

Research Article



Probing extracts of data for evidence-based monitoring and evaluation of government programmes in Oyo State Nigeria

Abstract

Accurate and timely statistics play a vital role in policy formulation, development planning, citizen focused budgeting, formulation of need-based demand driven development interventions. Development however, is a product of rigorous research, careful data driven planning, evidence-based decision and policy formulation that improve the welfare of the people. The importance of these (detailed and accurate statistical data) in the formulation of social and economic policies cannot be overstated. Data were extracted from government records to study how data can better inform the allocation of government resources efficiently while assessing government performance within the limit of available data as documented in its Ministries and agencies.

Available data revealed that the population of Oyo State increases at an average of 3.2% per annum; which indicates that by 2028 the Oyo State population would have doubled its size since 2006 when the last National Census was conducted. In the Health Sector, using the 2006 population figure, it was deduced that the number of doctors per capita stood at 1: 38489. This estimate was improved in 2008 as the number of doctors per capita rose to 1:9010. Education, Agriculture, Environment and water resources, Trade and Investments and Work Ministries were also assessed to give an overview of identified improvement across various regimes. Paucity of data and poor documentation culture among others seem to be the major problem within the State currently as only Health and Education Ministries seem to have some form of useful data for analysis and used in policy development.

Keywords: development planning, population, evidence-based decision, documentation, survey

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Background

Poor data limits African countries' ability to make good policy decisions. African policy makers are increasingly aware of the use of evidence-based research to make development decisions. However, this requires the rigorous collection of data as well as a coordinated system to disseminate it. Data, and especially good quality data, are essential for national, state governments and institutions to accurately plan, fund and evaluate development activities. Basic development indicators provide an accurate picture of a country's development status. This includes a country's/states' progress towards specific development goals and improving its citizens' socio-economic conditions. In fact, solutions to social and economic problems are often inseparable from the statistics. One cannot build schools without information about the number of children of school age. Private investors need to know what resources as well as the number of investment portfolios available in a given country before putting in their money. A country needs to know what it agricultural commodity it grows and the location where it has comparative advantage for their growth in order to prevent famine in the nation. Donors can only know whether their aid is changing lives if they have data like in the case of the Oyo state. Given the circumstances, one can only imagine how difficult it is for African governments to make data driven decisions without adequate, reliable and accurate data. This situation is often compounded by the lack of an entrenched culture of data use. More often than not it is difficult to ascertain and monitor existing programmes' effectiveness or whether available resources are being

allocated properly to address the most urgent and serious development issues.

Governments make budget and policy choices each year that have long-term effects on both their fiscal futures and the outcomes they deliver for constituents. Recognition is growing that policymakers can achieve substantially better results by using rigorous evidence1 to inform these decisions, enabling governments to select, fund, and operate public programs more strategically. Until now, however, no comprehensive road map has provided clear guidance on using this approach. To fill this gap, governments can follow to build and support a system of evidence-based policymaking. Based on an extensive review of research and in-depth interviews with government officials, practitioners, and academic experts, the framework identifies steps that both the executive and legislative branches can take to drive the development, funding, implementation, and monitoring of policies and programs. The framework has five key components, each with multiple steps that enable governments to make better choices through evidence-based policymaking: (1) program assessment, (2) budget development, (3) implementation oversight, (4) outcome monitoring, and (5) targeted evaluation.

The true value of data is sought when it allows decision makers to make sound decisions on a real-time basis. Accurate and timely statistics play a vital role in policy formulation, development planning, citizen responsive budgeting, formulation of need-based demand driven development interventions.

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Development planning has been a national priority since independence and subsequently all agencies working in the sectorcentral and state governments, voluntary sector, private sector and private individuals-have been experimenting and trying to identify a breakthrough to utilize data for development.

"Governments are responsible for making decisions to improve the quality of life of people. Statistics enable the government to use a scientific approach to investigate all available evidences in formulating policies that are more effective to achieve the desired outcome. Statistics provide evidence needed to improve decision making, document results and also enhance public accountability," "Statistics are a vital source of evidence as it provides us with clear, objective, numerical data on important aspects of the state including economic growth, characteristics of population, economic performance, social living conditions, etc." It is in line with these objectives that we have identified sectors and possible indicators to assess government's performance across regimes in Oyo state from 2003-2017 Regimes shall be indicated as follows; Regime 1: 2003-2007; Regime 2: 2007-2011; Regime 3: 2011-2015; Regime 4: 2016 to date.

Demographics of OYO State, Nigeria





- Housing
- Hospitality
- Industry
- Power

Figure I Map of Oyo State, Nigeria.

Table I	Basic	geographic	information	about	Оуо	State, Nigeria
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Feature	Statistic	Rank
Land Area	28,454 sq. km	Bigger than Singapore, Haiti, Belgium & Israel Potential for Agriculture as 84% of land area is cultivatable
Population	Estimated 10million	Bigger than Luxemburg, Slovenia, Macedonia, , Israel Lebanon & Rwanda 5th most populous state in Nigeria Large domestic market
Gross Domestic Product (PPP) "Purchasing Power Parity"	Approx. \$16,121m	4th in Nigeria
Research Institutions	Over 5 world-class research institutes	Highest in Nigeria. R&D is an engine of economic growth. Agricultural research institutes in the State are expected to increase agricultural production.
Location	About I hour drive to Lagos	Links the South West to the North
Emerging Middle Class	Significant market for product uptake	2nd highest in the South West
Ibadan Disco Revenue Potential	\$123m (2009)	2nd highest in Nigeria

The aim of this exercise is to harness available data that could be useful for evidence-based policy while assessing government performances, based on available data, over some time with a view to come up functional data base for consistent quarterly statistical report in the state.

