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Multilevel Analysis of State Variations in Women's Participation in Household Decision-Making in Nigeria

By Esther O. Lamidi¹

Abstract

Although the past two decades featured burgeoning research on issues affecting women's lives in Nigeria, the existing studies of women's status and decision-making autonomy in the country leave important gap in their representations of the high level of sociocultural heterogeneity in the country. Using a nationally representative survey data, the 2013 Nigeria Demographic and Health Survey (NDHS, n = 26,306), this study examines variations in women's decision-making autonomy across the 36 states and the Federal Capital Territory in Nigeria. A series of multilevel linear regression models revealed that Nigerian women's levels of participation in household decision-making varied significantly across states of residence. Particularly, women residing in states that practiced Sharia law reported significantly lower household decision-making autonomy relative to their counterparts in non-Sharia states. The implications of these findings for future research and stakeholders involved in women's affairs in Nigeria are discussed.

Key Words: Women, decision-making power, states, Nigeria

Introduction

The distribution of household decision-making power often reflects a balance of power within the household, one that has important implications for the well-being of household members (Friedberg & Webb 2006; Furuta & Salway 2006; Nikièma, Haddad, & Potvin 2008). Social status is also related to women's reproductive behaviors, including contraceptive use, fertility intentions and total number of births (Gage 1995; Isiugo-Abanihe 1994b; Jejeebhoy 1995; Morgan & Niraula 1995; Olaolorun & Hindin 2014).

There exist a number of works on women's autonomy in Nigeria. But the majority of previous studies examining the determinants of women's decision-making power in the country are based on data collected in the 1990s or earlier, and/or utilizing non-nationally representative samples (e.g. Feyisetan 2000; Gammage 1997; Kritz & Makinwa-Adebusoye 1999; Oyediran & Odusola 2004). Also, although previous research among Nigerian women suggests inter-ethnic variations in women's decision-making power, only a few studies examined such sociocultural variations. Few exceptions are Gammage's (1997) qualitative study in three states and Kritz's & Makinwa-Adebusoye's (1999) analysis using data collected in 1991. Variations in women's decision-making power across sociocultural contexts in Nigeria are crucial factors to consider in intervention programs aimed at improving the status of women across the country.

Geographic locations in Nigeria, such as states, widely vary in the extent to which they are subjected to, and have responded to, forces of social change, especially as it relates to western education and urbanization (Aka 1995; Isiugo-Abanihe 1994a). State and regional inequalities are

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not just inherited legacies of British colonial administration in Nigeria, but they have also been nurtured by various sociopolitical actions since the nation's independence (Aka 1995). Cultural practices also vary across space in Nigeria in ways that have implications for women's labor force participation, economic contributions to family expenditure and their status within the family (Kritz & Makinwa-Adebusoye 1999). Residents of some states in the northern part of Nigeria practice seclusion or "purdah" which restricts or forbids girl-child education, and often limits female labor force participation to the confines of the home (Hill 1972; Isiugo-Abanihe 1994a; 1994b). State variations in women's sociopolitical environment are further evidenced in the practice of Sharia law, an Islamic legal code, in some but not all states in Nigeria (Kalu 2003; Nmehielle 2004).

The present study makes an important contribution to the existing literature on women's decision-making power in sub-Saharan Africa by examining the more contemporary situation of women's decision-making power in the giant of Africa: Nigeria, the nation with one-sixth of the entire African population. Using a nationally representative survey data, the 2013 Nigeria Demographic and Health Survey (NDHS), the study examines variations in women's household decision-making power across the 36 states and the Federal Capital Territory, Abuja. In addition to her size, relative to other sub-Saharan African countries, Nigeria has one of the most heterogeneous social environments (Uthman 2008), suitable for examining spatial variations in women's decision-making power in the contemporary sub-Saharan African region.

Study Background

Gender relations occur within the larger sociocultural context (Agarwal 1997). According to the ecological perspective, knowledge of the larger social environment in which the family is embedded, illuminates the understanding of social roles and relationships of men and women, within and outside of the family (McHale, Crouter, & Whiteman 2003). The ecological framework delineates four major subsystems (microsystems, mesosystems, exosystems, and the macrosystems) that shape individual's behavior (Bronfenbrenner 1977). In this study, I conceptualize household decision-making as reflective of couple-level interactions, but one that is influenced by the macrosystem (states) within which the family is situated. Social influences on women's lives operate at multiple levels, ranging from socio-legal influences at the state level, to constructions of meanings associated with social roles at the individual level (Cook, Heppner, & O'Brien 2005). That is, gender relations at the state level could condition women's bargaining power within the home. States could enact laws and implement policies and programs that increase women's access to socioeconomic resources - employment, education and health services. Alternatively, states could "reinforce existing gender-retrogressive biases within the family" (Agarwal 1997: 32). Although little is known about the ways by which the socio-legal environment shapes household bargaining in Nigeria, the contemporary legal terrain in the nation makes this task expedient.

The new democratic governance in Nigeria ushered in the adoption of a new constitution, the 1999 Constitution of the Federal Republic of Nigeria, which many human rights activists hoped would put an end to the years of human rights' violations in the country (Nmehielle 2004), particularly for women. However, the new constitution had barely gone into effect when twelve northern states, led by Zamfara state, declared Sharia law (Islamic legal system) as the dominant legal system for the states. The adoption of Sharia law connotes important changes that affect women's lives, such as constraints on female dress code and prohibitions of women from engaging

in professions, businesses and activities that are considered ‘un-Islamic’ (Kalu 2003; Nmehielle 2004).

