



# Christians, Muslims and Traditional Worshipers in Nigeria: Estimating the Relative Proportions from Eleven Nationally Representative Social Surveys

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## Abstract

**Background** The absence of census data on religious identification in Nigeria since 1963 leaves much uncertainty about the most basic religious composition of the country. It is generally accepted that identification with traditional worship declined over the middle of the twentieth century as identification with Islam and Christianity increased, leaving these the two dominant religious groups in the country. The current relative proportions of Christians and Muslims has often been the subject of conjecture, guesswork and assertion, as have trajectories of growth or decline.

**Purpose** Where researchers have used sound data to address this question, they have often drawn on a single survey, or, if on multiple data sources, it is unclear how the different estimates the data provides are reconciled. This paper seeks to address these gaps to construct a better picture of the religious composition of Nigeria, and to consider the trajectory of change.

**Methods** This study presents data from 11 nationally representative surveys of adults conducted between 1990 and 2018. Surveys include four waves of the World Values Survey, five waves of the Afrobarometer survey, The Pew Tolerance and Tension survey, and the Nigerian General Household Survey of 2010.

**Results** The results show that identification with Christianity is likely to have been the majority among Nigerian adults through this period. Evidence suggests that identification with Christianity was still growing in the first half of the 1990s, to a high point of 69% of the adult population. This growth was associated with the tail of the decline of identification with traditional worship. Thereafter identification with Christianity has declined in proportional terms as identification with Islam has increased. Evidence is consistent with literature that suggests that this change is driven by differences in fertility, rather than by religious identity switching.

**Conclusion and Implications** Trends presented suggest that the Muslim-identified population is likely on track to have become an absolute majority of Nigerian adults, possibly within a decade with widespread implications, including for electoral politics.

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## Introduction

Statistics about the relative proportion of those identifying as Christian or Muslim in Nigeria are deeply contentious, as Afe Adogame explains:

In the past, the politicisation of the census on religious and ethnic grounds resulted in unreliable religio-ethnic demographic data in Nigeria, as population statistics were (and still are) often manipulated for political, economic, and religious ends, not least because such figures constitute one basis for the sharing of national revenue and other resources. That partly explains why religious indices were excluded from the recent national census (2010: 479).

As a consequence of the lack of census data on religious identification in recent years, and the contested figures for the past, 'accurate statistics for each tradition are difficult to come by and are largely a matter of conjecture' (Adogame 2010: 479), and one does find references to dubious sources.

In the past decade, there have been a number of serious attempts to move beyond pure conjecture, though agreement is limited and the guesswork abides. Most of the serious contributions, however, tend to each rely on a single data source, and the results do not always agree. By contrast, those assessments that make use of multiple sources of data, such as the World Christian Database (WCD), have not tended to make their calculations publicly transparent, nor clarified how they have squared the differences between contrasting indicators. Nevertheless, it would be difficult to see in the range of stated assessments any real debate about the relative proportions of Christians and Muslims in Nigeria, despite abiding disagreements.

What is known is that Christians (predominantly in the South) and Muslims (predominantly in the North) form the two largest blocks of religious identities in Nigeria. A substantial body of literature documents, and tries to explain the growth of identification with these two traditions over the course of the twentieth century, which has come at the expense of identification with traditional worship (Horton 1971; Peel 2016). The decline of those identifying as 'pagans' in the colonial census is part of a long term trend, from 50% in the 1931 census, 34% in 1952, and 18.2% in the first census of independent Nigeria in 1963. Over the same time period, identification with Christianity and Islam has grown. Those identifying as Muslim in the census increased from 44 to 47% and those identifying as Christian from 6.2% to 34.6% (Ibrahim 1991: 116). While the census takings of the period have been far from uncontested (Aluko 1965; Ahonsi 1988), the wide painted lines of that picture of religious change through the middle of the twentieth century is recognisable (Horton 1971; Peel 2016). There is a marked increase in identification with Christianity and Islam, though many traditional beliefs and practices continue among those who identify as Christians or as Muslims. It is therefore right to be cautious about describing the change straightforwardly as mass conversion (Ibrahim 1991; Gifford 2015). Even if there is broad agreement to this point, there is widespread disagreement about the proportions of the two largest groups, and about the continuing trends since the middle of the twentieth century.

