita expenditure on health and education (separately)	World Bank PFM database	Continuous	All (3 states missing)
Ratio of actual to budgeted expenditure in health and education	World Bank PFM database	Continuous	All (3 states missing)

Table 19. Resource Management indicators for the comparative state analysis			
Indicator definition	Data source	Years available	State coverage
Public Service Management SEAT results (composite scores)	PEFA-SEAT data	Continuous	All (3 states missing)
Sustainable improvements in the availability, quality and uptake of essential services to the population (health, education, other) and to business.			
Citizen perceptions of government performance in: <ul style="list-style-type: none"> <li>- Road maintenance</li> <li>- Keeping the community safe</li> <li>- Providing access to a clean supply of water</li> <li>- Ensuring a place in primary school for each child</li> <li>- Providing medical treatment at a nearby government health facility.</li> </ul>	CPS	2015, 2012, 2010	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013
Parents perceptions of performance at child's school in: <ul style="list-style-type: none"> <li>- Quality of education</li> <li>- Teachers competence</li> <li>- Affordability of school</li> <li>- Classroom, toilets and teaching material quality</li> <li>- Community influence in school management.</li> </ul>	CPS	2015, 2012, 2010	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013
Perceptions of change in school performance over the last 4 years in: <ul style="list-style-type: none"> <li>- Community influence in school management</li> <li>- Overall quality of education at school</li> </ul>	CPS	2015, 2012, 2010	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013
Whether citizens have faced the following challenges in public schools in the past year: <ul style="list-style-type: none"> <li>- Lack of textbooks or supplies</li> <li>- Poor teaching</li> <li>- Absent teachers</li> </ul>	Afrobarometer	2003, 2005, 2007, 2008, 2012, 2014	All

Table 19. Resource Management indicators for the comparative state analysis			
Indicator definition	Data source	Years available	State coverage
Perceptions of performance at closest government health facility in: <ul style="list-style-type: none"> <li>- Waiting times</li> <li>- Medicine availability</li> <li>- Medicine affordability</li> <li>- Staff availability</li> <li>- Staff behaviour towards patients.</li> </ul>	CPS	2015, 2012, 2010	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013
Perceptions of change in performance in health facilities in the last 4 years in: <ul style="list-style-type: none"> <li>- Waiting times</li> <li>- Medicine availability</li> <li>- Medicine affordability</li> <li>- Staff availability</li> <li>- Staff behaviour toward patients</li> </ul>	CPS	2015, 2012, 2010	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013
Perceptions of how easy or difficult it is to get medical treatment at a public clinic or hospital	Afrobarometer	2003, 2005, 2007, 2008, 2012, 2014	All
Whether citizens have faced the following challenges in health facilities in the past year: <ul style="list-style-type: none"> <li>- Unable to pay for health services</li> <li>- Long waiting times</li> <li>- Lack of medicines/supplies</li> <li>- Absent doctors</li> <li>- Dirty facilities</li> </ul>	Afrobarometer	2003, 2005, 2007, 2008, 2012, 2014	All
Level of accountability and responsiveness of state government			
Perceptions of responsiveness of state government in: <ul style="list-style-type: none"> <li>- Deciding which of our needs to spend money on</li> <li>- Regularly asking people what they think of its plans to improve services</li> <li>- The civil service working to solve our problems.</li> </ul>	CPS	2012, 2015	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013

Table 19. Resource Management indicators for the comparative state analysis			
Indicator definition	Data source	Years available	State coverage
Perceptions of the transparency and accountability of state government in: <ul style="list-style-type: none"> <li>- Informing people on how it spent money effectively</li> <li>- Regularly sharing information about progress in improving services</li> <li>- Doing what it promised to do to improve public services.</li> </ul>	CPS	2015, 2012, 2010	5 core SLP states in 2010. Expanded to cover Anambra, Katsina, Niger, Yobe and Zamfara in 2013
Perceptions on citizen freedom in Nigeria to: <ul style="list-style-type: none"> <li>- Say what you think</li> <li>- Choose who to vote for without feeling pressured</li> </ul>	Afrobarometer	2003, 2005, 2007, 2008, 2012, 2014	All
Perceptions on how many of the following are involved in corruption: <ul style="list-style-type: none"> <li>- Local government councillors</li> <li>- Local government officers</li> <li>- National Assembly members</li> <li>- Police</li> <li>- Tax officials</li> <li>- Judges</li> </ul>	Afrobarometer	2003, 2005, 2007, 2008, 2012, 2014	All
Whether citizens have had to pay a bribe in the past year to: <ul style="list-style-type: none"> <li>- Get a permit or document</li> <li>- Avoid a problem with the police</li> </ul>	Afrobarometer	2003, 2005, 2007, 2008, 2012, 2014	All

