DISCOVERY

Post pandemic recovery and demographic transformation in Nigeria: A review of policy and alternatives

James Ege Agena[1], Efeurhobo Davis Ochuko[2]

ABSTRACT

We conducted a multilevel review of most recent data from Nigeria's Center for Diseases and Control (NCDC) (2021) and Nigeria's Demographic and Health Surveys (NDHS) data from the 2003, 2008, 2013, 2018, 2020 and 2021 in relation to the question regarding post pandemic recovery. Findings suggest that trends in demographic transformation have been a missing policy agenda in post pandemic recovery. To fill this gap, the study made policy recommendations and proposes a demographic transformation model as alternative policy frame for post pandemic recovery and possible mitigation of new wave of COVID-19 outbreak.

Keywords: COVID-19, Demographic transformation, Post Pandemic Recovery, Nigeria

1. INTRODUCTION

Demographic transformation has become an important post pandemic recovery tool especially among the densely populated low-income countries such as Nigeria Africa's most populous nation. This is partly because of the insights it offers in understanding how managing human population in the era of pandemic is essential to mitigate resurgence of pandemic and economic meltdown. The population of Nigeria was 212,935,086 as of Tuesday, November 2, 2021, based on Worldometer elaboration of the latest United Nations data. Nigeria's 2020 population is estimated at 206,139,589 people at mid-year according to UN data. The country's population is equivalent to 2.64% of the total world population (Worldometer, 2021). With the recent socio-economic crisis of COVID-19 pandemic alongside the broader rise of lockdown, deaths, unemployment, displacement, quarantine and hospitalization across the country, it appears that demographic transformation is essential in post pandemic recovery.

The United Nations had projected that the global economy lost nearly $8.5 trillion in output due to the COVID-19 pandemic as the economic slump wiped out nearly all gains of the past four years (UN, 2021). The consequences of COVID-19 as Cadell, (2020) observed, transcend health problems and extends to issues of demographic, economic, psychological, emotional and social risks,

which are faced by health service consumers on one hand, healthcare workers and the general public on the other. Such concerns partly informed the analytical gap this study seeks to fill. Recent studies have recounted the need for post COVID-19 recovery (World Bank, 2020; WHO, 2020; Loayza, 2020; Onuigbo, 2021; Aisen et al., 2021; Jeremiah, 2021; UN, 2021). Essentially, problems associated with decrease of population, hunger, internal displacement and vulnerability have been central to post pandemic recovery (FAO, 2020).

Yet in Nigeria like most developing countries, issues regarding the effects of demographic transformation in contexts of post pandemic responses have been a marginal factor. Put differently, how post pandemic recovery is linked to demographic transformation in Nigeria remains a missing research agenda. The UN (2021) highlight that efforts countries will have to make to mitigate the pandemic impact is very long. In the context of this review demographic transformation is key. Recent studies point out that demography have been essential tool in COVID-19 response (Dominelli, 2020; Scarnera, 2020; Pandya and Redcay 2021). The Nigerian scenario has not been adequately resolved despite recent findings by Nigerian Centre for Diseases and Control (NCDC, 2021). Nigeria's major institution for disease control on the rise of incidence of the pandemic. One key problem in Nigeria has been the links between post pandemic recovery and demographic transformation. Recent discussions in Nigeria particularly since the outbreak of the pandemic have drawn attention of policy makers to this concern (Campbell & McCaslin 2020; Games, 2021; NCDC, 2021).

In the context of this review, COVID-19 recovery explores the various ways in which Nigeria could recover from the effects of the global pandemic. In particular, who, at the same time, could play what roles in the various processes of recovery, whether with regard to policy formulation, implementation or adaptation to various changes arising from the pandemic. Thus, calls for post pandemic recovery have been important as evidence rises regarding growing socio-economic challenges largely driven by the pandemic such as loss of lives, property, jobs, livelihoods etc. Recent report of the NCDC, (2021) suggests persistent rise of infections across the country with a total number of 2276 deaths recorded in 36 states and the Federal Capital Territory. This underscores the risk factor associated with the pandemic especially gender vulnerability (Kanem, 2020).