Oyo state government activities based on harnessed data

Efforts were made to collect data from the planning research and statistics units of the eight (8) Ministries/Agencies in Oyo state selected to pilot this study. The choice of these sectors/departments/ units was based on areas that directly affect the citizenry. The two ministries where fairly sufficient data were available are the Ministries of Health (MoH) and Education (MoE) with skeletal data from other agencies considered in this study. The summaries of the analysis of collected data are given below sector by sector.

Ministry of health

The Ministry of Health is one of the oldest in the State established in 1957. The ministry is saddled with the responsibility of policy initiation and implementation on issues relating to the health and well-being of the people of the State. Its major functions include: Planning Research & Statistics; Primary Health Care & Disease Control; Secondary Health Care & Training; Nursing Services; Pharmaceutical Services; Food, Water and Laboratory Services; Health and Hospital Monitoring. Its vision is to improve the health status and social economic advancement of individuals and families in the State using preventive, promotive and curative approaches while its mandate is to provide people-oriented broad based purposeful and sustainable health care delivery system with a fundamental unique structure in functions and performance of health systems; involving all stakeholders to deliver efficient, affordable, accessible, effective and equitable care services to the people. In view of the vision, mandate and the objectives of MoH, Summary statistics was done and comparison was carried out across various regimes in line with the indicator highlighted for this purpose.

Key performance indicator

Health facilities: Table 2 presents the number of health facilities by ownership across the regimes, the table suggests the State and Local Government owned health facilities which the government have direct control on have shown an increase in term of performance with 2.29% and 0.45% increase in 2011-2014 and 2015 till date respectively for the state owned facilities and 2.37% increase in 2015 till date. Also, there is a better performance in the number of federal and private owned health facilities with 4.55% and 10.64% increase in 2015 till date respectively. This is summarized in Figures 2 & 3 below.

Table 2 Health facilities in Oyo State across regimes

Regime	Federal	State	Private	LGA	Total
2003-2006	46 (100%)	215 (100%)	2987(100%)	2384(100%)	5632(100%)
2007-2010	47(102.17%)	218(101.40%)	3234(108.27%)	2543(106.67%)	6042(107.28%)
2011-2014	44(93.62%)	223(102.29%)	2809(86.86%)	2532(99.57%)	5608(92.82%)
2015 till date	46(104.55%)	224(100.45%)	3108(110.64%)	2592(102.37%)	5970(106.46%)

This used the 2003 estimates as a base for comparison.







Figure 3 Health Facilities by ownership.

Budget allocation: Table 3 present the budget allocation to health from the year 2006-2017. The table suggests that the highest and lowest budget was allocated to the health sector in the year 2011 and 2006 respectively with 16.9% and 4.9% respectively. This is summarized in Figure 4 below.



Figure 4 Percentage of budget allocated to health across the years.

Table 3 Budget allocation to health sector

	Total budget	Total health sector	% allocated to health	Actual amount released	% of actual released
2006	60,798,055,785.60	2,962,000,000	4.9	3,176,409,125.59	107.2
2007	55,000,000,000.00	6,112,000,000	11.1	5,302,793,450.53	86.8
2008	92,647,349,539.10	13,108,808,000	14.1	11,260,149,324.98	85.9
2009	128,409,352,393.00	17,880,000,000	13.9	4,757,117,266.34	26.6
2010	142,062,098,291.00	23,859,500,000	16.8	10,172,079,357.25	42.6
2011	148,706,562,535.00	25,164,282,300	16.9	6,639,445,417.47	26.4
2012	172,533,937,225.00	11,998,400,000	7	8,662,346,110.19	72.2
2013	159,625,261,000.00	13,046,000,000	8.2	6,841,700,766.65	52.4
2014	208,376,635,152.00	19,018,000,000	9.1	7,170,980,394.04	37.7
2015	143,108,660,700.00	12,155,106,000	8.5		
2016	173,429,404,444.00	13,747,836,000	7.9		
2017	210,785,494,299.99	19,273,588,126.00	9.1		

Table 4 presents the budget allocation to health sector across regime, the highest and lowest percentage of allocation was experienced in the year 2007-2010 and 2006 respectively.

Table 4 Budget allocation to health sector across regime

	Total budget	Total health sector	% allocated to health	Total released	% of actual released
2006	60,798,055,785.60	2,962,000,000	4.9	3,176,409,125.59	107.2
2007-2010	418,118,800,223.10	60,960,308,000.00	14.58	31,492,139,399.10	51.66
2011-2014	689,242,395,912.00	69,226,682,300.00	10.04	29,314,472,688.35	42.35
2015 till date	527,323,559,443.99	45,176,530,126.00	8.57		

Vaccines and Immunization:

Table 5 present the total number of immune children across region, the table suggests that the highest number of immune children was

experienced in the year 2015 till date for BCG, Oral Polio, measles and yellow fever with 73.15%, 84.43%, 91.06% and 102.32% respectively over the proportion of children immunized between regime 1. This is summarized in Figure 5 below.



Figure 5 Total number of immunized children across the region.

Table 5 Total number of immunized children across regime

Regime	B.C.G	Oral polio	DPT	Measles	Yellow fever
2003-2006	383146(100%)	233246(100%)	254926(100%)	371109(100%)	169159(100%)
2007-2010	90638(23.66%)	86599(37.13%)	110123(43.20%)	150432(40.54%)	40389(23.88%)
2011-2014	455558(118.89%)	367443(157.53%)	66464(26.07%)	338951(91.33%)	320968(189.74%)
2015 till date	788798(173.15%)	677689(184.43%)		647597(191.06%)	649368(202.32%)
Total	1718140	1364977	431513	1508089	1179884

Health personnel

Table 6 Oyo State health personnel by categories

	Doctors	Nurse / midwives	Community health extension worker	Pharmacists	Pharmacy technicians	Community health officers	Total personnel
2003	34	1850	690	40	128	172	6728
2004	38	1863	695	43	130	175	6741
2005	38	1666	681	51	127	192	7285
2006	145	1623	843	46	83	176	6714
2007	147	1623	843	46	83	176	6759
2008	663	3443	852	166	100	184	11572