## Annex C: Description of data sources

Data source	Summary description	Years available	States covered	Sample sizes (where applicable)
Citizens Perceptions Surveys	The objective of the CPS is to measure and track changes in the perception of Nigerian citizens on a range of governance and service delivery issues. These included perceptions on service delivery in education, health, security and basic infrastructure, the extent to which citizens feel they are currently able to claim their rights to government provided services and perceived access to effective mechanisms for holding state governments accountable for the effective delivery of services. Note that caution is required in making comparisons across the 2010 and 2013 surveys. The two surveys used different sample designs and the sample size was small at the state level in 2010. There were also some differences in the questionnaires.	2010, 2013 and 2015.	Core SLP states only in 2010. Expanded in 2013 to include Anambra, Katsina, Niger, Yobe and Zamfara.	1200 per state in 2013. 500 per state in 2010.
World Bank PFM database	The World Bank PFM database stores financial data for all Nigerian States (except for Nasarawa, Plateau, FCT-Abuja) PFM indicators covered include sector expenditure and revenue performance across several years.	2008 onwards	All states except Nasarawa, Plateau, FCT-Abuja. Note that actual capital expenditure in health and education were also missing in Imo state in the version shared with the analysis team.	N/A
Afrobarometer Surveys in Nigeria	Afrobarometer Surveys measure public perceptions about the quality of democracy and governance. Includes service delivery (e.g electricity, water, schools and health facilities in the local area), infrastructure, perceptions about the economic condition of the country, living conditions, the overall direction of the country, food security, public affairs, political freedom, political participation and faith in institutions.	2014, 2012, 2008, 2007, 2005, 2003	All	2400

Data source	Summary description	Years available	States covered	Sample sizes (where applicable)
Demographic and Health Survey	Collects information on fertility levels, marriage, fertility preferences, awareness and the use of family planning methods, child feeding practices, nutritional status of women and children, adult and childhood mortality, awareness and attitudes regarding HIV/AIDS, FGM, and domestic violence	2013, 2008, 2003, 1999, 1990	All	2013: 40,320 households 2008: 36,800 households 2003: 7000 household