In recent times, there is considerable and diverse literature on dimensions, effects and challenges of the pandemic including questions of socio-economic rehabilitation and strategies for exiting the pandemic (Anderson et al., 2020; Dominelli, 2020; Onuigbo, 2021). Yet the practice, meaning, scope and implications of post pandemic recovery involving issues of demographic transformation remains contested. Essentially, the broader perspective within which post pandemic recovery is located is increasingly changing, bringing new challenges to the understanding and practice of mitigation of the pandemic particularly in contexts related to recovery. Against this backdrop, this review takes a critical look at demographic transformation in view of the contexts associated with post pandemic recovery. The paper proposes policy and research agenda centered on demographic transformation.

Post Pandemic Recovery and Transformation Theory

A number of recent theoretical and empirical studies have discussed post pandemic recovery (Aro-Gordon et al., 2021). In their study, linked post-pandemic recovery strategies to the revitalization of lifestyle entrepreneurship, pointing out how new entrepreneurial skills and activities could emerge as a modality for post pandemic recovery.

The phenomenon of crisis such as pandemic is inextricably linked to divergent outcomes, which implies that, there are various effects of the pandemic; economic, political, social, cultural etc. Such effects, are evident in social or political life and in particular, act as key determinant of economic development, including economic relations or production methods both at the national and global levels. An analysis of economic crisis, in the last few centuries, has revealed a somewhat heterogeneous causes that contribute to their emergence and therefore an equally wide variety of ways to overcome them (Loan, 2012). Such efforts at overcoming the pandemic have made the recovery theory a useful tool of analysis in post pandemic recovery and demographic transformation debate. The emphasis on the mutual interconnections between post pandemic recovery and demographic transformation not only underscores some neglected aspects of post pandemic discourse but also better accounts for the specific socio-economic perspective on the pandemic recovery. This article follows the theoretical models of economic recovery in recession and depression phases (Loan, 2012), which reflects a centrality of building social and economic as well as demographic structures in post pandemic order.

Further, much of the recovery debates in post pandemic era have been unable to sufficiently link the demographic component in rebuilding an inclusive social order nor provide a discourse of what types of social structures are transformed. Much of the prevailing theoretical debates have also failed to address the role of covert forms of population distortion such as death rates and displacement in the era of pandemic. Our analysis offers a theoretical model central to post pandemic recovery by focusing particular attention on how to build and shore up several populations adversely affected by the pandemic. It focuses particular

attention on how the recurrent problems of pandemic could be resolved against vulnerability and in particular puts forward an alternative conceptions of post pandemic transformation, thus engaging substantially with the question of socio-economic transformation.

We draw on some of the theoretical perspective of the economic recovery in recession and depression phases and, in many respects, share their perspectives on the centrality of post pandemic recovery and demographic transformation. In this context, this article aims to make a distinct contribution to the broader debate and literature, which is relevant to both an understanding of the specific contexts of the – pandemic and possible post pandemic recovery. Thus, our theoretical approach identifies the relevance of post pandemic recovery as necessary for policy debates. Further the article elaborates on theoretical relevance of recovery policies in the construction and maintenance of a new social order. Here an alternative theoretical framework for understanding the persistence of economic recession vis-à-vis post pandemic transformation is developed, building on the interconnected perspective of recovery.

2. METHODOLOGY

Data and Methods

We reviewed most recent data from Nigeria's Center for Diseases and Control (NCDC, 2021) and Nigeria's Demographic and Health Surveys (NDHS) data from the 2003, 2008, 2013, 2018, 2019, 2020 and 2021 in relation to the question regarding post pandemic recovery. The aim is to understand possible linkages between post pandemic recovery and demographic transformation. Our analytical approach employs a demographic accounting approach that highlights linkages between population change, in terms of birth rate death rate, migration and implications for post pandemic recovery policies. Our review is between 2019 to 2021, this period is important as it marked the peak period of the effects of the pandemic.