Sharia law may also disproportionately affect women through its impact on social institutions like economy and marriage as suggested by some accounts of Sharia-related changes in Sharia states in Nigeria. These include: women prevented from renting houses, riding motorcycles or boarding the same vehicles with men; drivers of commercial vehicles flogged for carrying female passengers; high school students required to wear hijab and prevented from wearing ‘western-like’ skirts or dresses; discouragement of women from pursuing law profession; termination of female nurses’ appointments for wearing non-Sharia compliant uniforms; and women compelled to marry or risk being jailed (Adejumo 2011). Restrictions on public transportation by men and women in states implementing Sharia law may impede women’s mobility and their access to social resources, including health care services (Kritz & Makinwa-Adebusoye 1999; Nmehielle 2004).

Compared to the national legal code, Sharia law also entails more severe sanctions, especially for deviating from the normative sexual and marital relationships (Kalu 2003; Nmehielle 2004). Apostasy and adultery or “unlawful sexual intercourse” are two famous violations under the Sharia law. Whereas the Nigerian Penal code stipulates two years’ imprisonment for an adulterous act and no penalty for renunciation of one’s belief (mostly but not only religious), both offences are punishable by death (stoning) under the Sharia law. The death sentences of Safiyat Hussaini Tungar and Amina Lawal by Sharia courts in Sokoto and Katsina states in Nigeria in the early 2000s have been subjects of public debates both nationally and internationally.

The inherent gender discrimination in Sharia courts is implicit in the unequal voices of men and women: “the testimony of two females equals that of one male” (Nmehielle 2004: 273). In addition, husbands cannot be charged for marital rape in Sharia court and Sharia law makes provisions for wife beating as long as the husband does not inflict grievous bodily harm on his wife (Ekhaton 2015). It has also been argued that the strong system of male dominance in many Sharia states makes it easier for men to escape sanctions than women (Kalu 2003). Unlike cases of women like Safiyat and Aminat, four male eyewitnesses are required to prosecute men for adultery (Adejumo 2011).

Geographic boundaries could limit the opportunities available to women and the levels of discrimination against them (Scommegna 2012). High female illiteracy furthers women’s vulnerability in states with cultures of male dominance (Kalu 2003). According to the United Nations International Educational Fund (UNICEF), three factors that inhibit women’s advancement are “poverty, illiteracy and the weight of traditional discriminatory attitudes about women’s status, rights and responsibilities” (2001: 280). Women’s disadvantage, relative to men, often manifests in forms of socio-legal and institutional constraints on women’s access to means of livelihood such as land, and network of support for their growth (Angel-Udinola & Wodon 2010). Therefore, women’s decision-making power may vary across states with unequal access to education and differing economic opportunities available to women in Nigeria. Prior to the colonial conquest in the 19th century, most of the Islamic northern states engaged in Qur’anic education which has been linked with the practice of seclusion among Muslim women (Davis & Kalu-Nwivu 2001; Pittin 1990). Due to the close link between western education and Christianity, coupled with the preexisting functional Islamic system of education, the Muslims in many northern states repelled western form of education for several decades, while many southern states pursued

educational advancement owing to its religious, administrative and commercial benefits (Pittin 1990).

Also, the spatial development and spread of western education in Nigeria suggest differences in status-enhancing opportunities for women across states. The first set of boys' and girls' schools in Nigeria were established in Lagos state in 1878 and 1895 respectively (Okonkwo & Ezeh 2008). By 1949, the missionaries had expanded their school creation activities to two other neighboring states, Ogun and Oyo. In the following years, educational institutions spread northward, reaching Onitsha (now in Anambra state), Calabar (currently part of Cross River state), Benin City in Edo state and subsequently other parts of the country (Davis & Kalu-Nwiwu 2001; Okonkwo & Ezeh 2008). Thus, in spite of efforts by the Federal Government to bridge the educational gaps across states in Nigeria, through the 1976 Universal Primary Education and the 1999 Universal Basic Education schemes, women's access to education remains unevenly distributed (Okonkwo & Ezeh 2008; Pittin 1990). The adult female literacy rates, defined as percentage of women who attended secondary school or higher, or who can read a whole or part of a sentence, ranges from 10 percent in Sokoto state to 93 percent in Imo state (National Population Commission (NPC) [Nigeria] and ICF International 2014).

In most parts of Nigeria, women are expected to financially support themselves and their children (Kritz & Makinwa-Adebusoye 1999). However, variations in women's economic status across states in Nigeria stem from factors such as: restraints on physical mobility of women in states practicing seclusion (Hill 1972; Nmehielle 2004), differing access to western education (Okonkwo & Ezeh 2008; Pittin 1990) and varied subsistence patterns contingent on resource availability in the different geographical environments (Kritz & Makinwa-Adebusoye 1999).

In view of the above literature, the present study models state-variations in women's decision-making power in Nigeria as a function of state female literacy rate, female labor force participation and the practice of Sharia. Drawing on the ecological perspective, the paper analyzes variations in women's participation in household decision-making across the different states in Nigeria in its attempt to answer two major questions: 1) Do women's decision-making autonomy vary across states in Nigeria? 2) What factors account for state variations in women's participation in household decision-making in Nigeria?