## Annex D: Difference in difference parallel trend assumption

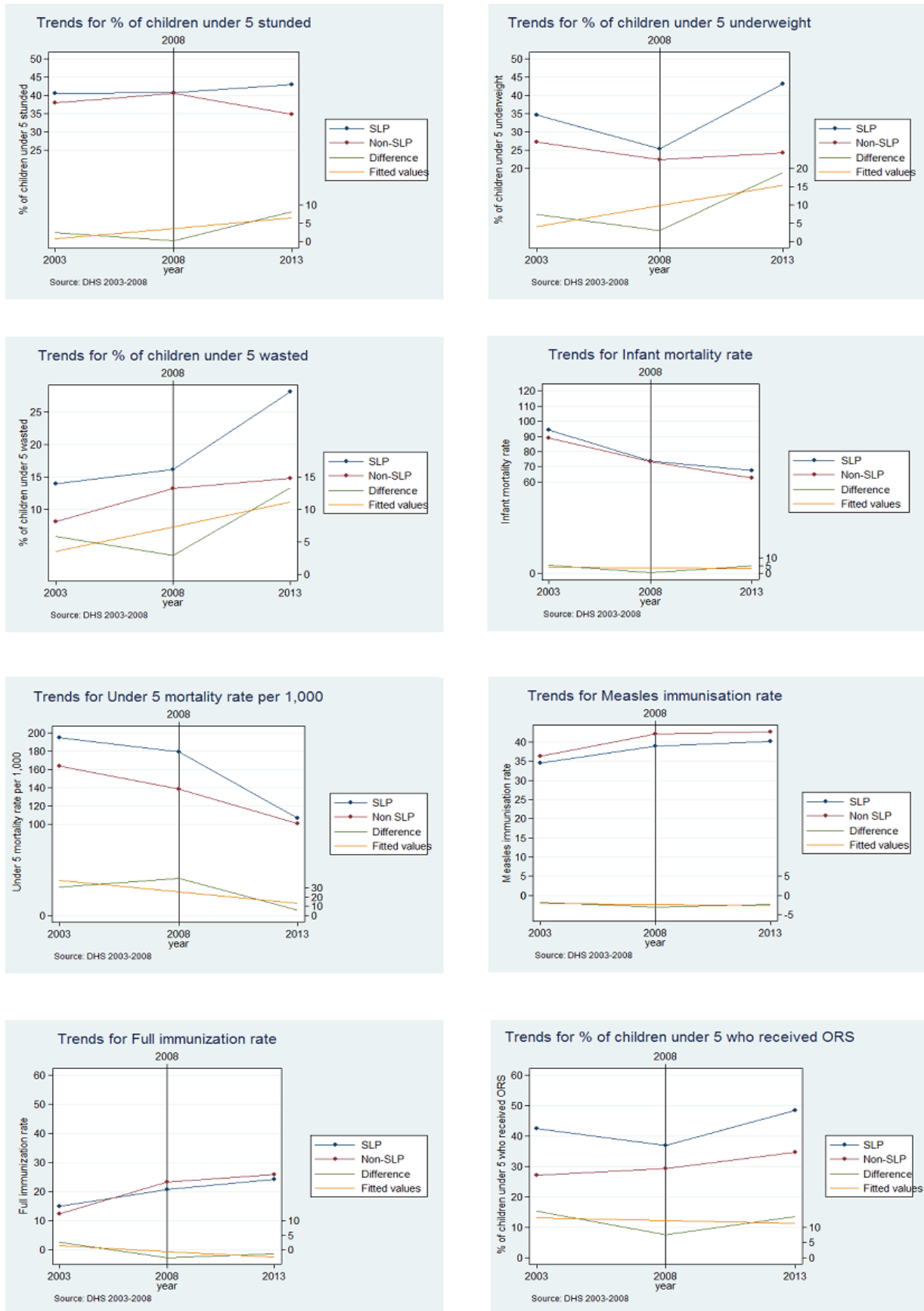
The main assumption that needs to be met in order for a diff-in-diff estimate to provide a robust estimation of programme impacts is that both the SLP and non-SLP states would have experienced identical trajectories on the outcome variables of interest, had the SLPs had not been implemented. As long as the trends in outcomes evolve in the same way in both groups in the absence of the interventions, any initial differences between the two groups do not interfere with the estimation of impact.

The parallel trend assumption is not directly testable, since one cannot observe the trends that would have occurred in the group of SLP states had the SLPs not been implemented. However one way to understand how likely it is to hold is to observe the trends in outcomes prior to the SLPs being implemented. If trends are shown to have broadly followed the same trajectory before the SLPs were implemented, the assumption that they would have continued to do so afterward had the intervention not been implemented may be justified. Therefore we used different rounds of the DHS survey (2003, 2008, and 2013) to look at past outcome trends and check whether these were similar before the SLP suite programme started. The analysis is only indicative since we do not have enough data points covering all the relevant indicators to draw a trend stretching further back in time.