The Nigerian Context

Nigeria is Africa's largest economy and a multi-ethnic society with three major ethnic groups namely Igbo, Hausa/Fulani and Yoruba. Nigeria had a population of about 140 million persons in 2006 (Census, 2006). The current population of Nigeria is 212,935,086 as of Tuesday, November 2, 2021, based on Worldometer elaboration of the latest United Nations data (Worldometer, 2021).

The first case of coronavirus disease was recorded on the 27th of February 2020 in Lagos State. The Nigeria Centre for Disease Control (NCDC) has been the body at the centre of control of the pandemic providing guidance, care and information regarding preventive measures (NCDC, 2021). The study of the Nigerian context aims not only to take stock of the various processes post pandemic recovery but to understand the diverse processes in which government policies and programmes have been framed to meet the professional and practical needs of social workers overtime.

Since the outbreak, adequate attention has not been given to issues of population control in contexts that could aid mitigation of the pandemic. In the alternative, the Nigerian experience has been devastating as the situation continued to get worse with increasing cases of infection, deaths and spread of the disease despite some of the measures adopted by both federal and state governments. For instance, on the 23rd of August 2021, 565 new confirmed cases and 8 deaths were recorded in Nigeria. Till the end of August, 187588 cases have been confirmed, 168818 cases have been discharged and 2276 deaths have been recorded in 36 states and the Federal Capital Territory (NCDC, 2021).

The 565 new cases are reported from 14 states- Lagos (205), Rivers (73), Ondo (63), FCT (53), Oyo (53), Ekiti (37), Delta (24), Edo (20), Benue (12), Bayelsa (6), Kwara (6), Osun (6), Ogun (5) and Adamawa (2). Thus, the complex effects of the pandemic have been severe across various sectors including health, education, religion, as well as economic wellbeing of the people. A multi-sectoral national emergency operations centre (EOC), activated at Level 2, continues to coordinate the national response activities (NCDC, 2021).

Table 1 above shows the confirmed cases of COVID-19 by States. This has implications for the management of Nigeria's growing population. For instance, in their study, Nyong et al., (2021) found that the economic shock created by the pandemic is expected to trigger Nigeria's worst recession in four decades. Nigeria's economy shrank 6% in the second quarter of 2020, the first contraction since the first quarter of 2017 and the steepest since the first quarter of 2004.

Table 1 Confirmed Cases of COVID-19 by State

States Affected	No. of Cases (Lab Confirmed)	No. of Cases (on admission)	No. Discharged	No. of Deaths
Lagos	70,845	11,813	58,561	471
FCT	20,419	371	19,874	174
RIVERS	9,514	1,183	8,214	117
Kaduna	9,205	13	9,126	66
Plateau	9,135	22	9,055	58
Oyo	7,829	511	7,163	155
Ogun	5,186	221	4,891	74
Edo	5,133	127	4,816	190
Kano	4,036	8	3,918	110
Ondo	3,873	280	3,523	70
Akwa Ibom	3,739	764	2,943	32
Kwara	3,441	272	3,112	57
Delta	2,826	195	2,556	75
Osun	2,673	28	2,573	72
Enugu	2,540	10	2,501	29
Nasarawa	2,413	29	2,345	39
Gombe	2,235	34	2,157	44
Katsina	2,164	29	2,100	35
Ebonyi	2,047	12	2,003	32
Anambra	2,043	56	1,968	19
Abia	1,791	8	1,760	23
Imo	1,697	14	1,645	38
Bauchi	1,553	2	1,534	17
Benue	1,407	56	1,327	24
Borno	1,344	1	1,305	38
Ekiti	1,317	229	1,073	15
Adamawa	1,136	6	1,098	32
Taraba	1,059	30	1,005	24
Bayelsa	991	45	920	26
Niger	964	30	914	20
Sokoto	794	4	762	28
Jigawa	562	25	521	16
Yobe	501	2	490	9
Cross River	470	15	434	21
Kebi	450	42	392	16
Zamfara	251	7	236	8
Kogi	5	0	3	2