Figures in the most recent edition of *The World Christian Encyclopedia* (Johnson and Zurlo 2020) draw on figures assembled and updated as part of the World Christian Database (WCD); these put those who identify as Christians on 46.3%, and Muslims on 46.2 and ‘ethnic religions’ on 7.2%. WCD figures predict that both Islam and Christianity will continue to grow as a proportion of the population through to 2050. Their projections predict Christians at that point will make up on 48% of the population and Muslims on 48.7%, both growing at the expense of ethnic religions, down to 2.9% of the population. The editors of the World Christian Encyclopedia provide reasonable methodological reflections on the different sources upon which scholars may draw in order to estimate the different religious populations of the world, as well as some of the issues that crop up as one tries to reconcile sources that disagree (Johnson and Zurlo 2020: 897–914). None of the particular calculations are provided, nor is there any accounting for methodological decisions in any particular case; neither transparency nor replicability are in evidence, which makes social scientific evaluation of how they reached their conclusions impossible.

Hsu et al (2008) found that the WCD makes estimates that are broadly consistent with other data sources, they also note that the Database does seem to overestimate the Christian identification, and expressed concern about what appears to be uncritical acceptance of figures provided by religious groups of their membership. With reference to one denomination in Nigeria McKinnon (2020) has recently found evidence that supports the criticisms offered by Hsu et al (2008). WCD estimates for Anglican identification in Nigeria were found to be dramatically over-estimated due to The Church of Nigeria’s un-evidenced membership claims.

The Pew Research Center project on the changing global religious landscape has also considered Nigeria (Hackett et al 2015). Using estimates derived from the Demographic and Health Survey (DHS) of 2008, adjusted to account for under-represented groups (77), they put Christians on 49.3% of the population and Muslims on 48.8% of the population, with 0.4% unaffiliated and 1.4% “folk religion” (47). How adjustments were made for under-represented groups is not made clear. While the DHS is a very high quality data source, the DHS Survey of 2008 has a greater proportion of Christians than any other recent DHS survey of Nigeria, with 53.6% Christians in the sample. This is a considerably higher than the next highest proportion of Christians in the immediately preceding DHS survey of 2003 which had 47.9% Christians, and stands out even more in contrast to other years: 1990 had 47.6% Christian, and subsequent years have also contained fewer Christians: 2013 had 46.8% and 2018 had 46% Christians (all figures using standard weighting; Boyle et al 2019).

The Pew Research Center’s previous study of Islam and Christianity in sub-Saharan Africa (Lugo and Coopermans 2010) estimated that the proportion of adults who identify as Christian (46%) was lower than that of adults who identify as Muslims; these had an absolute majority (52%, margin of error: 4%). A very important contribution of the study is that the Tolerance and Tension survey found no evidence that religious change in Nigeria is shaped by conversion between Islam and Christianity (in either direction). The same percentage report being raised as Christian or Muslim as identify with the tradition now. This leaves differential rates of natural

population increase to shape the changing religious landscape in the country, whatever the current proportions of Christians and Muslims.

Stonawski et al (2016) accept the 2012 Pew Research Center estimates for the relative population of Muslims and Christians in Nigeria, but give much stronger evidence that religious change is being driven by relative rates of natural increase. Also using DHS data, they demonstrate the impact of diverging total fertility rates (TFR), highlighting the difference between Muslims living in Northern states where Sharia law was introduced in 1999–2000 and Christians living in the South. (Muslims living in the South share a pattern much closer to their Christian neighbours). Stonawski et al. have shown that, at the time of the 2008 DHS survey, the TFR for Christians living in the South (where most Christians live), had fallen from 6.0 in 1990 to 4.5 in 2013; in the same period, the TFR of Muslims in Sharia law states has increased from 6.4 to 7.2. Given that natural increase is the primary driver of religious change in Nigeria, this is predicted to slowly tip the balance decisively between the two largest religious groups, with Muslims achieving a majority, though much will depend on the precise TFR and any subsequent changes to fertility rates (see also Hackett et al 2015).