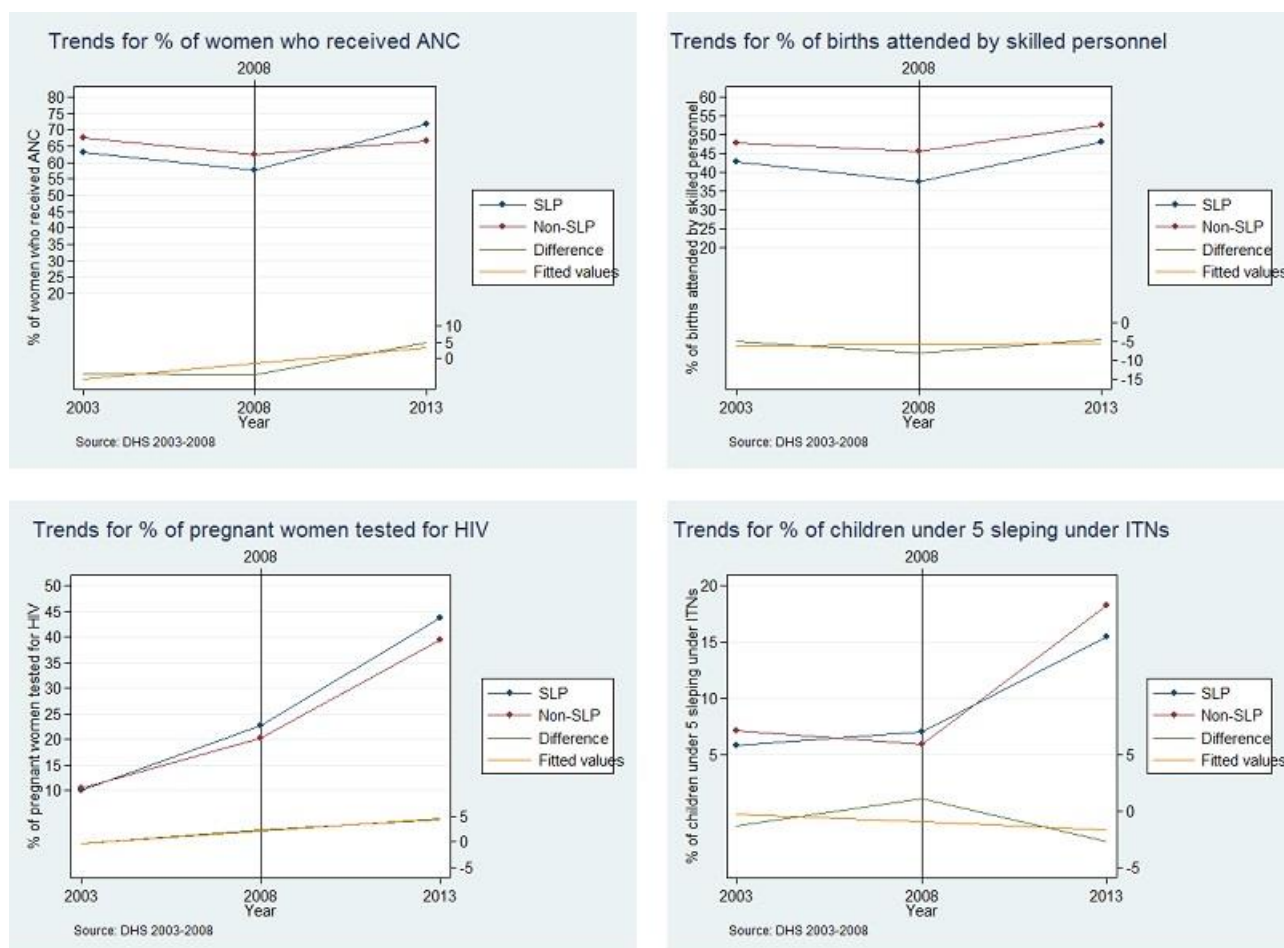
As shown in Figure 2, we do not find a great deal of support for the common trend assumption across all the DHS indicators. Indeed, past trends of SLP suite and non-SLP suite states only appear to be parallel for the case of under 5 mortality rates, measles immunisation rates, percentage of women who received ANC, and percentage of births attended by skilled personnel. These results could be taken as a suggestion that observable differences across SLP suite and non-SLP suite states after the program's implementation could be due to differences in characteristics across these groups, and not necessarily because of the programme. It should be noted however that these trends are based on only two points and the comparison is visual rather than statistical.