Source: NCDC, (2021) Note: The data is as at August, 2021

In a bid to mitigate the pandemic, on the 8th of March 2020, the federal government set up the Presidential Task Force on COVID-19 to coordinate and oversee Nigeria's intergovernmental multi-sectoral efforts to curb the spread and mitigate the impact of the pandemic. Beyond the Task Force, individuals from the private sector formed coalition to support the government's response to the pandemic with the establishment of isolation centers. For instance, Eribo, (2020) observed that in Lagos there was a -110-bed isolation centers and the provision of palliatives to many Nigerians during the lockdown. A key post recovery measure was free will donations in cash and in kind by local philanthropists and multilateral aid agencies, including the EU and the UN, who made free will donations to the Nigerian government (Onalu et al., 2020).

In the month of July 2020, the federal government adopted economic blue print at post COVID recovery namely, The Economic Sustainability Plan, which aimed to address the economic challenges of the pandemic, as the federal government approved the sum of $5.9 billion (N23 trillion) (Nyong et al., 2021) stimulus package. The plan costs roughly 1% of GDP and is intended to stimulate and diversify the economy, retain and create jobs and extend more protections to the poor (Nyong et al., 2021). Among others, Olanrewaju, (2020) highlights that the plan seeks to:

Stimulate the economy by preventing business collapse and ensuring liquidity,

Retain or create jobs in key areas like agriculture and housing,

Undertake growth enhancing and job creating infrastructural investments,

Promote manufacturing and local production and

Extend protection to the very poor and other vulnerable groups.

A number of key projects are also included in the plan. Some of the biggest are:

A mass agricultural programme that is expected to bring between 20,000 and 100,000 hectares of new farmland under cultivation in every state,

An extensive public works and road construction programme,

A mass housing programme that is expected to deliver up to 300,000 homes annually,

the installation of solar home systems for up to 5 million households and

A strengthening of the social safety net.

Also proposed is support for micro, small and medium enterprises, an 80% reduction in the registration fees for food, drugs, cosmetics, medical devices and chemicals by the National Agency for Food and Drug Administration and Control (NAFDAC) as well as a waiver of administrative charges for product license renewals (Olanrewaju, 2020). The government also plans to set up a survival fund to give payroll support to small and medium-sized enterprises and to promote the use of domestic gas as well as technology hubs. Ministers whose portfolios these fall under will be responsible for supervising implementation of the plans (Olanrewaju, 2020).

Despite the post recovery plan of the federal government, the specific interconnections with demographic transformation are less clear. Relatedly, the broader adverse effects of the pandemic are generally felt in many ways. With the resurgence of the second wave, new threats and possible, space for recovery becomes a growing concern (UN, 2021). In COVID-19 recover discourse, there has been increasing attention to issues of loss of lives, loss of jobs, displacements, loss of means of livelihoods, migration and various forms of damage etc (Olanrewaju, 2020), which makes recovery an important research agenda. In particular, such concerns seek to address the inclusive and participatory development implications of new approaches which accounts for the basis of demographic transformation.

Table 2 Summary of the Nigerian COVID-19 Scenario in Nigeria (Jan 2020–August 2021)

Confirmed Cases	Active Cases	Discharged Cases	Samples Tested	Death
187,588	16,494	168,818	2,727,834	2,276

Source: NCDC, (2021)

Thus, in policy and academic discourses, there have been gaps on the role of demographic transformation in post pandemic recovery. This is consequent on the fact that there is a disconnect between more academic and practical treatments of the subject and in clear terms, the intervention-oriented approaches to pandemic recovery, which remains a missing research agenda (Nyong et al., 2021), even as recent scholarship seeks to bridge this gap, it appears there are still growing complex problems regarding demography and COVID-19 recovery nexus. Based on the growing concern, this study proposes a research agenda which builds on demographic transformation to post pandemic recovery.