## Data and Methods

This paper considers results from eleven high-quality Nigerian general population social surveys that contain questions on religious identity, analysing them to see what can be inferred in terms of the most likely relative proportion of Christians and Muslims in Nigeria, as well as any change that can be discerned over time. The survey results considered here are: (1) rounds three to seven of the Afrobarometer survey programme (2005, 2008, 2013, 2016 and 2018); (2) World Values Survey (WVS) waves two to four and six (1990, 1995, 2000, 2012; Nigeria did not participate in wave five); (3) the General Household Survey (GHS), a collaborative project of The Nigerian Bureau of Statistics and the World Bank, 2010) and (4), the Pew Research Center's Islam and Christianity in sub-Saharan Africa survey (2008).<sup>1</sup>

The Afrobarometer survey programme is coordinated by three core partners, Michigan State University, the Institute for Democracy in South Africa, and the Centre for Democratic Development in Ghana, and has now conducted six rounds of a multi-country survey of African nations, beginning in 1999–2001 (Afrobarometer 2018). The World Values Survey is a well-known international non-profit association, and one of the largest producers of social survey data globally (Inglehart et al. 2014). The General Household Survey is a joint project of the Nigerian Bureau of Statistics with the Federal Bureau of Agriculture and Rural Development and the World Bank's Living Standards Measurement Study. The Pew Research Centre is a

<sup>1</sup> This paper does not analyse the only other relevant high-quality data source, the Demographic and Health Survey (DHS) because of the difficulty of making direct comparison with the data here. This is due to the DHS's very different sampling frame: 15–49 year olds; women are oversampled, and one of the DHS surveys of this period only samples women.

non-partisan think tank, a subsidiary of the Pew Charitable Trusts, with a commitment to high standards in research methods (Lugo and Cooperman 2010). All four survey programmes are collaborations between national and international partners, and this reduces the likelihood data collection becoming distorted by political pressures and inclinations.

In each of the eleven surveys, a nationally representative sample of the population is produced using a multi-stage stratified random sample with randomized selection at each stage. For the Afrobarometer and the World Values survey, each round draws an independent sample from a new sampling frame. In the World Values survey, a quota system is employed for the gender of the respondent within the sampled household. The General Household survey samples households, rather than individuals, though person weights make necessary adjustments for the analysis of individuals. In all the surveys, in country weights make small adjustments based on known characteristics of the national population.

In all of the surveys, fieldworkers conducted face-to-face surveys with non-institutionalised respondents. In all but the GHS, the individuals enumerated are all over the age of 18; the GHS collects data on all members of the sampled household, irrespective of age. In the main analysis presented here, only those who are over 18 are selected from the GHS survey for purposes of comparability. Useful indication of future change can be gleaned, however, from the subsequent consideration of what the results look like when complete households, including children, are enumerated. Unlike in Europe or North America, where the majority of the population are over 18, the age structure of sub-Saharan Africa means that half the population are excluded from surveys of the adult population.<sup>2</sup> The individual sample sizes of each of the surveys, response rates, and confidence intervals for proportions are reported in the [Appendix](#).

In addition to random error, non-random distortions are also likely to have made an impact on all of these samples, despite the careful sampling strategy and the best efforts of researchers and fieldworkers. Some non-random distortion is probably inevitable even under ideal conditions; sub-Saharan Africa in general, and Nigeria in particular, does not provide ideal conditions. The challenges posed by poor and uneven infrastructure and rapid population growth in the country, as in the region as a whole, are enormous, and the different sampling strategies to deal with this complexity undoubtedly result in non-random variation between surveys. It is probably not much comfort to scholars interested in religious demography, but these challenges plague all attempts by states, international organizations and NGOs across the region to gather even the most basic social and economic statistics, such as population, exports, imports, unemployment, GDP, or even a reasonably accurate count of the total population (Jerven 2013).