I controlled for a range of individual-level covariates of women's decision-making power: education, employment, household wealth, urban residence, religion, polygyny, age, age gap between women and their spouses and total number of children, in the analyses. The bargaining hypothesis postulates that household decision-making is determined by who controls and allocates economic resources within the family (Mabsout & van Staveren 2010; Manser & Brown 1980; Staveren & Odebode 2007). In support of the bargaining model, greater household decision-making autonomy has been found among women with primary and secondary education, relative to those with no education (Acharya et al. 2010; Kritz & Makinwa-Adebusoye 1999; Nigatu et al. 2014). Similarly, women who work are more likely to participate in household decision-making than unemployed women (Acharya et al. 2010). Household wealth appears to be a strong correlate of household decision-making power (Acharya et al. 2010), but the direction of the relationship is less established (Friedberg & Webb 2006).

Couples living in urban areas are more likely to jointly make reproductive decisions than rural residents (Feyisetan 2000). Religion represents an indelible aspect of family life in Nigeria (Ojo 1997) and being a Muslim woman in Nigeria is associated with lower decision-making power in the family (Kritz & Makinwa-Adebusoye 1999). Catholics and other Christian women have about twice the odds of joint reproductive decisions with their spouses as Muslim women

(Feyisetan 2000). Nucleation of the family presents an opportunity for women to actively participate in household decision-making (Sathar & Kazi 1997) but polygyny may enable women to “head” their respective household units. Polygynous husbands are more likely to be irregular visitors to their wives than husbands in nuclear households (Gage 1995; Kritz & Makinwa-Adebusoye 1999). Further, women in polygynous households are known for collaborative efforts at maximizing household chores and child care and such cooperative effort could increase women’s authority in the family (Oppong & Abu 1987). Age differences among polygynous couples (Kritz & Makinwa-Adebusoye 1999), may, however, mean reduced authority for polygynous wives.

Age has been shown to be one of the strongest determinants of women’s status in Africa (Gage 1995) and in other developing countries like Pakistan (Sathar & Kazi 1997). In Nigeria, older women have higher decision-making power than younger women (Kritz & Makinwa-Adebusoye 1999) and they stand better chances of communicating with their husbands about family-related issues (Feyisetan 2000; Gage 1995). In Nigeria (Kritz & Makinwa-Adebusoye 1999), and elsewhere (Gage 1995; Morgan & Niraula 1995), women with more children tend to have greater decision-making autonomy.

Methods

Data

This study utilizes data from the 2013 Nigeria Demographic and Health Survey (NDHS). NDHS is a nationally representative study of socioeconomic characteristics, reproductive patterns and health behaviors of reproductive-age women (15-49 years) in Nigeria. The survey was locally implemented by the Nigerian National Population Commission (NPC) but funded by various international bodies such as ICF Macro, an ICF International Company, (through the USAID-funded MEASURE DHS program), the United Kingdom Department for International Development (DFID) and the United Nations Population Fund (UNFPA). In 2013, the survey included a number of questions on household decision-making dynamics. The design of the NDHS and the procedure for its data collection has been detailed elsewhere (see National Population Commission [Nigeria] and ICF International 2014).

Sample

About 38,948 women aged 15-49 were surveyed in the 2013 NDHS. The analytic sample for this study includes all women aged 15 to 49 who were married or living with their unmarried partners at the time of interview ($n = 27,274$). About 558 women did not answer one or more questions on household decision-making (my dependent variable) and were therefore excluded from the analysis. Also, because this study focusses on household decision-making at the couple level, I excluded respondents who identified “someone else” or “other” person(s) outside of the couple dyads as the person with the absolute power in one or more household decision-making area. Ninety five women (0.36%) identified someone other than their partners as having a final say in one out of the four decision-making areas examined; 18 women (0.07%) in two decision-making areas; 11 (0.04%) in three; and only two women (0.01%) in all four decision-making areas. Two-fifth (40%) of all the women with primary household decision makers outside of the couples resided in just three states. Therefore, due to their non-random distribution, I excluded from the analysis, women who reported unknown persons or extended family members as having the final say in their household decision-making. Lastly, I dropped about 284 women who had invalid

answers on more than one focal variable included in the analysis. The above diminutions left a final sample size of 26,306 women clustered within 36 states and the Federal Capital Territory.

Measures

Outcome Variable

The main outcome variable in this study is women's decision-making power. In the 2013 NDHS, women were asked four questions about who had the final say in certain household decision-making areas. These include decisions about: (1) what to do with money husband earns (2) respondents' health care (3) large household purchases and (4) visits to family or relatives. Responses to these items ranged from respondent alone (1), respondent and husband/partner (2), husband/partner alone (4), someone else (5) and other (6).

Similar to previous studies (e.g. Kritz & Makinwa-Adebusoye 1999; Nigatu et al. 2014; Steele & Goldstein 2006), the four items were recoded into an ordinal measure of household decision-making power such that, a value of "0" indicates an absolute say by the male partner and a value of "1" signals joint decision-making by the couple. I assigned a value of "2" to women who reported having the final say in a household decision-making area. I then used the four new variables indicating women's participation in each of the four decision-making areas, relative to their partners, to create a composite scale of household decision-making power. The four items showed a high level of internal consistency (cronbach's alpha = 0.82). The decision-making scale for this study ranges in values from "0" to "8" with a higher value representing greater participation in household decision-making.