Demography and Post Pandemic Recovery Nexus

A review of Nigeria's demography is essential to understand possible interconnections with post pandemic recovery. Nigeria's population has been increasing rapidly for at least the last 5 decades due to very high birth rates. Growth was fastest in the 1980s, after child mortality dropped rapidly, which slowed slightly as the birth rate has declined slightly. According to the 2017 revision of the World Population Prospects, the total population was 185,989,640 in 2016, compared to only 37,860,000 in 1950 (World Fact Book, 2019). The proportion of children under the age of 15 in 2010 was 44.0%, 53.2% were between 15 and 65 years of age, while 2.7% were 65 years or older (World Fact Book, 2019). There is a large population momentum, with 3.2 percent growth leading to the projected population (Stonawski et al., 2016; World Fact Book, 2019).

Table 3 Nigeria's Population Structure (1950-2010)

	Total population	Population aged 0–14 (%)	Population aged 15–64 (%)	Population aged 65+ (%)
1950	37 860 000	41.7	55.3	3.0
1955	41 122 000	41.6	55.6	2.8
1960	45 212 000	41.6	55.6	2.8
1965	50 239 000	41.9	55.2	2.9
1970	56 132 000	42.6	54.6	2.8
1975	63 566 000	43.4	53.8	2.8
1980	73 698 000	44.0	53.2	2.8
1985	83 902 000	45.0	52.2	2.8
1990	95 617 000	44.9	52.3	2.9
1995	108 425 000	44.1	53.0	2.9
2000	122 877 000	43.5	53.7	2.8
2005	139 586 000	43.6	53.7	2.7
2010	159 708 000	44.0	53.2	2.7

Source: NDHS. (2015)

3. RESULTS AND DISCUSSIONS

Based on our findings, demographic transformation has implications for post pandemic recovery policy as the multiple data and indictors reviewed in this study suggest. Table 4 shows the structure of total fertility rate Urban and Rural and across the regions. The evidence provided between 2003 to 2018 shows high growth rate. Thus, effective post pandemic recovery should take cognizance of population growth and high fertility rate.

In table 5, total fertility rate including wanted and crude show high rate of fertility between 1960 to 2018. In table 6, fertility data provided by the Demographic and Health Surveys (DHS) show that there is also high fertility rate across Nigeria's 36 states. In table 7, the MICs survey of 2019 further reinforced the rise of fertility rate between 2008 to 2018. Table 8 shows the use and prevalence of contraceptives as seen from multiple sources from UNICEFs State of the World's Children and Child info, United Nations Population Divisions' World Contraceptive Use, household surveys including Demographic and Health Surveys and Multiple Indicator Cluster Surveys from 1982 to 2017 show that there is contraceptive prevalence yet population growth is on the increase. Table 9, provides estimates of crude birth rate; crude death rate; natural change; infant mortality rate per total fertility rate (number of children per woman) between 1950 to 2015, which has exponential increase.

In table 10, data on life expectancy from 1950 to 2015 shows progression in decline of life expectancy. This is not surprising as there is economic hardship in a densely populated Nigeria. This has implications for demographic transformation. Table 11 provides data on the structure of the population (DHS, 2013) (males 87 034, females 89 529 = 176 574) across various age groups, which shows high population growth rate. Against the backdrop of our reviewed data, the linkages between post pandemic recovery and demographic transformation are important especially in the present Sustainable Development Goals (SDG) era, particularly SDG: 3 (Health and Wellbeing) as Nigeria is a developing country with complex health challenges. Essentially, since both SDGs and Agenda 2030 are global development agendas, matching demographic transformation with SDG will provide a more inclusive policy initiative. Thus, there is need to understand how demographic transformation is essential for post pandemic recovery.