The religious identification questions in the Afrobarometer, World Values Surveys and in the Pew Research Center Survey are asked differently. The Afrobarometer survey instrument instructs the interviewer to ask “What is your religion,

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<sup>2</sup> The median age in Nigeria was 17.4 in 1990 and rising to just under 18 in the period considered here (UN Development Programme 2019).

if any?” and to code from a list. The General Household Survey asks about each member of the household, “What is [name’s] main religion?”, recognising the possibility of multiple identifications and restricting it to the primary identity. The Pew Research Center survey by contrast uses a two-step process, whereby, respondents are asked “What is your present religion, if any?” Those who answer that they are Christian, are then asked what “denomination or church, if any, [they] identify with most closely.” The survey instrument was originally designed to collect primary and secondary identifications as well, but as very few respondents provided secondary identifications the secondary question was dropped across all of the national surveys. As we are only interested in the relative size of populations identifying with Christianity, Islam and traditional religion, setting aside the considerable variation within each, the different question wordings should make no appreciable difference. This is particularly the case as non-identification with a religious tradition is very low in all of the surveys.

## Results

Looking at Table 1, it is clear that the vast majority of the adult population identifies with Christianity or Islam, and very few with traditional religion or no religion (here merged). This finding is unlikely to be controversial, given the longstanding recognition of mass adoption of Christianity and Islam over the course of the twentieth century, even if the reasons for this massive shift have long been debated (Horton 1971; Peel 2016), and are arguably still not well understood. Barring the results from the 2012 World Values Survey, those who do not identify as Christian or Muslim have amounted to no more than 4% combined any year since 1990. In the 2012 survey, most of the responses in this category mostly (9%) consists of ‘no religion’, and traditional worship only 2%. There has been no substantial change to question wording that would boost ‘no religion’ responses, and this is much more substantial increase than we would expect given the confidence interval for the sample. Nevertheless, the proportion of no religion responses seems unlikely as a reflection of true value in the population, given that this would be difficult to square with responses to the religion question in the other representative samples; the reason for the anomaly is unknown. The decline in identification with traditional worship between 1990 and 1995 is likely the tail end of the descent of identification with traditional religion that began in the middle of the twentieth century.

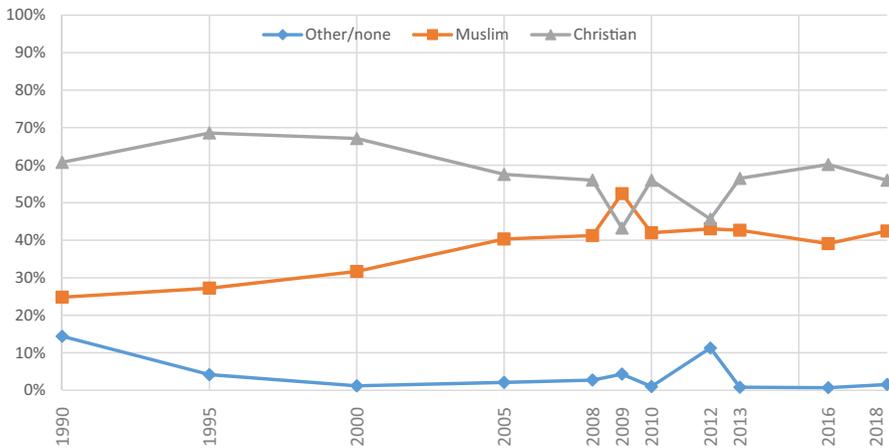
We can be sure that that neither Muslim nor Christian identities have been making substantial gains in over the past 20 years by converting from among those who hold other religious identities or none. There are very few remaining (in proportional terms) others who could be won over to identify with either monotheistic tradition.