Table 7 Computation of per capita estimates of health workers in the State

	Oyo State population	No of Doctors per capita	No of nurses/ midwives per capita	No of community health worker per capita	No of pharmacists per capita	No of pharmacist technician per capita
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004		N/A	N/A	N/A	N/A	N/A
2005		N/A	N/A	N/A	N/A	N/A
2006	5580894	38489	3439	6620	121324	67240
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	5,973,596	9010	1735	7011	35986	59736
2009	6,180,187	N/A	N/A	N/A	N/A	N/A
2010	6,393,927	N/A	N/A	N/A	N/A	N/A
2011	6,615,059	N/A	N/A	N/A	N/A	N/A

Based on the census figures we could deduce that Oyo state population increases averagely at 3.2% as shown in Figure 6 &7, which indicate that in 22 years' time from the last census (2006), the population of Oyo state would have doubled its size. This indicate that hopefully in 5 years' time the population of Oyo state would have doubled its size based on 2006 figures (i.e. 11,161,788). Using the 2006 population figure we could deduce that the number of doctors per capita stood at 1:38489. This estimate was improved in 2008 as the number of doctors per capita rose to 1:9010. Data limitation prevented us to look at the situation of thing beyond 2008. Below are the per capita estimates of other health workers across the years.



Figure 6 Oyo State population projection using exponential growth equation.



Figure 7 Oyo State census figures for 1991 and 2006.

Ministry of education

Ministry of Education is responsible for provision of basic, scientific and technological education services in the State. Its vision is to ensure that citizens of the State have a holistic growth through affordable quality education and all round development of sound minds in the fields of technology, sciences commerce and

Table	8	Distribution	of	Teachers	package	across	regimes
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humanities with total cognizance to the values, norms and belief of the entire constituents of the State. It therefore seeks to provide quality education for all Nigerians regardless of gender, ethnicity, social background and geographical location to develop the individual into a sound and effective citizen. This is to achieve free, qualitative and economic driven education that will address the key challenges in the State so much that no child is left behind in the acquisition of holistic knowledge.

Key performance indicator

Teachers: It can be observed from the Table 1 below that teacher's recruitment was 5000 teachers as at 2003-2007 and drastically reduced to 2195 teachers from 2007-2011 with a decrease of 56.1%. And more so, from 2011-2017 we experienced 66.2% increase of teachers recruited. In the year 2003-2007 for training teachers, 14468 training teachers was recorded with an increase of 41.8% (24870 training teachers) in the year 2007-2011 and the increment persist from 2011-2017 by 74.1% (96000 training Teachers) from the previous. Salary elongation revealed 300% increase from the previous year as at 2011-2017. The total numbers of 237 teachers were given Cars/Housing Loan as at 2003-2007, an increase of 85.5% (1640) loan was also observed during the period of 2007-2011. And further increase of 58.4% (2808) was also observed from 2011-2017. There were no record for table and chair provided for teachers as at 2003-2007 and 2007-2011 but from 2011-2017, the total number of furniture (Table and chair) provided was 1318. The visual inspection of the above summary can also be read from the plot below in Figure 7. More so, in 2017, Oyo State Government seconded 2000 teachers from SUBEB to TESCOM, deployment of 2632 N-power beneficiaries to schools, conduction of capacity building for 12902 teachers in the State and employment of 2858 teachers for secondary schools.



Figure 8 Distribution of teacher's package across regimes.

	Recruitment	Training	Salary elongation	Car/Housing loan	Furniture (Table/Chair)
2003 -2007	5000	14468		237	
2007 - 2011	2195 (-56.1%)	24870 (41.8%)		1640 (85.5%)	
2011 - 2017	6500 (66.2%)	96000 (74.1%)	(300%)	2808 (41.5%)	1318

Students: From the table 9 below, none of the students as at the period of 2003-2007 were beneficiary of the bursary and scholarship in Oyo State. Further improvement was observed as at the year 2007-2011 and 2011-2017 where 1063 and 15000 students were given bursary and scholarship respectively. In 2003-2007, Oyo State Government provided a total number of 93858 textbooks to students and as at 2007-2011, the State experienced a decline in textbooks provision by the Government with a total number of 20333 textbooks compared with the previous years. A takeover of 76.1% (85000 textbooks) increase in textbooks provision by the Government was observed from the period of 2011-2017. We observed the provision of 45909

furniture to students by the Oyo State Government in 2003-2007 and the total number of the provided students' furniture as at 2007-2011 reduced drastically by 32.8% (30836). In 2011-2017, an increase occurred as Government provided 190000 furniture to students. A more concentration of 200% by the Oyo State Government for the less privilege feeding and salaries can only be observed from the year 2011-2017. Also, the Oyo State Government only noted expansion of opportunity in the State in 2011-2017. Further observations from the research, in the mid-year of 2017, Oyo State Government cancelled any automatic promotion, a tune of N92, 390,000 bursaries awarded to students and more so, payment of WAEC fees was cancelled.



■ 2003 -2007 ■ 2007 - 2011 ■ 2011 - 2017

Figure 9 Government intervention on students across regimes.

Table 9 Government intervention on students across regimes

	Bursary/ Scholarship	Textbooks	Furniture	Less Privilege feeding/ salaries	Expansion of opportunities	Upgrade of institution
2003 -2007	Nil	93858	45909			
2007 - 2011	1063	20333 (-78.3%)	30836 (-32.8%)			
2011 - 2017	15000 (92.9%)	85000 (76.1%)	190000 (83.8%)	200%	5	

Infrastructure: Between 2011-2017, eleven-(11) science laboratory was provided by the State Government. A sum of N30million was spent on tools and equipment in both 2003-2007 and 2007-2011 to execute the infrastructural project in the State. But in 2011 through 2017, the Oyo State Government released the sum of 459 million for tools and infrastructural equipment. Another infrastructural development was the renovation and constructions of classroom, 700 classrooms were constructed/renovated between 2003 and 2007. We noticed from collected data an increase of 37.2% (1114) of classrooms renovated/constructed between 2007 and 2011. And the total number

of classrooms constructed increase by 34.6% (1704) compare with the previous years/periods.