Covariates of Women's Decision-making Autonomy

A wide range of individual-level covariates of women's decision-making autonomy identified in previous studies (e.g. Feyisetan 2000; Kritz & Makinwa-Adebusoye 1999; Nigatu et al. 2014; Steele & Goldstein 2006) were included in the analysis. These include: education, household wealth, employment, urban residence, religious affiliation, polygyny, number of children, age, age gap between women and their spouses and ethnicity. Education is measured with four categorical variables indicating women with no education (reference group), primary education, secondary education, and higher levels of education. I categorized respondents as unemployed (0), professional (1) or non-professional employees (2). I considered the professional, technical and managerial jobs as professional jobs and all other jobs (clerical, sales, agricultural, services and manual jobs) as non-professional jobs.

Household wealth or facilities is an ordinal measure describing the poorest (1), poorer (2), middle (3), richer (4) and the richest (5) households. Urban residence is coded "1" if a woman lived in an urban area and "0" if otherwise. Women identified themselves as Protestants or other Christians (reference category), Muslims, Catholics and traditionalists or members of other religions. A woman is classified as being in a polygamous union if she indicated that her spouse had at least one other wife. I controlled for the total number of children each woman had.

The respondents reported their age and age of their current husbands or partners in years but 160 women (0.6% percent of the total sample), failed to report the age of their spouses. Though relatively small in number, compared to my total sample size, these respondents had valid cases on all the other variables in my analysis. I, therefore, included them in the analyses. I substituted the mean spouse age, estimated in a linear regression of spouse age on all the other variables in the multivariate analysis, for the missing values on spouse age. I accounted for the effects of

memberships in five major ethnic groups identified in previous studies (Mberu & Reed 2014), Hausa/Fulani/Kanuri, Igbo, Niger-Delta, Middle Belt and Yoruba on women's household decision-making.

State-Level Predictors

The analysis examines three state-level characteristics that previous research suggests are related to women's decision-making autonomy (e.g. Kritz & Makinwa-Adebusoye 1999; Okonkwo & Ezeh 2008; Pittin 1990). The three measures of Sharia, female literacy and employment, are derived from averages of the individual-level data to the state-level. Although Nigeria's census provides information about literacy rates and female labor force participation in each state, the most recent census was conducted at least seven years prior to the 2013 NDHS. Contextual factors derived from individual-level Demographic and Health Survey data have, however, been used in many previous studies (e.g. Elfstrom & Stephenson 2012). A binary variable was used to show how women residing in Sharia states compared to those living in non-Sharia states in their decision-making power. Percent literate (a variable) helped describe the proportion of women who were able to read part or all of a sentence, whereas percent employed delineated the share of women who were active in the labor force, in each state.

Analytical Strategy

The first part of the analysis presents the summary of the individual and state-level characteristics. The data structure, women as nested within states, necessitates a multilevel modelling strategy. Hence, I employed the multilevel linear regression models in estimating the impact of individual women's and state-level characteristics on women's household decision-making autonomy. Multilevel modeling allows the estimation of the variance in women's decision-making power at both the individual level (Level 1) and at the state level (Level 2). All the individual-level predictors of women's decision-making power are specified as fixed effects.

First, I estimated a variance components model (Model 1) to determine whether the variance in women's decision-making autonomy differs across states (Hypothesis 1). Model 2 presents the coefficients associated with the individual-level predictors while allowing the average women's decision-making power to vary across states. I examined the relationship between the state-level characteristics and women's decision-making autonomy in Model 3 while Model 4 includes all the individual-level and state-level predictors in the analysis. The models are estimated with Stata (Version 13) using maximum likelihood estimation method. Multilevel approach permits me to test whether or not the effects of the individual-level predictors of women's decision-making autonomy vary across states but such tests are beyond the scope of this study. All analyses were weighted to produce results that are representative of all Nigerian women.

Results

Table 1 presents the weighted means and proportions for my analytic sample. As shown on the table, Nigerian women demonstrated relatively low levels of participation in household decision-making ($M = 1.73$, $SD = 1.93$) in 2013. Nearly half (49%) of all the women in this study had no single year of education and less than one-third (32%) graduated from high (secondary) school or its equivalent. As such, close to half (44%) of them lived in indigent households. Also, nearly one-third (29%) of Nigerian women were unemployed in the year 2013. In line with the

2006 reports of the Nigerian Federal Ministry of Women Affairs and Social Development, the majority (93%) of those women who were actively involved in the labor force had non-professional, rather than professional jobs. The sample also had more rural dwellers (64%) than urban residents (36%).

More Muslims (61%) than Christians (37%) and women with other religious beliefs (2%) were surveyed in the 2013 NDHS. Catholicism, unlike Protestantism, is not widespread in Nigeria; only eight percent of all women identified as Catholics. About 33 percent of Nigerian women had spouses who were either married to, or cohabiting with other women in polygynous relationships. The respondents had an average of four children. Women in this study range from 15 years to 49 years of age, with a mean of 31 years ($SD = 8.8$). It appears very uncommon for Nigerian women to marry or cohabit with younger men, or to have spouses who are about the same age as they are. On average, the women in this study were married to or cohabiting with men who were about 10 years older than them. Greater number of Hausa/Fulani/Kanuri women is represented in this study than members of other ethnic groups. Slightly more than half of all the women (53%) lived in states that practiced Sharia law. Percent women literate ranges from six percent to 94 percent, with a mean of 41 percent and percent employed women ranges from 29 percent to 96 percent, with a mean of 72 percent.

