Ethnicity Versus Country Context in Shaping Fertility Preferences in West Africa: The Ideal Family Size of the Fulani and Yoruba of Benin and Nigeria

Alli Coritz- University of Southern California

Background

Fertility literature in sub-Saharan Africa has long been interested in how social group identity and the broader social context in which individuals' reside, powerfully shapes their fertility desires and experiences. A common puzzle in these literatures is separating the two and identifying just how individuals' group identity, such as ethnicity, drives their fertility-related experiences relative to the broader context in which they reside. Findings show that there is significant variation in fertility preferences and behaviors within single country contexts and that this variation frequently correlates with one's ethnic identity (Hogan & Biratu, 2004; Johnson-Hanks, 2003). However, other studies show that it is not ethnicity, per se, that causes differences in fertility, rather, the country contexts in which ethnicities reside create inequalities that manifest along ethnic lines (McNamee, 2009; Weinreb, 2001). In light of the difficulties in parsing out the relative influence of ethnicity and country context, I use two ethnic groups, the Fulani and Yoruba of Benin and Nigeria, who were split across country borders as a novel approach to help untangle the relative salience of ethnicity versus country context in shaping fertility preferences in sub-Saharan Africa.

Current Study Hypotheses

In light of the conflicting narratives in the literature, I test two competing hypotheses:
Hypothesis 1 (H1) –Ethnicity: Fulani and Yoruba women—regardless of residence in Benin or Nigeria—will have nearly identical ideal family sizes to their co-ethnics across borders.

Contrarily, if the country context in which women form and express their fertility intentions has a stronger influence on their desires, women's country residence will be more strongly associated with their ideal family size than ethnic identity:
Hypothesis 2 (H2) – Country Context: Fulani and Yoruban women in Benin versus Nigeria will have ideal family sizes that differ significantly from their co-ethnics across borders and more closely resemble those of their co-nationals.

Data and Sample

To analyze the impact of ethnicity versus context on a woman's ideal family size (IFS), I use data from USAID's Demographic and Health Survey (DHS) of Benin (2011-2012) and Nigeria (2013). The DHS surveys use a stratified random sampling approach to conduct interviews of a nationally representative sample of women aged 15-49. All eligible women in a sampled household, both residents and visitors, were interviewed for the general survey. The interview included attitudinal measures regarding fertility preferences, including women's ideal family size.

Benin's DHS survey response rate was 99% and Nigeria's was 95%, resulting in a combined survey sample size of 55,547 reproductive aged-women in Benin and Nigeria. Of the 16,599 Beninese and 38,948 Nigerian women interviewed, I restrict the sample to childless women aged 15-30 years old (N=3,942 in Benin; N=11,088 in Nigeria). In focusing on childless

women, I control for rationalization bias, where women are unlikely to report a smaller IFS than their current parity (Bongaarts, 1990; Bongaarts & Casterline, 2012; Bushan & Hill, 1995).

I include women who have either never been in a union or who are currently in one. I remove women who were formerly in a union and those who are formerly married. I further exclude from this restricted sample women reporting non-numeric IFS (e.g., "Up to God"). Finally, I exclude three (0.0%) Nigerian women due to missing data. The final sample consists of 3,899 Beninese women and 10,507 Nigerian women, resulting in a final combined sample of 14,406 women.

To take into account the stark economic, social, religious, and cultural difference in Nigeria and Benin's north-south regions, I restrict the Fulani sample to those residing in the north of Benin and Nigeria, and the Yoruba sample to those in the south. I therefore compare the Fulani (n=440) only to their northern co-nationals (n=5,477) and the Yoruba (n=1,875) to their southern co-nationals (n=6,614).

Measures

Ideal family size

The key outcome variable is women's ideal family size. Childless women were asked: "If you could choose exactly the number of children to have in your lifetime, how many would that be?"

Ethnicity

Interviewers asked all individuals "What is your ethnicity?" Benin's DHS categorized responses into 10 categories whereas in Nigeria 308 identities are self-reported. Based on these classifications, I identify Fulani and Yoruba respondents in Benin and Nigeria. For the Fulani, I include the "Peulh and related" in Benin and those self-identified as "Fulani" in Nigeria. Peulh (sometimes spelled Peul) is the name of the ethnic group in Francophone countries, whereas Fulani is a Hausa term adopted into English to identify the same group (Hampshire, 2004; Johnson-Hanks, 2003; Salamone, 2015).[1] I identify the Yoruba as women in Benin categorized as "Yoruba" and those in Nigeria who identified as "Yoruba."