Consequently, this study has three inter related implications for policy (i) demographic transformation is an effective post pandemic policy tool (ii) inclusive post pandemic recovery policy would build on structure of Nigeria's demography and (iii) as a global concern post pandemic recovery remains central to mainstream development discourse and constitutes an essential tool for sustainable health which makes demographic transformation essential.

Table 4 Structure of Total fertility rate Urban and Rural and across the regions

Variable	TFR (Wanted TFR) (2003)	TFR (Wanted TFR) (2008)	TFR (Wanted TFR) (2013)	TFR (Wanted TFR) (2015-18)
Nigeria	5.7 (5.3)	5.7 (5.3)	5.5 (4.8)	5.3 (4.8)
Urban	4.9 (4.6)	4.7 (4.4)	4.7 (4.1)	4.5 (4.0)
Rural	6.1 (5.7)	6.3 (5.8)	6.2 (5.3)	5.9 (5.4)
Region – North Central	5.7	5.4	5.3	5.0 (4.7)
Region – North East	7.0	7.2	6.3	6.1 (5.6)
Region – North West	6.7	7.3	6.7	6.6 (5.9)
Region – South East	4.1	4.8	4.7	4.7 (4.3)
Region – South South	4.6	4.7	4.3	4.0 (3.6)
Region – South West	4.1	4.5	4.6	3.9 (3.5)

Source: NDHS, (2018)

Table 5 Total Fertility Rate (TFR) (Wanted TFR) and Crude Birth Rate (CBR)

Year	CBR (Total)	TFR (Total)	CBR (Urban)	TFR (Urban)	CBR (Rural)	TFR (Rural)
1960	47	6.35				
1965–66	45.9	6.44				
1967–69	46.1	6.42				
1970	46.3	6.47				
1971–73	46.7	6.57				
1975	47.2	6.71				
1978–82	47	6.78				
1978–80	47	6.76				
1981–82	46.68	6.78				
1983–86	45.67	6.7				
1987–90	45.9	6.57				
1990	44.2	6.49 (5.8)	34	5.033 (4.8)	40	6.326 (6.1)
1999	43.2	6.13	35.6	4.50	38.5	5.44
2003	42.8	6.04 (5.3)	36.3	4.9 (4.6)	44.5	6.1 (5.7)
2004–07	42.4	5.97				
2008	41.8	5.9 (5.3)	36.8	4.7 (4.4)	42.5	6.3 (5.8)
2013	40.2	5.5 (4.8)	35	4.7 (4.1)	42	6.2 (5.3)
2014–15	39.5	5.57				
2015–18²²	38	5.3	34	4.5	42	5.9

Source: Nigeria Demographic and Health Surveys DHS, (2019)

Table 6 Fertility data as of 2013 (NDHS Program)

State	Total fertility rate	Percentage of women age 15–49 currently pregnant	Mean number of children ever born to women age 40–49
Abuja	3.8	8.3	4.7
Benue	5.2	13.0	6.8
Kogi	4.2	9.4	5.7
Kwara	5.1	7.2	5.2
Nasarawa	5.4	10.8	5.8
Niger	6.1	14.8	5.8
Plateau	5.4	11.2	5.6