Table 2 provides descriptive statistics for the outcome variable and three state-level correlates of women's household decision-making autonomy. Nigeria's 36 states and the Federal Capital Territory were ranked based on their average women's decision-making power. The results show that, on a scale of women's decision-making autonomy ranging from zero to eight, women residing in Ekiti state reported the highest average decision-making power ($M = 3.6$, $SD = 3.02$) whereas respondents living in Sokoto state reported the least participation in household decision-making ($M = 0.1$, $SD = 0.5$). States where women reported relatively low household decision-making power - below the national average of 1.73 - also ranked low on female literacy and employment rates and majority of such states practiced Sharia. Put differently, Sharia states stand out, for their relatively lower literacy and lower female labor force participation rates, in this study. Eight out of the ten states with the lowest female literacy rates were Sharia states. Similarly, of all the fifteen states with women's employment rates below 70 percent, 12 were Sharia states.

The results of the multilevel regression models are presented in Table 3. First I estimated a random analysis of variance (ANOVA) model for women's decision-making autonomy in order to determine the amount of total variation in women's decision-making power that is attributable to differences among women in the same state (Level 1) versus the differences across states (Level 2). The results presented in Model 1 indicate a substantial variation in women's decision-making autonomy across states in Nigeria. Thirty five percent of the total variability in women's participation in household decision-making occurred across states while 65 percent existed within states.

The second model is a Level 1 analysis of covariance (ANCOVA) model that examines the relationship between the individual-level variables and women's decision-making power, while allowing the intercept to vary at both the individual and state levels. I found that women's participation in household decision-making increased with increase in education and household wealth. Compared to those with no education, women with primary, secondary and higher education had significantly greater household decision-making power, net of other predictors of women's decision-making autonomy. On average, women who worked (both professional and non-professional jobs) participated more in household decision-making than those who did not work. Urban residence does not significantly predict women's decision-making autonomy in this

study. Muslim women exhibited significantly lower household decision-making power, whereas Catholic women reported significantly higher household decision-making autonomy, than Protestants, net of the controls for other covariates. After accounting for the effects of other predictors, polygynous women compared to monogamous women in their household decision-making autonomy. Women's decision-making power diminished with higher-order births but older women reported significantly greater participation in household decision-making, net of controls for other covariates in the model. Controlling for other predictors of women's decision-making power, members of all other ethnic groups in Nigeria demonstrated greater participation in household decision-making than the Hausa/Fulani/Kanuri women.

Accounting for individual-level predictors of women's decision-making power in Model 2 yields a modest intraclass correlation of 0.16 suggesting that most (84%) of the variation in women's decision-making autonomy occurred at the individual level. Models 3 and 4 describe the relationship between women's participation in household decision-making and the state-level characteristics. The results reveal significantly lower decision-making power among women living in Sharia states relative to their counterparts in states that were yet to adopt the Sharia law. The coefficient of Sharia remained significant even after controlling for differences in socio-demographic characteristics among women living in each state. Women residing in states with higher share of literate women exhibited higher decision-making autonomy than those in states with smaller percent of literate women (Model 3). However, the effect was mediated by the individual-level predictors in the model. Lastly, percent employed in each state had no significant association with women's decision-making autonomy, net of controls for individual-level and other state-level characteristics. The results of the relationship between women's decision-making power and the individual-level predictors in the final model changed very little from those reported in Model 2.

Discussion

The close link between fertility behaviors and women's autonomy in households (Gage 1995; Isiugo-Abanihe 1994b; Jejeebhoy 1995; Morgan & Niraula 1995; Olaolorun & Hindin 2014) necessitates adequate understanding of factors influencing women's participation in household decision-making in high-fertility nations like Nigeria. The few existing studies of determinants of women's decision-making autonomy in Nigeria (Feyisetan 2000; Gammage 1997; Kritz & Makinwa-Adebusoye 1999), utilized non-nationally representative and dated data. More importantly, many of these studies fail to duly account for the high level of sociocultural heterogeneity in the country.

Drawing on the ecological perspective, the present study examines state variations in women's decision-making power in Nigeria in order to answer two main questions: 1) Do women's decision-making autonomy vary across states in Nigeria? 2) What factors account for state variations in women's participation in household decision-making in Nigeria? I found that, in 2013, Sharia states in Nigeria had distinctively lower literacy and lower female labor force participation rates, relative to non-Sharia states in the country. The results of a series of multilevel models showed significant variations in Nigerian women's participation in household decision-making across states. Women who resided in states with Sharia law reported significantly lower household decision-making autonomy relative to their counterparts in non-Sharia states. Also, women's decision-making power increased with increase in percent literate women in each state even though much of the effect was mediated by the individual-level characteristics. Significant

individual-level predictors of women's decision-making power in this study include: education, household wealth, employment, religion, number of children, age and ethnicity.

Individuals and organizations involved in planning and implementation of programs aimed at empowering women need to be aware of how state variations in women's decision-making autonomy in Nigeria could possibly impact their successes. The above results suggest that a one-size-fits-all approach in women's empowerment programs will yield limited results in Nigeria due to the significant state variations in women's decision-making power. Large scale provision of contraceptives to women in Sokoto state, for instance, may be less effective in lowering fertility than in Ekiti state because of the higher levels of women's involvement in household decision-making in the latter than in the former. The findings also points out the need for more empowerment programs targeting women in states exhibiting lower average decision-making power. More so, policy-makers, particularly in Sharia states in Nigeria, need to enact policies aimed at improving the status of women. Enhancing Nigerian women's access to western education, particularly in Sharia states, could potentially increase their household decision-making autonomy, thereby improving their reproductive health.