Controls

I include a robust set of controls standard in the literature on ideal family size in sub-Saharan Africa (Ezeh, Mberu, & Emina, 2009; Hayford & Agadjanian, 2012; Upadhyay & Karasek, 2014). I control for age, as well as urban versus rural location. I also control for women's socioeconomic status using the DHS household wealth index score. The wealth index score is a composite measure of a woman's household living standard based off of weighting assets and services available in the household, such as water sources and materials used to construct the home (Rutstein & Johnson, 2004). It is not a measure of income, but rather resources available to all household members (Rutstein & Johnson, 2004). To control for marital status, I create a binary of never-married women (0) compared to married women (1). For education, I include a dummy variable of whether women have ever attended school given that 62.7% of Beninese women in my sample have never attended school as compared to 35.3% Nigerian women.

[1] Despite sharing a language with the Fulani (Hampshire, 2004), I do not include Nigerians self-identifying as "Fulfuldhe" as Fulani in this study (N=58 after restriction), leaving them coded by their region of residence.

Analytical Approach

I use a linear regression approach to estimate the association between ethnicity, country context, and women's IFS. I estimate two models for both ethnic groups. Model 1 is the zero-order relationship between ethnicity, country context, and IFS. In Model 2, I include all covariates to assess whether the associations observed in Model 1 are robust to women's socioeconomic circumstances.

Results

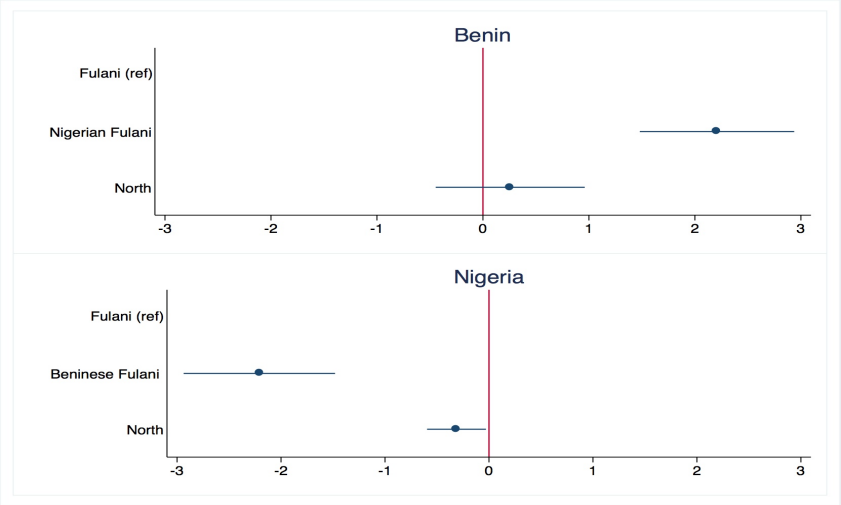
In the baseline model without controls, results indicate that for the Fulani of Benin and Nigeria, country context appears to be a main driver of IFS. This aligns with the descriptive findings that Beninese Fulani women report an average IFS of 4.9 as compared to the Nigerian Fulani's average 7.2. In the baseline model, the Beninese Fulani report no significant difference in IFS from other northern Beninese women ($b=0.55$, $p>0.05$). In contrast, the Nigerian Fulani and Nigerian northerners are significantly divergent in their IFS ($b=1.29$, $p<0.001$), though the effect size is smaller than the difference between the two Fulani groups ($b=2.31$, $p<0.001$).

Model 2 introduces socioeconomic control variables in order to assess whether the findings shown in Model 1 persist after accounting for women's socioeconomic differences. Figure 1 presents the results of Model 2 visually. The addition of these controls did little to reduce the gap between the Fulani groups' IFS (a reduction of 0.10) and the difference remains significant ($p<0.001$). The difference in IFS between the Beninese Fulani and their northern counterparts remains non-significant ($p>0.05$) and shrinks in size (from 0.55 to 0.26). Among the Nigerians, the difference between the Nigerian groups has decreased in significance ($p<0.05$) and is reduced sharply in effect size (1.29 to 0.31).