Adamawa	5.8	15.6	6.7
Bauchi	8.1	16.9	8.4
Borno	4.7	12.7	5.2
Gombe	7.0	14.3	7.9
Taraba	6.0	10.6	7.1
Yobe	6.6	13.4	7.4
Jigawa	7.6	15.1	7.6
Kaduna	4.1	21.0	5.7
Kano	6.8	12.6	7.7
Katsina	7.4	17.3	8.4
Kebbi	6.7	16.9	8.2
Sokoto	7.0	14.1	7.3
Zamfara	8.4	17.0	8.7
Abia	4.2	7.3	5.0
Anambra	4.2	6.0	4.7
Ebonyi	5.3	9.1	7.1
Enugu	4.8	8.4	5.9
Imo	4.8	8.3	5.0
Akwa Ibom	3.9	5.3	5.4
Bayelsa	4.5	11.3	6.1
Cross River	5.4	9.1	5.5
Delta	4.1	10.6	5.6
Edo	4.4	6.3	5.7
Rivers	3.8	9.5	4.9
Ekiti	4.3	7.0	5.2
Lagos	4.1	7.2	4.3
Ogun	5.4	10.6	4.9
Ondo	5.2	9.1	5.2
Osun	4.1	6.8	4.3
Oyo	4.5	11.9	5.1

Source: Nigeria Demographic and Health Surveys DHS, (2013)

Table 7 Fertility rate by State

Variable	TFR (2008)	TFR (2011) *	TFR (2013)	TFR (2016) *	TFR (2018)
Nigeria	5.7	5.7	5.5	5.8	5.3
Urban	4.7	4.7	4.7	4.9	4.5
Rural	6.3	6.3	6.2	6.3	5.9
Region – North Central	5.4	4.9	5.3	5.3	5.0
Abuja (FCT)	4.0	3.8	4.5	4.6	4.3
Benue	5.9	4.9	5.2	4.8	4.5
Kogi	4.2	3.9	4.2	3.7	4.8
Kwara	4.5	5.1	5.1	4.4	5.2
Nasarawa *	4.7	5.5	5.4	5.7	5.3
Niger	7.5	6.1	6.1	6.4	5.8
Plateau	5.3	4.5	5.4	5.6	4.7
Region – North East	7.2	6.7	6.3	6.4	6.1
Adamawa	6.8	5.6	5.8	5.5	6.1
Bauchi	8.1	8.6	8.1	6.8	7.2
Borno	7.1	6.7	4.7	6.1	5.2

Gombe	7.4	5.6	7.0	7.3	6.6
Taraba	5.9	5.3	6.0	5.5	5.4
Yobe	7.5	7.9	6.6	6.8	5.9
Region – North West	7.3	7.2	6.7	7.3	6.6
Jigawa	7.1	6.7	7.6	8.5	7.1
Kaduna	6.3	7.9	4.1	5.6	5.9
Kano	8.1	7.5	6.8	7.7	6.5
Katsina	7.2	8.2	7.4	7.5	7.3
Kebbi	6.0	7.0	6.7	7.7	6.5
Sokoto	8.7	5.2	7.0	7.3	7.0
Zamfara	7.5	6.5	8.4	7.3	6.4
Region – South East	4.8	5.1	4.7	4.6	4.7
Abia	4.4	5.2	4.2	5.1	4.9
Anambra	5.0	5.7	4.2	4.3	4.7
Ebonyi	5.6	6.1	5.3	5.2	5.4
Enugu	4.4	4.3	4.8	3.8	4.1
Imo	4.8	4.6	4.8	5.1	4.5
Region – South South	4.7	4.9	4.3	4.3	4.0
Akwa Ibom	4.0	4.0	3.9	4.5	3.6
Bayelsa	5.8	6.7	4.5	4.8	4.4
Cross River	5.4	5.8	5.4	4.4	3.7
Delta	4.5	5.3	4.1	5.2	4.4
Edo	5.3	5.3	4.4	3.8	4.8
Rivers	4.3	4.3	3.8	3.3	3.9
Region – South West	4.5	5.1	4.6	4.4	3.9
Ekiti	5.0	4.8	4.3	4.4	4.6
Lagos	4.0	4.7	4.1	4.0	3.4
Ogun	5.4	5.6	5.4	4.5	3.8
Ondo	4.9	3.9	5.2	4.5	4.1
Osun	4.0	4.9	4.1	4.7	3.8
Oyo	5.0	6.4	4.5	4.9	4.5