It is equally important for future research on women's decision-making in Nigeria to take into consideration different aspects of sociocultural heterogeneity in the country. Although differences in cultural beliefs and practices are salient to variations in women's decision-making autonomy across Nigeria, factors other than culture may explain the lower average decision-making autonomy among residents of Osun state, compared to those in Ekiti states² (Table 2).

Like its antecedents, this paper is not without limitations. First, due to data limitation, the study examines only three state-level characteristics derived from aggregate individual-level data—Sharia, percent literate and percent employed. However, previous analyses have utilized similar individual-level data to generate contextual characteristics (e.g. Elfstrom & Stephenson 2012). Secondly, this study analyzes household decision-making at the couple level. I encourage future research to broaden the scope of studies of household decision-making dynamics by analyzing decision-making authority outside of the couple relationships such as the role of children and extended family members in household decision-making dynamics. Lastly, analyses of broader context-specific characteristics, at multiple levels (local, community and state), that influence gender relations within the household will greatly benefit the gender discourse in Nigeria.

This study demonstrates the importance of sociopolitical context in household decision-making. It reveals significant variations in women's decision-making autonomy across states in the giant of Africa: Nigeria. Majority of states with the lowest women's average decision-making autonomy in Nigeria also have lower percent literate women, percent employed women and practice Sharia. This research has laid important background for future studies to further explore the interaction between gender relations within the family and contextual factors in understanding women's household decision-making autonomy.

² Residents of both Osun and Ekiti states are predominantly Yoruba in their ethnic identification

References

- Acharya, D. R., Bell, J. S., Simkhada, P., van Teijlingen, E. R., & Regmi, P. R. (2010). Women's autonomy in household decision-making: a demographic study in Nepal. *Reproductive health*, 7(1), 15.
- Adejumo, A. O. (2011). The dynamics of Sharia adoption in northern Nigeria and women rights: An ethical analysis. *Global Journal of African Studies*, 1(1), 24-29.
- Agarwal, B. (1997). "Bargaining" and gender relations: Within and beyond the household. *Feminist Economics*, 3(1), 1-51.
- Aka, E. O. (1995). Regional inequalities in the process of Nigeria's development: Socio-Political and Administrative Perspective. *Journal of Social Development in Africa*, 10(2), 61-80.
- Angel-Udinola, D., & Wodon, Q. (2010). Income generation and intra-household decision making: A Gender analysis for Nigeria. J. S. Arbache, A. Kolev, and E. Filipiak (Ed.), *Gender disparities in Africa's labour markets* (pp. 381-406). Washington, DC: World Bank.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513-531.
- Cook, E. P., Heppner, M. J., & O'Brien, K. M. (2005). Multicultural and gender influences in women's career development: an ecological perspective. *Journal of Multicultural Counseling & Development*, 33(3), 165-179.
- Davis, T. J., & Kalu-Nwivu, A. (2001). Education, ethnicity and national integration in the history of Nigeria: Continuing problems of Africa's colonial legacy. *Journal of Negro History*, 1-11.
- Ekhtator, E. O. (2015). Women and the Law in Nigeria: A Reappraisal. *Journal of International Women's Studies*, 16(2), 285-296.
- Elfstrom, K. M., & Stephenson, R. (2012). The role of place in shaping contraceptive use among women in Africa. *PloS one*, 7(7), e40670.
- Federal Ministry of Women Affairs and Social Development (2006) *Nigeria national gender policy: Situation analysis/framework*. Abuja: Federal Republic of Nigeria.
- Feyisetan, B. J. (2000). Spousal communication and contraceptive use among the Yoruba of Nigeria. *Population Research and Policy Review*, 19(1), 29-45.
- Friedberg, L., & Webb, A. (2006). *Determinants and consequences of bargaining power in households*. Center for Retirement Research, Working Paper 12367. Boston: Boston College. Available via <http://www.nber.org/papers/w12367>. Cited October 17, 2013
- Furuta, M., & Salway, S. (2006). Women's position within the household as a determinant of maternal healthcare use in Nepal. *International Family Planning Perspectives*, 32(1), 17-27.
- Gage, A. J. (1995). Women's socioeconomic position and contraceptive behavior in Togo. *Studies in Family Planning*, 264-277.
- Gammage, S. (1997). *Women's role in household decision making: A case study in Nigeria*. Washington, DC: International Centre for Research on Women.
- Hill, P. (1972). *Rural Hausa: A village and a setting*. New York: Cambridge University Press.
- Isiugo-Abanihe, U. C. (1994a). *Nuptiality patterns, sexual activity, and fertility in Nigeria*. DHS Working Papers No 16. Maryland: Macro International Inc. Available via <http://dhsprogram.com/publications/publication-WP16-Working-Papers.cfm>. Cited 08 June 2014