From 2017 till date, Oyo State Government facilitated the construction of 6 blocks of classrooms each in 30 public primary schools across the State by Japanese International Cooperation Agency (JICA) and construction of 372 blocks of classrooms in both public primary and secondary schools. Also, there is an on-going construction of 3 model schools plus one model school inherited in Ogbomosho as contained in Table 10 below.

Table 10 Distribution pattern of infrastructure to schools in Oyo State across regimes

	Science Laboratory	Tools/Equipment	Renovation/Constructions of class room
2003 -2007	-	30million	700
2007 - 2011	-	30million	1114 (37.2%)
2011 - 2017	П	459million (93.5%)	1704 (34.6%)

Waec results performance: The analysis below showed the WAEC results performance of both public and private school in Oyo State over the period of 15 years. Having the result in retrospect, we observed a fall and rise fluctuation performance from the year 2003 to 2007 and a steady increase performance from 2008 to 2013. A little fall in candidates' performance came up in 2014 and a tremendous increase

began again in 2015 to 2017. The present administration has been making landmark achievement in the areas of WASSCE performance. The year 2011–2017 performance in WASSCE results showed a total transformation trend. Worthy of note is the 2017 WASSCE result with 54.18%.

WASSCE RESULT: PUBLIC AND PRIVATE SCHOOLS









Figure 11 Numbers and percentages of candidates with Credit in English and Mathematics.

Table II WASSCE result performance in Oyo State

Analysis for public and private schools			
Year	No of Candidates	Performance %	
2003	55688	6.13	
2004	60052	9.17	
2005	55203	7.89	
2006	52534	10.4	
2007	58504	6.16	
2008	61332	9.14	
2009	60444	11.92	
2010	65330	13.4	
2011	72559	16.97	
2012	75179	21.35	
2013	74319	21.79	
2014	77685	19.19	
2015	78897	21.61	
2016	N/A	N/A	
2017	53850	54.18	

 Table 12 WASSCE performance of schools in Oyo State across regimes

	Total Number of Candidate	Number of candidate with Credit in Eng.& Maths	% Performance
2003 - 2007	226293	13433	5.94%
2007 - 2011	259665	33883	13.05%
2011 - 2017	400864	101832	25.40%

Enrollments: The enrolments data was collected across primary schools, secondary schools and Tertiary schools in Oyo State. In the primary school enrolments, a significant increase was observed in the year 2006 and it declined from 2007 to 2009. We also experienced a bit steady increase from 2010 to 2013 and the rest of the years till date showed no records. For the secondary school enrolments, the data captured were only for 4years (2010-2013) and the result revealed steady increase across the years. The total enrolment for tertiary school shown that college of education has the highest number of enrolments across the captured years. We also observed the distribution of teachers

Records were not available to compute the percentage performance in 2016 hence the $\ensuremath{\text{N/A}}$

and academic staff in Oyo State. It is very obvious that teachers in primary school was targeting increase from 2005 to 2013 compares to the distribution of teachers in secondary school. In the distribution of academic staff, Polytechnics and Universities were at consistent increasing length from the year 2010 to 2013 compares to the College of education distributions.



Figure 12 Total number of enrolments in Primary and Secondary Schools.



Year	Total enrolments
2003 - 2007	1637626
2007 - 2011	1480794 (-9.57%)
2011 - 2017	3055893 (51.5%)





Figure 13 Total number of enrolment in Tertiary Institutions.





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Total Enrolment in Tertiary School

Total Number of Enrolments



Figure 15 Total enrolment across the State by regime.

The average of enrolment over a period 6 years (2011-2017) shows the believed of the citizenry in public schools as shown in the table above.

Ministry of agriculture

Food crops production

The table below revealed that cassava yield measured in metric tons has the highest food crops production in Oyo State across the considered years (2003 to 2017). Also from the table are 20% increase of maize size planted in hectares from regime (2003-2007) to regime (2007-2011), 11% increase from regime (2007-2011) to regime

Table 14 Food crop production across the state by Regimes

(2011-2015) and 9.3% increase from regime (2011-2015) to 2015 to date. For maize yield measured in metric tons, there is 53.6% increase from regime (2003-2007) to regime (2007-2011), 22.9% increase from regime (2007-2011) to regime (2011-2015) and 31.6% increase from regime (2011-2015) to 2015 to date.

For cassava size planted in hectares, 7.1% increase from regime (2003-2007) to regime (2007-2011), -2.1% decrease in regime (2011-2015) and a rise of 10.2% from regime 2015 to date. And finally for the Cassava yield measures in metric tons, 48.4% increase from regime (2003-2007) to regime (2007-2011), 20.9% increase in regime (2011-2015) and 6% increase from regime 2015 to date.

Food Crops Production:	2003-2007	2007-2011	2011-2015	2015 to date
Maize (size planted in '000ha)	712.15	726.56(2.0%)	817.32	900.96
Maize (Yield in '000mt)	1,287.83	2,773.78 (53.6%)	3,596.90	5,257.86
Cassava (size planted in '000ha)	786.62	846.72	829.71	923.56
Cassava (Yield in '000mt)	7,889.88	15,282.70	19,323.30	20,565.30



Food Crops Production

Figure 16 Food crop production by regime.

Tress crops production

We observed from the table below that in the year 2007-2011, cocoa (seedlings) surpassed all other available tree crop production in

Oyo State. The table also shown the percentage increase and decrease across all the tree crops production regime. We experienced much of the decrease from regime 2011-2015 in cocoa, oil palm and cashew seedlings.



Figure 17 Tree crop production by regime.