Looking over the two other categories, the first thing to notice is that Muslims form a majority in only one of the ten samples: in the 2008 Pew Research Center study the absolute majority identify as Muslim (52%) and 43% identify as Christian, and this stands out from all the rest of the samples in this respect. One would have to say that on the evidence of the ten other surveys, coming from three different research groups, it seems highly unlikely that those who identify as Muslims

**Table 1** Religious identity by survey-year, adult population of Nigeria

Religious identity	1990	1995	2000	2005	2008	2009	2010	2012	2013	2016	2018
	World values survey 2 <sup>a</sup> (%)	World values survey 3 <sup>a</sup> (%)	World values survey 4 <sup>a</sup> (%)	Afro-barometer round 3 <sup>b</sup> (%)	Afro-barometer round 4 <sup>b</sup> (%)	Pew tolerance and tension <sup>c</sup> (%)	General household survey <sup>d</sup> (%)	World values survey 6 <sup>a</sup> (%)	Afro-barometer Round 5 <sup>b</sup> (%)	Afro-barometer round 6 <sup>b</sup> (%)	Afro-barometer round 7 <sup>b</sup> (%)
Christian	61	69	67	58	56	43	56	46	56	60	56
Muslim	25	27	32	40	41	52	42	43	43	39	42
Other/none	14	4	1	2	3	4	2	11	1	1	2
	100	100	100	100	100	100	100	100	100	100	100

Sources<sup>a</sup> Inglehart et al (2014); <sup>b</sup> Afrobarometer (2018); <sup>c</sup> Pew Research Center (2009); <sup>d</sup> Minnesota Population Research Center (2019)



**Fig. 1** Religious identification, adult population Nigeria

constituted the largest religious group of adult Nigerians between 1990 and 2018. Those identifying as Christian are not in the absolute majority only in the Pew (2008) and in the World Values 6 (2012) sample, though in the latter they still constitute the largest group. In World Values 6, those with Christian identities are not an absolute majority again only because of the anomalous large number of respondents in the other/none category.

Looking at Fig. 1, there is a clear trend of steady growth from 25% identifying as Muslim towards 50% of the adult population of the country. While Christian identities increased between 1990 and 1995, mirrored by the decline in traditional worship, this appears to be the tail end of proportional growth of Christian identities before the trend starts reversing itself, not because of losses through conversion, but rather because the Muslim-identified population is growing faster. Those who identify as Muslim are growing towards 50% of the population, and those who identify as Christian are shrinking proportionately, towards 50% of the population.

## Discussion and Limitations

The evidence presented here suggests that while those who identify as Christians have been the majority in Nigeria, Christians seem unlikely to maintain their place as the largest religious group in Nigeria for long. The change is demographic, rather than the product of conversions and defections, as the literature provides clear evidence that switching between Christianity and Islam is not a substantial factor in the changing religious composition of Nigeria (Lugo and Cooperman 2010; Stonawski et al 2016; see also Zurlo 2017).

Stonawski et al. put considerable emphasis on the consequences of Sharia law in Northern provinces (inaugurated in 1999 and 2000) for the higher levels of fertility among Muslims in the North. Given that the survey data we have been considering

only includes those over 18, meaning that those born concurrently with the implementation of Sharia law will only be entering their 18th year in 2018 (and thus meet the inclusion criteria for the samples considered here), thus, the growth of identification with Islam presented here predates that development. These results reinforce the suggestion that the effects of inauguration of Sharia law in Northern Nigeria may be compounding change that was already under way, and may result in a much faster than expected rate of change. While it is conceivable that Northern Nigeria could undergo a similar demographic transition as has occurred in the predominantly Christian south, much seems likely to depend on women's access to education, as well as birth control. Strong religious and cultural feelings directed towards all things perceived to be 'western' in the North, there seems likely to be some resistance to both women's access to education and to birth control (Stonawski et al 2016).