- Isiugo-Abanihe, U. C. (1994b). Reproductive motivation and family-size preferences among Nigerian men. *Studies in Family Planning*, 25(3), 149-161.
- Jejeebhoy, S. J. (1995). *Women's education, autonomy, and reproductive behaviour: Experience from developing countries*. Oxford: Clarendon Press.
- Kalu, O. U. (2003). Safiyya and Adamah: Punishing adultery with sharia stones in twenty-first-century Nigeria. *African Affairs*, 102(408), 389-408.
- Kritz, M. M., & Makinwa-Adebusoye, P. (1999). Determinants of women's decision-making authority in Nigeria: The ethnic dimension. *Sociological Forum*, 14(3), 399-424.
- Mabsout, R., & Van Staveren, I. (2010). Disentangling bargaining power from individual and household level to institutions: Evidence on women's position in Ethiopia. *World Development*, 38(5), 783-796.
- Manser, M., & Brown, M. (1980). Marriage and household decision making: A bargaining analysis. *International Economic Review*, 21(1), 31-44.
- Mberu, B. U., & Reed, H. E. (2014). Understanding subgroup fertility differentials in Nigeria. *Population Review*, 53(2), 23-46.
- McHale, S. M., Crouter, A. C., & Whiteman, S. D. (2003). The family contexts of gender development in childhood and adolescence. *Social Development*, 12(1), 125-148.
- Morgan, S. P., & Niraula, B. B. (1995). Gender inequality and fertility in two Nepali villages. *Population and Development Review*, 21(3), 541-561.
- National Population Commission (NPC) [Nigeria] and ICF International (2014). Nigeria Demographic and Health Survey 2013. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International.
- Nigatu, D., Gebremariam, A., Abera, M., Setegn, T., & Deribe, K. (2014). Factors associated with women's autonomy regarding maternal and child health care utilization in Bale Zone: a community based cross-sectional study. *BMC women's health*, 14(1), 79.
- Nikièma, B., Haddad, S., & Potvin, L. (2008). Women bargaining to seek healthcare: Norms, domestic practices, and implications in rural Burkina Faso. *World Development*, 36(4), 608-624.
- Nmehielle, V. O. O. (2004). Sharia law in the northern states of Nigeria: To implement or not to implement, the constitutionality is the question. *Human Rights Quarterly*, 26(3), 730-759.
- Ojo, M. A. (1997). Sexuality, marriage and piety among charismatics in Nigeria. *Religion*, 27(1), 65-79.
- Okonkwo, U. U., & Ezeh, M. N. E. (2008). Implications of missionary education for women in Nigeria: A historical analysis. *Journal of International Women's Studies*, 10(2), 186-197.
- OlaOlorun, F. M., & Hindin, M. J. (2014). Having a say matters: Influence of decision-making power on contraceptive use among Nigerian women ages 35-49 years. *PloS one*, 9(6), e98702.
- Oppong, C., & Abu, K. (1987). *Seven roles of women: Impact of education, migration and employment on Ghanaian mothers*, Geneva: International Labour Office.
- Oyediran, K. A., & Odusola A. F. (2004). Poverty and the dynamics of women's participation in household decision-making in Nigeria. *African Population* 19, 115-139.
- Pittin, R. (1990). Selective education: issues of gender, class and ideology in Northern Nigeria. *Review of African political economy*, 17(48), 7-25.
- Sathar, Z. A., & Kazi, S. (1997). *Women's autonomy, livelihood and fertility: A study of rural Punjab*. Pakistan: Pakistan Institute of Development Economics.

- Scommegna, P. (2012). *Dementia cases expected to triple by 2050 as world population ages*. Washington, DC: Population Reference Bureau.
- Staveren, I. v., & Odebode, O. (2007). Gender norms as asymmetric institutions: A case study of Yoruba women in Nigeria. *Journal of Economic Issues*, 41(4), 903-925.
- Steele, F., & Goldstein, H. (2006). A multilevel factor model for mixed binary and ordinal indicators of women's status. *Sociological methods & research*, 35(1), 137-153.
- United Nations International Education Fund (2001). *Children and women's rights in Nigeria: A wake-up call*. UNICEF, Nigeria Country Office: National Planning Commission.
- Uthman, O. (2008). Geographical variations and contextual effects on age of initiation of sexual intercourse among women in Nigeria: A multilevel and spatial analysis. *International Journal of Health Geographics*, 7(1), 27.

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Table 1. Descriptive Statistics for Study Variables

Variables	M	SD	Minimum	Maximum
Individual-level variables				
Decision-making power	1.73	1.93	0	8
Education				
No education	0.49	0.50	0	1
Primary education	0.19	0.39	0	1
Secondary education	0.25	0.43	0	1
Higher education	0.07	0.26	0	1
Household wealth				
Poorest	0.23	0.42	0	1
Poorer	0.21	0.41	0	1
Middle	0.18	0.38	0	1
Richer	0.18	0.39	0	1
Richest	0.19	0.40	0	1
Employment				
Unemployed	0.29	0.45	0	1
Non-professional	0.66	0.47	0	1
Professional	0.05	0.21	0	1
Urban residence	0.36	0.48	0	1
Religious affiliation				
Catholic	0.08	0.28	0	1
Protestant	0.29	0.45	0	1
Muslim	0.61	0.49	0	1
Others	0.02	0.12	0	1
Polygyny	0.33	0.47	0	1
Number of children	4.01	2.88	0	18
Age	31.28	8.83	15	49
Age gap	10.47	7.47	-17	79
Ethnicity				
Hausa/Fulani/Kanuri	0.44	0.50	0	1
Igbo	0.11	0.31	0	1
Niger-Delta	0.07	0.26	0	1
Middle-Belt	0.11	0.31	0	1
Yoruba	0.13	0.34	0	1
Others	0.15	0.36	0	1
State-level variables				
Sharia state	0.53	0.50	0	1
% women literate	40.87	27.62	6.10	93.53
% women employed	71.87	16.23	28.99	96.38

Source: 2013 NDHS. Age gap is age difference between women and their spouses. The descriptive statistics are based on weighted data. M = mean; SD = Standard deviations.