Table 15 Tree crops production across the state by regimes

Tree crops production:	2003-2007	2007-2011	2011-2015	2015 to date
Cocoa (seedlings)	3,406,730	4,500,000	1,030,000	240,000
		(24.30%)	(-77.1%)	(-76.7%)
Oil-palm (seedlings)	188,750	215,000	20,000	50,939
		(12.2%)	(-90.6%)	(60.7%)
Cashew (seedlings)	131,250	202,250	20,000	32,000
		(35.1%)	(-90.1%)	(37.5%)
Cocoa (size planted)	32,	179,832.19	185,717.19	
		(26.5%)	(3.2%)	
Oil-palm (size planted)	123,397.14	158,836.08	-	
		(22.3%)		
Cashew (size planted)	673,148.14	771,352.03	849,837.07	
		(12.7%)	(9.2%)	
Cocoa (yield)	37,904.63	42,881.28	51,935	
		(11.6%)	(17.4%)	

Fisheries production

Among all other fisheries production in Oyo State, Clarias fisheries production gained public attention in the market. And of which is also the highest production in 2011-2015. Similarly, all the Fisheries

production measured in metric tons has a consistent percentage increases across the 2003-2007 regime to 2007-2011 regime, except for Heterotis Fisheries. 2011-2015 regime also has a steady increase across the production but several declined in production was observed in 2015 to 2019 regime.



Fisheries Production

Figure 18 Fisheries production by regime.

 Table 16 Fisheries production across the state by regimes

Fisheries production (Mt)	2003-2007	2007-2011	2011-2015	2015 to date
Clarias	45,948.00	49,956.00	80,176.20	75939.1
		(8.0%)	(37.7%)	(-5.6%)
Tilapia	15,316.00	16,652.00	26,725.40	9,422.68
		(8.0%)	(37.7%)	(-64.7%)
Heterotis	3,063.20	2,648.47	5,345.08	252.24
		(-15.7%)	(50.5%)	(-95.3%)
Catfish	765.8	832.6	1,336.27	388.03
		(8.0%)	(37.7%)	(-71.0%)
Lates	3,982.13	4,329.51	6,948.60	9,395.48
		(8.0%)	(37.7%)	(26%)
Gymnarchus	3,675.81	3,996.47	6,414.09	7,344.02
		(8.0%)	(37.7%)	(12.7%)
Hepsetus	918.94	999.11	1,603.52	781.02
		(8.0%)	(37.7%)	(-51.3%)
Snake Head	306.3	333.03	534.5	1,091.65
		(8.0%)	(37.7%)	(51%)
Bargus	612.6	666.06	1,147.49	550.92
		(8.0%)	(42%)	(-52%)
Chrysichtys	765.17	832.6	1,336.27	3,208.74
		(8.1%)	(37.7%)	(58.4%)
Synodontes	616.56	666.06	1,069.01	744.52
		(7.4%)	(37.7%)	(-43.6%)
Prawn	612.6	666.06	1,069.01	1,070.62
		(8.0%)	(37.7%)	(0.2%)

Livestock production

On livestock production, more capital was invested on poultry from the year 2003 to 2019. In 2011-2015, it can be generally observed that livestock production of poultry takes the larger capital investment. Also from the table, there is -1.19% decreases in the poultry production from regime (2003-2007) to regime (2007-2011), 41.2% increase from regime (2007-2011) to regime (2011-2015) and 21.5% increase from regime (2011-2015) to 2015 to date. For Goat production, there is 27.6% increase from regime (2003-2007) to regime (2007-2011), 26.3% increase from regime (2007-2011) to regime (2011-2015) and 33.3% increase from regime (2011-2015) to 2015 to date. For sheep livestock production, 7.5% increase from regime (2003-2007) to regime (2007-2011), 15.3% increase in regime (2011-2015) and a decline of -34.5% from regime 2015 to date. For cattle livestock production, -13.7% decrease from regime (2003-2007) to regime (2007-2011), 15.6% increase in regime (2011-2015) and a decline of -62.4% from regime 2015 to date. For Rabbit livestock production, there is 14.5% increase from regime (2003-2007) to regime (2007-2011), 40.2% increase from regime (2007-2011) to regime (2011-2015) and 33.3% increase from regime (2011-2015) to 2015 to date. And finally, for the pig livestock production, -6.45% decrease from regime (2003-2007) to regime (2011-2015) and -51.1% decrease from regime 2015 to date.

Table	17	Livestock	production	across the	state by	y regimes
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Livestock production (Heads of animal)	2003-2007	2007-2011	2011-2015	2015 to date
Poultry	174,571,105	172,518,000	294,200,000	374,550,000
		(-1.19%)	(41.2%)	(21.5%)
Goat	9,538,210	13,182,000	17,896,000	26,844,000
		(27.6%)	(26.3%)	(33.3%)
Sheep	10,362,000	11,201,000	13,221,000	9,831,500
		(7.5%)	(15.3%)	(-34.5%)
Cattle	17,059,700	15,005,000	17,787,000	6,680,500
		(-13.7%)	(15.6%)	(-62.4%)
Rabbit	143,715	168,100	280,93 I	421,397
		(14.5%)	(40.2%)	(33.3%)
Pig	10,408,000	9,777,000	9,887,500	4,831,250
		(-6.45%)	(1.1%)	(-51.1%)



Figure 19 Livestock production by regime.

Other information on Agricultural sector are as follows:

In 2011-2015, 10000 metric tons capacity of Mega Silo Constructions was made available in Oyo Central Senatorial Division.

On Tractors procurement, 90 tractors with full implementation was provided in 2003-2007, 40 tractors with full implementation in 2007-2011 and 338 tractors was made available in 2011-2015.