The failure of the common trends assumption means that our analysis cannot isolate the precise size of any effect that is attributable to the SLP Suite. However it is nonetheless possible to estimate the direction of change using this type of analysis if previous trends in outcomes are not shown to be excessively divergent. For example, in the case of the % of children who received oral rehydration therapy for diarrhoea it is shown that both SLP and non-SLP states experienced a decrease in the outcome between 2003 and 2008. Even though this decrease did not occur at the same rate, the fact that there is an upswing after 2008 in the SLP states is striking and strengthens the case for claiming that this was related to the effect of the SLPs. Thus even though it is not possible to assess the size of that impact from the differences in differences method, the graphs provide support for the claim that there was a positive impact of some degree.

**Figure 2. Inspection of the parallel trend assumption between SLP suite and non-SLP suite states in Nigeria. DHS, 2003-2013**

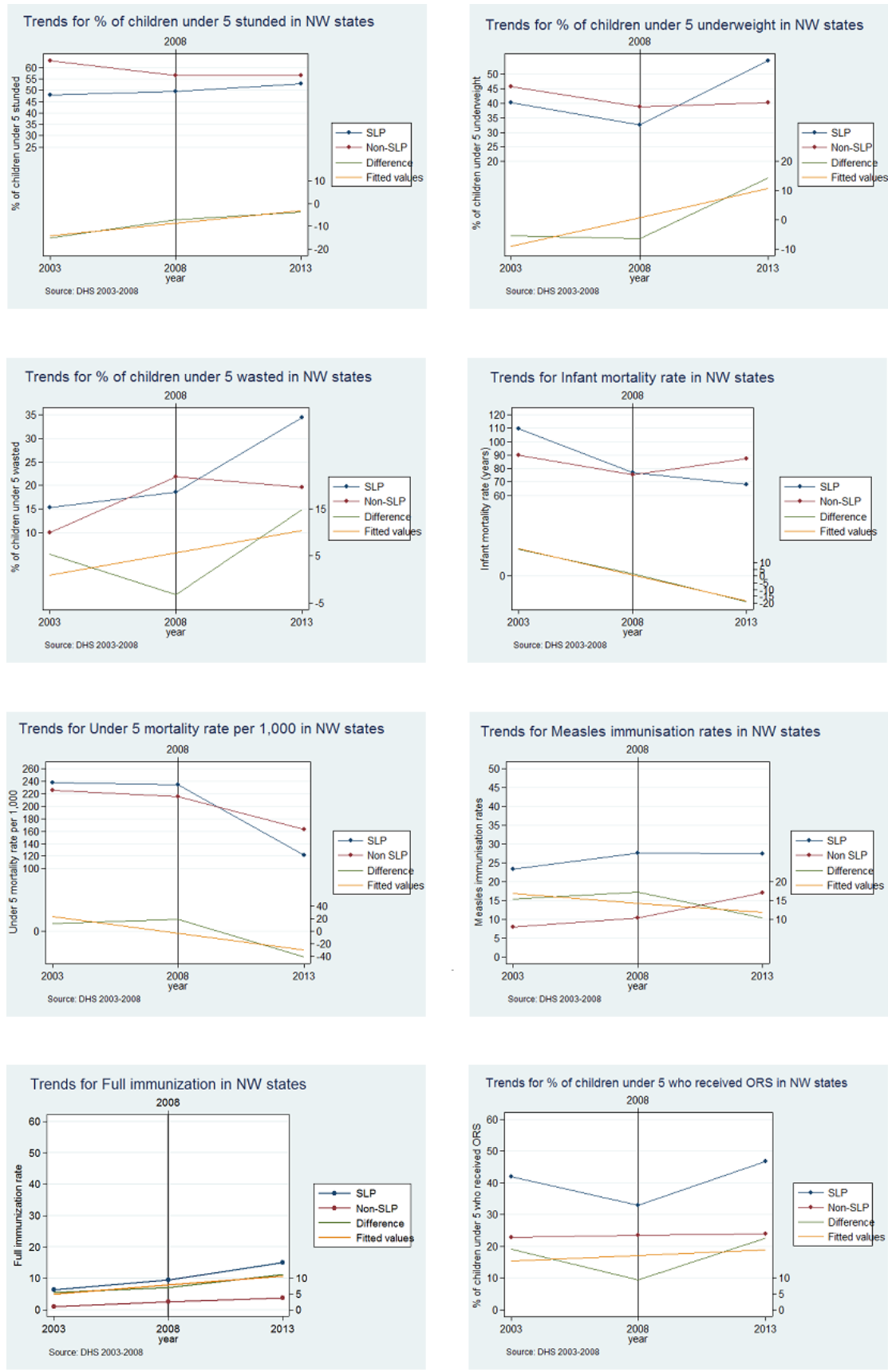






A similar test was undertaken for the North West states. Figure 3 shows that the common trend assumption still does not hold for every DHS indicator in the case of North West states. This implies that differences we observe for certain outcome indicators may partially reflect pre-existing differences in the characteristics of SLP and non-SLP states, rather than fully capturing the effect of the SLP suite. Nevertheless, it is important to note that the number of outcome variables for which the assumption appears to hold is higher for this sub-set of states than it is nationally. This corroborates the claim that the comparability of state outcomes is more powerful for this regional group than it is over the whole country, where the divergences between states may be considerable. Past trends for North West Suite and non-Suite states seem to be parallel for the cases of under 5 mortality rates, measles immunisation rates, full immunisation rates, percentage of children under 5 underweight, percentage of children under 5 who received ORS, percentage of births attended by skilled personnel, and percentage of pregnant women tested for HIV. This provides some support to the validity of the differences in differences findings for the group of north-western states, although again with the caveat that the parallel trends assumption itself is not directly testable, and we also did not have access to sufficient data to plot a past trend using multiple data-points.