One of the surveys considered here, the General Household Survey (2010) gives clear indication of the religious change that follows from the differential rates of fertility. Table 1 and Fig. 1 reported the data selecting for individuals 18 years of age or older for purposes of comparison with the other general population surveys. In the GHS survey, 56% of those 18 years of age or over identify as Christians, and 42% of these identify as Muslim (Table 1). The children in the GHS sample, however, are more likely to be Muslim than the adults; if the children in those households are included, those identified as Christian drop to 52% of the total population, those identified as Muslim rise to 47% and the remainder fall to 1% (data from the Minnesota Population Center, 2019; standard person weights applied). Bearing in mind that switching between these identities is limited and has little net effect, the crossover point at which those adults who identify as Muslims will constitute a majority in Nigeria is closer than would appear from the adult data, as the greater number of Muslim children grow into adulthood (at present half of those children will have entered adulthood).

While the surveys presented here provide the best available evidence for the relative proportion of those Nigerian adults who identify as Muslim or as Christians, the samples do have a number of limitations. First, much about the population of Nigeria is unknown and subject to sophisticated guesswork, including the total population of the country. This means that sampling decisions made in a multi-stage cluster analysis (and the weights used to correct population estimates) are subject to uncertainties, even as the results presented here do show remarkable consistency. If a census of the population could ask the question about religious identification without being drawn into the politics of representation (and the funding implications that follow), this would be a much better source of knowledge on this question. That seems unlikely to happen any time soon, however. Further, while all of the samples use multi-stage cluster sampling, the relevant information to calculate confidence intervals from complex samples is not made publicly available (and may, for some of the samples analysed here, be unknown). Thus, the confidence intervals for proportions presented in the Appendix (which assume a simple random sample) are likely to be overly optimistic. Finally, some of the response rates for the surveys used here (Appendix) are unknown, and for those that are known, there is little information about how those response rates are calculated. There is not enough information

about response rates to speculate what the effect differential non-response between religious groups might be. These qualifications suggest the need for more and better information from survey researchers than is generally provided, particularly in the complex and challenging sampling environments of sub-Saharan Africa.

## **Conclusion and Implications**

The results presented here, drawing on eleven high-quality general social surveys in Nigeria with questions on religion, provide evidence of a majority of adults holding Christian identities in the period 1990–2018. The surveys presented also offer evidence that Christians are in proportional decline and unlikely to maintain their majority position (in either absolute or relative terms) for long. Evidence suggests that growth in Christian identities between 1990 and 1995 is associated with the final tail of the decline of traditional worship and adoption of Christian identities, which grew to 69% of the adult population. The subsequent proportional decline of Christian identities appears to be a product not of Nigerians adopting Muslim identities, but of a greater growth of Muslim identified populations by natural increase. The adult (voting age) population of Nigeria may be an absolute majority within the decade.

## **Appendix**

See Table 2.

**Table 2** Sample characteristics for each of the eleven surveys utilized

	World values survey 2	World values survey 3	World values survey 4	Afrobarometer round 3	Afrobarometer round 4	PEW tolerance and tension	General household survey	World values survey 6	Afrobarometer round 5	Afrobarometer round 6	Afrobarometer round 7
Year	1990	1995	2000	2005	2008	2009	2010	2012	2013	2016	2018
Response rate	Unknown	Unknown	80%	61%	72%	Unknown	Unknown	86%	90%	70%	98%
Sample size	999	1996	2019	2363	2324	1531	39,422	1759	2400	2400	1600
95% CI	3.0%	2.0%	2.1%	2.0%	2.0%	2.5%	0.5%	2.3%	2.0%	2.0%	2.4%
95% CI Traditionalists	2.2%	0.9%	0.4%	0.6%	0.7%	1.0%	0.1%	1.5%	0.4%	0.4%	0.7%
95% CI Muslims	2.7%	3.0%	2.0%	2.0%	2.0%	2.5%	0.5%	2.3%	2.0%	2.0%	2.4%

<sup>a</sup>Confidence Interval (95%) for proportions calculated using the total adult population of Nigeria (18 years and older) in that year

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