Agricultural loans disbursements

In 2003-2007, 2007 - 2011 and 2011-2015, Oyo State Government gave N296,800,220 to 3773 farmers, N433,913,550 to 3064 farmers and N1,009,382,010 to 5119 farmers respectively. A further probe into the Agric sector reveal that the ratio of farmers to available tractors is 1:4000 while 2-4 bags of fertilizers is the average number of fertilizers available to a farmer. Storage facilities across the state are in Offa meta (OYO), Ayete, Saki, Kisi and Iseyin. Details on the capacity of these silos were not available in the Ministry. The current agricultural output in major crop production, Total length of access road across the farm settlement and the number of farm settlement by Local Government were also presented in the graph below;



Figure 20 Agricultural output in major crop production in 2017.



Figure 21 Total length of access road tarred across the farm settlement.



Figure 22 Number of farm settlement by LGAs.



Figure 23 Tractors procurement by Regimes.



Figure 24 Loan disbursement to farmers by regimes.







Figure 26 Average proportion of loan given to a farmer by regimes.

Ministry of trade and investments

BOLA IGE international business complex

It can be seen from the table below of what made up of Bola Ige International Business Complex in terms of Textiles from the period of 2003 -2007 regime to 2011-2017 regime. We observed that Bukateria Business complex for Textiles were the highest paid or charges by the customers for business in 2011-2017 regime. Also from the table, there is 60.53% increase of 5x10 complex for textiles from regime (2003-2007) to regime (2007-2011) and 60% increase from regime (2007-2011) to regime (2011-2017). For 10x10 complex for textiles, there is 66.67% increase from regime (2003-2007) to regime (2007-2011) and 60% increase from regime (2007-2011) to regime (2011-2017). For Bukateria complex for textiles, there is 75% increase from regime (2003-2007) to regime (2007-2011) and 57.14% increase from regime (2007-2011) to regime (2011-2017). For Warehouses for textiles, there is 93.13% increase from regime (2003-2007) to regime (2007-2011) and -62.50% decrease from regime (2007-2011) to regime (2011-2017). For Containers for textiles, there is 93.13% increase from regime (2003-2007) to regime (2007-2011) and -89.58% decrease from regime (2007-2011) to regime (2011-2017). For small offices for textiles, there is 76% increase from regime (2003-2007) to regime (2007-2011) and 54.55% increase from regime (2007-2011) to regime (2007-2011) and 54.55% increase from regime (2007-2011) to regime (2011-2017). For Big offices for textiles, there is 62.5% increase from regime (2003-2007) to regime (2007-2011) to regime (2007-2011). The Summary of Bola Ige Business Complex across regime was also captured in the bar chart below in Figure 27.

Bola Ige International Business Complex



Figure 27 Shop-types and rents paid by regime.

 Table 18 Shop-types and rents paid by regime

Shop types	2003-2007	2007-2011	2011-2017
5x10	1500	3800	9500
		(60.53%)	(60.00%)
10×10	3000	9000	22500
		(66.67%)	(60.00%)
Bukateria	30000	120000	280000
		(75.0%)	(57.14%)
Warehouses	8250	120000	45000
		(93.13%)	(-62.50%)
Containers	8250	120000	12500
		(93.13%)	(-89.58%)
Small Offices	12000	50000	110000
		(76.0%)	(54.55%)
Big Offices	30000	80000	160000
		(62.5%)	(50.0%)
Clinic	30000	120000	200000
		(75.00%)	(40.00%)

The pie chart in Figure 28 revealed the average period of years given to the customers to pay off or used up of land before the usual payment begins for privately developed business across the regimes. 10 years grace was maintained in 2003-2007 and 2007-2011 regimes. It was then extended to 12 years in 2011-2017 regime

Government generated revenue	2003-2007	2007-2011	2011-2017
5x10	209664000	531148800	1327872000
10x10	230112000	690336000	1725840000
Bukateria	11520000	46080000	107520000
Warehouses	108108000	1572480000	589680000
Containers	1051380000	15292800000	1593000000
Small Offices	46656000	194400000	427680000
Big Offices	216000000	57600000	1152000000
Clinic	1440000	5760000	9600000



Figure 28 Average pay off by privately developed structures by regime.

Bola Ige Int'l Market Government Revenue



Figure 29 Estimated revenue from Bola Ige market by regime.

Adamasingba business complex

Lock shop of N36,000 was only accounted for by the Adamasingba complex in 2010. Any Open space in the same environment charged N12,000 from 2003 to 2013 and was increased to N60,000 from the year 2014 to 2017.

Oke Bola business complex

Oke Bola complex revealed that the Oyo State Government collected a sum of fifteen thousand naira (N15,000) for Lock shops from the years 2003 to 2009, Eighteen thousand naira (N18,000) from 2010 to 2013 and Sixty thousand naira from 2014 to 2017. More so, every other shops in Oke Bola collected a sum of six thousand naira only (N6,000) across the regimes till date.

Scout camp

N50000 was collected for Locked Shops across all the years (2003-2017) in the research. N150000 was collected for Restaurant from 2003 to 2017. N3500 per square meter was charged for any available space in the Warehouse. N1500 was charged per square meter for every Relaxation area acquired by the marketers. Finally, there is no payment or charges for Open Stalls and Butchers.

UMBC Ogbomoso multipurpose complex

The table below revealed that UMBC Ogbomoso Multipurpose Complex from the period of 2003 - 2007 regime and 2011-2017 regime, the multipurpose complex maintained the same charges or payments. We observed that warehouse was the highest paid complex for trading business across all the regimes. Also from the table, there is 38.89% increase of Type A shops from regime (2003-2007) to regime (2007-2011) and -38.89% decrease from regime (2007-2011) to regime (2011-2017). For Type B shops, there is 33.33% increase from regime (2003-2007) to regime (2007-2011) and -33.33% decrease from regime (2007-2011) to regime (2011-2017). For Type C shops, there is 37.5% increase from regime (2003-2007) to regime (2007-2011) and -37.5% decrease from regime (2007-2011) to regime (2011-2017). For Type D shops, there is 37.5% increase from regime (2003-2007) to regime (2007-2011) and -37.5% decrease from regime (2007-2011) to regime (2011-2017). For Double shops, there is 92% increase from regime (2003-2007) to regime (2007-2011) and -92% decrease from regime (2007-2011) to regime (2011-2017). For Meat shops, there is -46.67% decrease from regime (2003-2007) to regime (2007-2011) and 46.67% increase from regime (2007-2011) to regime (2011-2017). And finally, Warehouse has 37.5% increase from regime (2003-2007) to regime (2007-2011) and -37.5% decrease from regime (2007-2011) to regime (2011-2017). More so, below is the bar chart summary of the UMBC Ogbomoso Multipurpose complex revealing among others, the Warehouse as the highest paid business environment.