**Figure 3. Inspection of the parallel trend assumption between SLP suite and non-SLP suite states in North Western States. DHS, 2003-2013**



## Annex E: Description of data sources considered but not used for the Comparative Analysis

### A.4 Main data sources used

Data source	Summary description	Years available	States covered	Sample sizes (where applicable)
<b>SAVI Governance Index</b>	Consists of a set of qualitative sub-indicators relating to the role of various stakeholder groups (government, State Houses of Assembly, media houses and civil society groups) in responsive government. From this SAVI constructs a voice and accountability index, which is a composite indicator that measures the quality of governance across government, civil society and media. SAVI provides annual Governance Index updates in the states where it operates.	2010 onwards	Core SLP states	Unknown
<b>Annual School Census</b>	The ASC, supported in some states by ESSPIN, reports administrative data from schools, including enrolment data. It is closely linked to, and informs, the EMIS.	2010, 2011, 2012, 2013	ESSPIN states (core SLP states plus Kwara)	Total number of schools in 2013 data (primary, secondary and private):  Enugu: 2919 Jigawa: 2903 Kaduna: 6331 Kano: 7680 Katsina: 3211 Kwara: 3365 Lagos: 1809 Niger: 4062 Zamfara: 2140

Data source	Summary description	Years available	States covered	Sample sizes (where applicable)
Health Management Information Systems	The HMIS collects routine administrative data from health facilities across Nigeria. It started in 1999 and was reviewed in 2004 to address challenges and collect information more closely related to monitoring Nigeria's progress against the MDGs.	1999 onwards	All states	Unknown
UBEC grant data	The Universal Basic Education Commission (UBEC) is a national agency responsible for disbursing federal funds reserved for helping states to achieve the goal of universal provision of 9 years of free, compulsory education for school aged children. UBEC releases information showing which states have drawn the maximum fund that they are entitled to each year.	2005-15	All states	N/A
SMART	The objective of the surveys is to provide information on the nutrition status of children, vitamin a supplementation coverage, use of deworming tablets, nutrition of women and crude mortality.	2014, 2013, 2012, 2011, 2010	8 northern states in early rounds, increased to 24 states in 2013. The latest round is planned to cover all states	July – Aug 2010: 3575 households Dec 2010: 3325 households July – Aug 2011: 4452 households Feb 2012: 4733 households Aug – October 2012: 4583 households
Multiple Indicator Cluster Survey (MICS)	The MICS survey aims to provide information on the situation of women and children in Nigeria. The information collected can be used to monitor progress towards the MDGs.	2007, 2011	All	29,077 households in 2011