*Sources: MICS surveys, (2019), NDHS, (2018)

Table 8 Contraceptive prevalence, any methods (% of women ages 15–49)

Year	1982	1990	1994	1999	2003	2007	2008	2011	2012	2013	2016	2017
% of women ages 15–49	6.8 %	6.0 %	13.4 %	15.3 %	12.6 %	14.7 %	14.6 %	14.1 %	13.5 %	15.1 %	20.4 %	13.4 %

*Source: UNICEF's State of the World's Children and Child info. United Nations Population Divisions World Contraceptive Use, household surveys including Demographic and Health Surveys and Multiple Indicator Cluster Surveys. Contraceptive prevalence, any methods (% of women ages 15–49), World Bank Group.

Table 9 Estimates of crude birth rate; crude death rate; natural change; infant mortality rate per total fertility rate (number of children per woman)

Period	Live births per year	Deaths per year	Natural change per year	CBR*	CDR*	NC*	TFR*	IMR*
1950–1955	1 821 000	1 169 000	652 000	46.1	29.6	16.5	6.35	200.7
1955–1960	1 998 000	1 181 000	817 000	46.3	27.3	19.0	6.35	186.6
1960–1965	2 202 000	1 197 000	1 005 000	46.1	25.1	21.0	6.35	172.9
1965–1970	2 431 000	1 244 000	1 187 000	45.7	23.4	22.3	6.35	159.6
1970–1975	2 801 000	1 306 000	1 495 000	46.8	21.8	25.0	6.61	147.3
1975–1980	3 232 000	1 377 000	1 855 000	47.1	20.1	27.0	6.76	134.2

1980–1985	3 642 000	1 467 000	2 175 000	46.2	18.6	27.6	6.76	125.3
1985–1990	4 018 000	1 657 000	2 361 000	44.8	18.5	26.3	6.60	126.0
1990–1995	4 446 000	1 866 000	2 580 000	43.6	18.3	25.3	6.37	126.0
1995–2000	4 984 000	2 075 000	2 909 000	43.1	17.9	25.2	6.17	118.6
2000–2005	5 606 000	2 230 000	3 376 000	42.7	17.0	25.7	6.05	104.0
2005–2010	6 309 000	2 224 000	4 085 000	42.2	14.9	27.3	6.01	89.9
2010–2015							5.74	

*CBR = crude birth rate (per 1000); CDR = crude death rate (per 1000); NC = natural change (per 1000); IMR = infant mortality rate per 1000 births; TFR = total fertility rate (number of children per woman)

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects, 2011

Table 10 Life expectancy from 1950 to 2015

Period	Life expectancy in Years
1950–1955	33.81
1955–1960	35.80
1960–1965	38.13
1965–1970	39.97
1970–1975	42.03
1975–1980	44.29
1980–1985	46.02
1985–1990	45.95
1990–1995	45.87
1995–2000	46.00
2000–2005	46.94
2005–2010	49.75
2010–2015	51.88

Source: UN World Population Prospects year. (2016)

Table 11 Structure of the population (NDHS, 2013) (males 87 034, females 89 529 = 176 574)

Age Group	Male (%)	Female (%)	Total (%)
0–4	17.4	16.7	17.1
5–9	16.8	15.9	16.3
10–14	12.7	11.9	12.3
15–19	8.6	9.0	8.8
20–24	6.7	7.8	7.2
25–29	6.6	8.3	7.4
30–34	5,9	6,2	6,1
35–39	5,2	5,4	5,3
40–44	4,3	4,0	4,2
45–49	3,9	3,7	3,8
50–54	2,6	3,3	2,9
55–59	2,5	2,3	2,4
60–64	2,3	2,0	2,1
65–69	1,5	1,2	1,3
70–74	1,3	1,0	1,2
75–79	0,7	0,5	0,6
80+	1,0	0,8	0,9

Source: NDHS. (2013)