Figure 30 Government rates UMBC market, Ogbomosho by regimes.



Figure 31 Estimated revenue from UMBC market by regime.



Figure 32 Total number of shops available at the five business complexes.

 Table 20 Fixed Government generated rates for UMBC Market, Ogbomosho

UMBC Ogbomoso	2003-2007	2007-2011	2011-2017
Type A Shops	22000	36000	22000
		(38.89%)	(-38.89%)
Туре В	16000	24000	16000
		(33.33%)	(-33.33%)
Туре С	6000	9600	6000
		(37.5%)	(-37.50%)
Туре D	30000	48000	30000
		(-37.50%)	(-37.50%)
Double	50000	96000	50000
		(92.0%)	(-92.0%)
Meat Shop	180000	96000	180000
		(-46.67%)	(46.67%)
Warehouse	450000	720000	450000
		(37.50%)	(-37.50%)

 Table 21 Estimated Government generated revenues from UMBC Market,
 Ogbomosho

Government generated revenue (UMBC)	2003-2007	2007-2011	2011-2017
Type A Shops	168960000	276480000	168960000
Туре В	73728000	110592000	73728000
Туре С	28800000	46080000	28800000
Туре D	17280000	27648000	17280000
Double	43200000	82944000	43200000
Meat Shop	8640000	4608000	8640000
Warehouse	21600000	34560000	21600000

 Table 22 Total number of shops available at the five business complexes

Business company	Total number of shops
Oke Bola Business Complex	86
Adamasingba Business Complex	170
Bola Ige International Business Complex	7678
Scout Camp	1159
UMBC Ogbomoso	388

Table 25 Key performance indicators for road construction (II)

Cooperative societies

Table 23 Number of cooperative societies registered by regime

Key performance indicators	Year		
Regimes	2003-2007	2007–2011	2011-2014
Number of Cooperative Societies Registered	2674	2078 (-22%)	3464 (66%)
Figure (percentage increase), figure (percentage decrease)			

The was a 22% decrease in the number of cooperative societies registered in Oyo Sate in the year-interval 2003-2007 to 2007-2011 but an increase of 66% in the year-interval 2007 - 2011 to 2011 - 2014.



Figure 33 Number of cooperative societies registered by Regime.

Road construction

Table 24 Key performance indicators for road construction

Key performance indicators	Regimes		
Road	2003-2007	2007–2011	2011-2017
I.Total No. Constructed/ Rehabilitated	69	91 (32%)	134 (42%)
2.Total Length Constructed	83.05km	59.55km (-28%)	27.65 (-54%)
3.Total Length Rehabilitated	394.50km	184.34km (-53%)	256.495km (39%)
Figure (percentage	e increase), figure	e (percentage decrea	se)

Table 24 shows the key performance indicators for road construction for year intervals; 2003-2007, 2007-2011 and 2011-2017. There was a 32% increase in the total number of roads constructed/ rehabilitated in the year-interval 2003-2007 to 2007-2011. There was 42% increase in the year 2007-2011 to 2011-2017. Moreover, there was a 28% decrease in the total length of road constructed in the year-interval 2003-2007 to 2007-2011 and a 54% decrease in the year 2007-2011 to 2011-2017. There was also 53% decrease in the total length of road rehabilitated in the year interval 2003-2007 to 2007-2011 and a 54% decrease in the total length of road rehabilitated in the year interval 2003-2007 to 2007-2011 to 2011-2017. This information is shown in the histogram below.

Key performance indicators	Year		
Road	1999-2003	2003-2007	2007-2011
I.Total No. of Roads	29	8 (-72%)	47 (488%)
2.Total Length of Road	N/A	N/A	N/A
a. Single Lane Road	208.14km	48.47km (-77%)	332.83km (587%)
b. Dual Carriageway	208.14km	32.27km (-85%)	313.66km (872%)
c.Total Cost of Road	₩4,262,365,287.73	₩4,308,247,460.74 (1%)	₩26,677,854,266.92 (519%)



Figure 34 Key performance indicators for road construction (I).

Table 25 shows the key performance indicators for road construction for the year intervals; 1999 - 2003, 2003 - 2007 and 2007 - 2011. There was 72% decrease in the total number of roads constructed in the year-interval 1999-2003 to 2003-2007 but a 488% increase in the year-interval 2003 - 2007 to 2007-2011. There was 77% decrease in the number of single lane roads in the year-interval 1999 - 2003 to 2003-2007 and an increase of 587% in the year-interval 2003 - 2007 to 2007-2011. For the dual carriageway, there was 85% decrease in the year 1999 -2003 to 2003-2007 but an increase of 872% in the year-interval 2003-2007 to 2007 - 2011. There were 1% and 519% increase on the total cost of road construction in the year intervals; 1999-2003 to 2003 - 2007 and 2003-2007 to 2007-2011 respectively. The diagrammatic representation of the information in the table is given below:



Figure 35 Key performance Indicators for road construction (II).



Figure 36 Estimated cost of road construction by regime.