## A.5 Data sources not used

### Sources without two data points available

We did not include data sources which only covered one point in time, as the ability to calculate a trend from a data source was the minimum necessary condition for our analysis. The evaluation team decided against alternative strategies that would not be limited to the use of data covering more than one time period. Comparing indicator estimates across datasets (for example, comparing one pre-SLP implementation observation from one dataset with a post-SLP estimate from another) is not advisable since idiosyncrasies in how data are gathered and compiled between sources could easily render such comparisons misleading. The initial impressions of the evaluation team, based on for example inspection of the DHS and Standardized Monitoring and Assessment of Relief and Transitions (SMART) datasets, were that data gathered from different sources are not readily comparable. Therefore the ability to compare over time within the same data source is critical to ensure consistency of survey methodology and methods of data cleaning and analysis.

Among the data sources that could not be included in the analysis for this reason were the Nigeria Education Data Survey (NEDS), the Nigeria Schools Census data and the Millennium Development Goals Tracking Survey.

The NEDS data is available for 2008 and 2010, which is not a sufficient time lag for a meaningful pre- and post- SLP difference in outcomes to be calculated (given that there may have been a lapse in time before the SLPs began to have meaningful results). The 2015 round of NEDS was not available at the time of analysis, which would have been a more useful data source from which to take a 'post-SLP' observation from. The Nigeria Schools Census is cited as a source on the Millennium Development Goals Information System website, but is listed as being available for only 2005. The MDG Tracking Survey is carried out on behalf of the Nigeria MDG Information System to track progress against the MDGs. While state-level estimates are publicly available in the report for the 2014 survey, the previous report from 2012 does not publish estimates at the state level and therefore cannot be used (without resorting to a resource-intensive examination of the microdata).

The implication of not including data sources which did not capture two relevant points in time in the analysis are that the coverage of education-related MDG indicators is incomplete. For some indicators, the only source available was the Annual School Census (ASC), which only covers a limited subset of states.

### Specific issues with certain datasets

In addition to the general issues of data availability outlined above, there were some specific concerns with some of the data sources used that have implications for the reliability of the results.

The Health Management Information System (HMIS) and ASC data both suffer from underreporting on the part of schools and health facilities that are responsible for their own data entry. In early years of the HMIS being operational this problem was evidently extremely pervasive; though the picture has since improved (especially in PATHS2 states where the system is receiving extra support) the extent of underreporting still plagues the data. The implications are firstly that changes in the volume of health services dispensed or school enrolment from year to year cannot be straightforwardly separated from changes in reporting rates across years. Even to the extent that figures can be adjusted relative to the proportion of facilities and schools completing their

reporting obligations, the estimates are not wholly reliable since they reflect only the situation in schools and facilities that do file their reports, which may have markedly different characteristics from those that do not. For example, private schools enrolment data is missing entirely from some ASC reports in Lagos, which may introduce bias in the estimates.

Data on the proportion of the states allocated grant from the UBEC commission (reserved for state spending on basic education) that is withdrawn on each year was compiled but not ultimately included in the results section. This was owing firstly to the fact that there was complete information for two or more time periods for relatively few states, and very little variability in the findings that did emerge across the other states. It is also difficult to infer the reasons behind states drawing more or less of their entitlement, which may be due to a variety of factors (for example, states not meeting the conditions attached to receiving the grant or not being able to pay the counterpart fund, or not prioritising spending on education in favour of other concerns).

Data from the SAVI governance index was also not used in the final results. The indicator of interest was a qualitative measure of Public Service Management, based on a self-reporting exercise conducted by different arms of government, the civil society and media. The composite score is difficult to interpret at the state level. The data also covered only ten states, and did not exhibit much variability.

We chose not to use the Multiple Indicator Cluster Survey (MICS) in our analysis, which measures key indicators to monitor progress toward MDGs (including measures of nutritional status, child and infant mortality, treatment of diarrhoea, and education indicators). The reason for not including the MICS is that most recent data available at the time of writing are from 2011 and 2007. While these data points do constitute one measurement before the SLPs were implemented and one afterward, the period of time over which effects of the SLP Suite would be tested for is narrow. In particular, the MICS affords a much smaller window for assessing the SLP than the DHS, and was excluded on this basis.