Table 2. Ranking of States According to Average Women's Decision-making Power and Distribution of State-level Variables

Rank	States	State-level variables			
		Decision-making power M (SD)	% women	literate % women	employed % women
1	Ekiti	3.57 (3.02)	89.61	88.17	0
2	Rivers	3.52 (1.38)	81.55	88.25	0
3	Kwara	3.42 (1.74)	54.22	86.18	0
4	Imo	3.33 (1.42)	92.48	72.13	0
5	Delta	3.30 (2.46)	67.87	78.15	0
6	Lagos	3.25 (1.35)	86.43	84.06	0
7	Oyo	3.21 (1.35)	63.34	94.31	0
8	Ogun	3.20 (1.17)	69.85	92.86	0
9	Anambra	3.15 (1.53)	87.93	77.71	0
10	Cross river	3.02 (1.75)	62.68	81.31	0
11	Ondo	2.98 (2.04)	70.77	89.36	0
12	Enugu	2.96 (2.07)	71.09	84.55	0
13	Kogi	2.90 (2.63)	60.80	87.89	0
14	Edo	2.80 (1.93)	77.10	82.95	0
15	Plateau	2.73 (2.03)	57.04	63.27	1
16	Ebonyi	2.72 (1.80)	56.50	91.90	0
17	Nasarawa	2.70 (2.30)	47.62	76.89	0
18	Akwa ibom	2.63 (2.04)	78.85	84.80	0
19	Abia	2.61 (2.67)	88.61	86.61	0
20	Osun	2.33 (2.04)	88.71	96.15	0
21	Fct-abuja	2.32 (2.93)	71.24	64.57	0
22	Kaduna	2.11 (1.43)	42.01	68.66	1
23	Taraba	2.08 (2.16)	32.95	67.70	0
24	Bayelsa	2.04 (2.70)	69.55	82.17	0
25	Nigeria	1.73 (1.93)	41.14	71.09	0.53
26	Benue	1.62 (1.68)	42.21	88.01	0
27	Adamawa	1.57 (2.10)	42.26	65.01	1
28	Katsina	1.57 (1.68)	12.32	69.65	1
29	Bauchi	1.14 (1.47)	15.65	57.43	1
30	Niger	0.91 (1.29)	21.81	82.05	0
31	Borno	0.88 (1.03)	14.25	28.80	1
32	Jigawa	0.77 (1.47)	9.46	55.25	1
33	Yobe	0.43 (0.92)	8.21	36.52	1
34	Zamfara	0.39 (0.65)	7.66	68.32	1
35	Gombe	0.36 (1.47)	27.38	47.81	1
36	Kebbi	0.19 (0.69)	7.08	63.89	0
37	Kano	0.07 (0.41)	25.85	66.20	1
38	Sokoto	0.05 (0.50)	7.13	48.29	1

Source: 2013 Nigeria Demographic and Health Survey

Table 3. Multilevel Linear Regression Model of Women's Decision-making Power in Nigeria (n = 26306)

Variables	Model 1	Model 2	Model 3	Model 4
Fixed Effects				
Intercept	2.13 (0.18)***	0.97 (0.12)***	0.82 (0.66)	1.15 (0.65)
Education (0=No education)				
Primary		0.18 (0.03)***		0.18 (0.03)***
Secondary		0.21 (0.03)***		0.21 (0.03)***
Higher		0.16 (0.05)**		0.16 (0.05)**
Household wealth				
Wealth		0.04 (0.01)***		0.04 (0.01)***
Employment (0 = Unemployed)				
Non-professional		0.55 (0.02)***		0.55 (0.02)***
Professional		0.70 (0.05)***		0.70 (0.05)***
Urban residence (0=Rural)		0.05 (0.03)		0.05 (0.03)
Religion (0 = Protestant)				
Catholic		0.09 (0.04)*		0.09 (0.04)*
Muslim		-0.58 (0.03)***		-0.57 (0.03)***
Others		-0.22 (0.08)**		-0.21 (0.08)**
Polygyny (0=Monogamous)				
Polygynous		0.00 (0.02)		0.00 (0.02)
Number of Children		-0.02 (0.00)***		-0.02 (0.00)***
Age				
Respondent's Age		0.02 (0.00)***		0.02 (0.00)***
Age gap		-0.00 (0.00)		-0.00 (0.00)
Ethnicity (0 = Hausa/Fulani/Kanuri)				
Igbo		0.42 (0.07)***		0.39 (0.07)***
Niger-Delta		0.28 (0.06)***		0.25 (0.06)***
Middle-Belt		0.20 (0.05)***		0.20 (0.05)***
Yoruba		0.81 (0.06)***		0.79 (0.06)***
Others		0.37 (0.04)***		0.36 (0.04)***
State-level variables				
Sharia state			-0.90 (0.35)**	-0.74 (0.34)*
% women literate			0.02 (0.01)**	0.00 (0.01)
% women employed			0.01 (0.01)	-0.00 (0.01)
Random effect				
Intercept	1.24 (0.29)	0.39 (0.09)	0.23 (0.05)	0.21 (0.05)
Level -1 error	2.30 (0.02)	2.12 (0.02)	2.30 (0.02)	2.12 (0.02)

Source: 2013 Nigeria Demographic and Health Survey. Standard errors are in parentheses.

*** p<0.001, ** p<0.01, * p<0.05.