Circular road network

Progress made so far on the circular road network since 2003 to date was a construction of 32km length out of 110km starting from Lagos-Ibadan end to Egbeda end at Badeku. The company handling this construction is presently doing its clearing and earthworks. Hence, the total length of roads constructed across the state from 2003 to date stood at 522.2km with 15 Nos and 550 m span as the number of bridges and width of bridges constructed across the state from 2003 to 2017 respectively. Due to the suspicion that this could be used for political reasons, the Ministry decided not to release the yearly breakdown of this indicators. We also experienced this limitation from the Pacesetter Transport Services.



Figure 37 Proportion contracted from the circular road network.

Environment

Table 26 Key performance indicators for environment by regime

Key performance indicators	Regimes		
Road	2003-2007	2007-2011	2011-2015
I.Procurement of Refuse Vehicles	20	35 (75%)	40 (14%)
2. Procurement of Skip Bins	115	552 (380%)	1120 (103%)
3. Job Creation through Solid Waste	-	75	128 (71%)

Figure (percentage increase), figure (percentage decrease)

There were 75% and 14% increase in the number of refuse vehicles procured for the Ministry of Environment in the year-intervals; 2003-2007 to 2007-2011 and 2007-2011 to 2011-2015 respectively. Percentage increase of 380% and 103% were recorded for the number of skip bins procured for the year-intervals as well. 71% increase was recorded for the creation of jobs through solid waste in the year-interval 2007-2011 to 2011-2015. The diagram below shows the information for the key performance indicators considered.



Figure 38 Key performance indicators for environment by regime.

Findings

Relying on the available data from the key ministries in the Oyo state secretariat and the governor's office, we can confidently assert that the government in power has made some significant improvements in various sectors of Oyo state economy. This is particularly noticeable in the Ministries of Education and health where data was available. In the ministry of health, the per capita number of health workers has reduced from 1 doctor to 38,489 persons in 2006 to one doctor to 9,010 persons in 2008, also one nurse/midwife to 3,439 persons to 1,735 persons in 2008. The pattern is the same for other health worker. This is reflective of the government efforts in increased recruitment of health workers and number of health infrastructures. In the education sector, the performance of the students in WAEC examinations has increased exponentially. This is also a direct effect of increase in the recruitment of teachers, increase in number of classrooms, positive adjustment in school structure and improvement in teacher's welfare. Our findings have revealed that the state government can generate large amount of revenue from the various business complexes located all over the state. Notable among them is the Bola-Ige market. A lot of improvements have also been made in the agricultural sector with the procurement for many tractors for farmers. The number of tractors rose from 40 in 2007-2011 to 338 in 2015-2017 period. Our findings revealed that Oyo state farmers are more interested in poultry farming and rearing of goats.

On road construction, the length and number of roads constructed between 2015-2017 is more that 400% higher than that constructed in 2007-2011 and 2012-1015. It is gratifying to note that the state government has made tremendous achievements in many other areas to improve the welfare of Oyo state people but such activities were

not recorded or were not documented at all. This can be seen in the followings:

Recommendations

It was our intention to cover as many sectors as possible in this exercise, but our inability to collect relevant data due to lack of record keeping culture, over summarized data or probably deliberate attempt not to release data.

We therefore recommend that:

- 1. The research, planning and statistics (PRS) units in the various ministries should be made functional and effective in their operations by appointing qualified statisticians as the head.
- 2. Capacity building for the staff of the PRS units in highly necessary. This will further made them appreciate the power of statistics in highlighting the achievements of the government and realize the importance of record keeping culture in order to monitor and evaluate government policies and programmes.
- 3. There is also a need for comprehensive baseline data gathering in collaboration with the state Bureau of Statistics.
- 4. Governments at all levels should embark on building a very viable information system in order to have adequate statistical

Appendices

information for designing a formidable social and economic policy.

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Conflicts of interest

The authors declared that there are no conflicts of interest.

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POTENTIALS AND OPPORTUNITIES AGRICULTURE

Opportunities

Crop Production

- Mechanized farming Agricultural value chain expansion
- Adoption of greenhouse technology for year-round vegetable production
- Partnership with commercial farm operators for satellite farms for the new integrated agric model of the state.

Farm Produce Aggregation & Trade
Establishment of primary and secondary storage centers

Agro- Input Business

- Establishment of businesses focused on seed, fertilizer and agrochemical distribution
- Equipment Leasing Businesses
- Tractors for mechnised farming Bulldo zers for land clearing
- Local assembling of farming equipment and implements in the State

stment Opportunities in Oyo state









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POTENTIALS AND OPPORTUNITIES MANUFACTURING / INDUSTRIALISATION

Potentials

- P roximity to Lagos sea ports
- · Large pool of skilled and low cost labor
- · Proximity and accessibility to large consumer markets
- · Ongoing in flux of FDIs and transfer of technology
- · Rich human and natural resources typified by a young population with high literacy rate

Transport Links

- · Key transport route between the South West and Northern Nigeria
- · Key transport links to West African markets through its border with Benin Republic

Consumerisation

- · Increasing urban population and consumerisation in the South West and
- · Discounted land prices for the establishment of businesses compared to Lagos





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In vestment Opportunities in Oyo state



POTENTIALS AND OPPORTUNITIES

Opportunities

- Inland Dry Port
- Rail Network
- Airport (Including Cargo Airport)
- Logistics Center
- Ibadan Circular Road
- Transborder Market
- Gem Stone processing and buying center







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Investment Opportunities in Oyo state



POTENTIALS AND OPPORTUNITIES SOCIAL SERVICES – POWER AND ENERGY

Potentials	्रिं Opportunities
 Inland waterways and dams with the possibility of hydroelectric power generation in the State Potential to support the retail distribution of electricity through the manufacturing of electric poles High demand for power in the state 	 Power generation through the establishment of independent power projects and captive power generation Financing of the 3 proposed Independent Power and captive power generation (3,000MW) projects in the State Alternative power generation using the solar powered technology Manufacture/ production of transformers to support rural electrification efforts Potentials to optimize dams and rivers in the State for hydroelectric power generation Waste Processing & Conversion (i.e. Waste-to-Wealth)
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