## Annex F: Further tables from datasets not used in the main analysis

Table 22. Percentage point changes by individual states for health-related indicators. SMART, period 2010-2012

	SLP state	Percentage of children under 5 stunted	Percentage of children under 5 underweight	Percentage of children under 5 wasted
Borno	No	-21.9	-1.0	4.3
Jigawa	Yes	-26.0	-6.7	1.8
Kano	Yes	-30.5	-9.5	-1.2
Katsina	No	-31.7	0.4	3.8
Kebbi	No	-18.3	-4.0	-4.4
Sokoto	No	-20.9	-2.5	4.9
Yobe	No	-37.1	-18.6	-4.4
Zamfara	No	-24.6	-2.8	-0.5

Source: SMART 2010 and 2012

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement <5; darker green for 5 < improvement.

Table 23. Percentage point change by individual states for education-related indicators. ASC, period 2009-2013.

	SLP state	Net enrolment rate for primary education	Gross enrolment rate in primary education	Net enrolment rate for junior secondary education	Net enrolment rate for secondary education	Gross enrolment rate in Junior secondary school	Gross enrolment rate in secondary education
Enugu	Yes	8.5	9.0	1.1	4.1	7.3	11.5
Jigawa	Yes	9.8	6.1	6.6	.	8.0	7.9
Kaduna	Yes	6.2	8.3	-7.0	-5.3	-6.5	-3.9
Kano	Yes	20.4	23.2	-21.8	-4.9	-25.1	-2.9
Kwara	No	-3.1	0.5	-6.9	-5.9	3.6	3.8

Source: ASC 2009 and 2013

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement <5; darker green for 5 < improvement.

Table 24. Trends for education related MDG indicators by SLP and non-SLP suite states. ASC, period 2009-2013

	SLP suite states			Non-SLP suite states			Dif-in-Dif
	Period 1 (2009)	Period 2 (2013)	Change (P2-P1)	Period 1 (2009)	Period 2 (2013)	Change (P2-P1)	
Net enrolment rate for primary education	79.0	92.0	13.0	58.0	55.0	-3.0	16.0
Gross enrolment rate in primary education	88.0	102.0	14.0	63.0	63.0	0.0	14.0
Net enrolment rate for junior secondary education	32.0	23.0	-9.0	51.0	44.0	-7.0	-2.0
Net enrolment rate for secondary education	27.0	23.0	-4.0	45.0	39.0	-6.0	2.0
Gross enrolment rate in Junior secondary school	40.0	30.0	-10.0	56.0	59.0	3.0	-13.0
Gross enrolment rate in secondary education	31.0	31.0	0.0	49.0	53.0	4.0	-4.0

Source: ASC 2009 and 2013

Note: ASC includes information for four SLP (Enugu, Jigawa, Kaduna, and Kano) and 1 non-SLP suite states (Kwara)

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement.

Table 25. Trends for state public financial management improvement. PEFA-SEAT, period 2012-2015

	SLP suite states			Non-SLP suite states			Dif-in Dif
	Period 1 (2012)	Period 2 (2015)	Change (P2-P1)	Period 1 (2012)	Period 2 (2015)	Change (P2-P1)	
<b>Composite scores</b>							
Public Service Management SEAT results (composite scores)	2.23	2.52	0.29	2.06	2.31	0.25	0.04

Source: PEFA-SEAT 2012, 2015

Note: PEFA-SEAT includes information for all SLP suite states and for six non-SLP (Anambra, Katsina, Niger, Yobe, and Zamfara)

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement...



Table 26. Change in state public financial management. PEFA-SEAT, period 2012-2015:

	SLP state	Change in Public Service Management SEAT results
Anambra	No	0.00
Enugu	Yes	0.39
Jigawa	Yes	0.29
Kaduna	Yes	.
Kano	Yes	0.16
Katsina	No	0.14
Lagos	Yes	0.49
Niger	No	0.48
Yobe	No	0.43
Zamfara	No	0.35

Source: PEFA-SEAT 2012, 2015

Label description: Light red for 0 > decline > -5; darker red for -5 > decline; light green for 0 < improvement < 5; darker green for 5 < improvement...

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