Among the Yoruba, Model 1, the baseline model without controls, shows that the Beninese and Nigerian Yoruba do not report statistically different IFS ($p>0.05$), aligning with the descriptive findings that the Beninese Yoruba have an IFS of 3.90 as compared to the Nigerian Yoruba's 3.84. This suggests that in the case of the Yoruba, country context might matter less for fertility preferences than does ethnicity. The Beninese Yoruba also have no significant ($p>0.05$) difference in IFS from their southern co-nationals. However, the Nigerian Yoruba have a lower IFS than their southern co-nationals that is both significant ($p<0.001$) and large ($b=0.94$). These results support ethnicity as being more salient than country context in the formation of Yoruba fertility preferences.

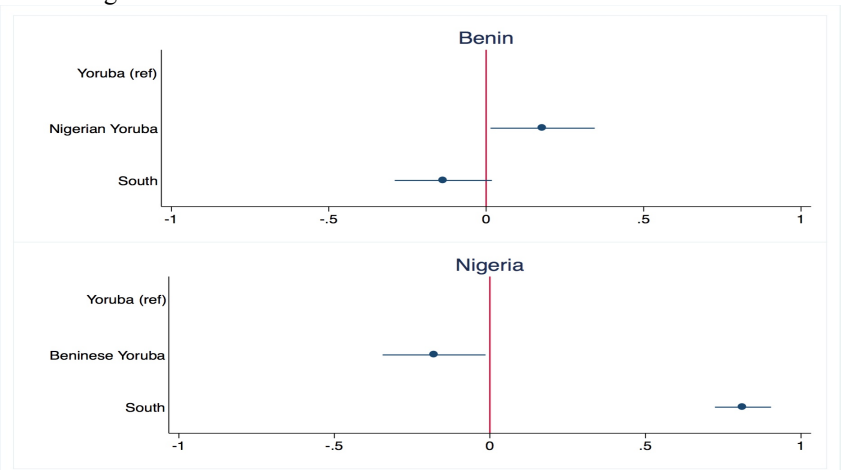
Model 2, presented visually in Figure 2, accounts for women's socioeconomic background and renders the difference between Yoruba groups statistically significant ($p=0.03$), though the change from the baseline model is modest in effect size (0.07 to 0.18). However, the difference among the Beninese groups remains non-significant ($p>0.05$) with the addition of the control variables, while the difference among the Nigerian groups remains significant ($p<0.001$). These findings suggest that shared ethnicity decreases in importance once socio-economic controls are included, increasing the salience of country context.

Figure 1: Predicted ideal family size of the Fulani by country as compared to co-ethnics and co-nationals, controlling for socio-economic variables



N=5,917 *Source*= Demographic and Health Survey

Figure 2: Predicted ideal family size of the Yoruba by country as compared to co-ethnics and co-nationals, controlling for socio-economic variables



N=8,489 *Source*= Demographic and Health Survey

Works Cited:

Bongaarts, J. (1990). The measurement of wanted fertility. *Population and Development Review*, *16*(3), 487–506.

Bongaarts, J., & Casterline, J. (2012). Fertility transition: Is sub-Saharan Africa different? *Population and Development Review*, *38*(SUPPL.1), 153–168. http://doi.org/10.1111/j.1728-4457.2013.00557.x

Bushan, I., & Hill, K. (1995). *The measurements and interpretation of desired fertility*. New York.

Ezeh, A. C., Mberu, B. U., & Emina, J. O. (2009). Stall in fertility decline in Eastern African countries: Regional analysis of patterns, determinants and implications. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *364*(1532), 2991–3007. http://doi.org/10.1098/rstb.2009.0166

Hampshire, K. R. (2004). Fulani. In *Encylopedia of Medical Anthropology: Health and illness in the world's cultures* (Vol. 351, pp. 2245–2246). C. Ember & M. Ember (Eds.). http://doi.org/10.1056/NEJM200411183512127

Hayford, S. R., & Agadjanian, V. (2012). From desires to behavior: Moderating factors in a fertility transition. *Demographic Research*, *26*(Idd), 511–542. http://doi.org/10.4054/DemRes.2012.26.20

Hogan, D. P., & Biratu, B. (2004). Social identity and community effects on contraceptive use and intentions in southern Ethiopia. *Studies in Family Planning*, *35*(2), 79–90. Retrieved from http://www.jstor.org/stable/3181136

Johnson-Hanks, J. (2003). Education, ethnicity, and reproductive practice in Cameroon. *Population-E*, *58*(2), 153–179. http://doi.org/10.3917/pope.302.0153

McNamee, C. B. (2009). Wanted and unwanted fertility in Bolivia: Does ethnicity matter? *International Perspectives on Sexual and Reproductive Health*, *35*(4), 166–75. http://doi.org/10.1363/ipsrh.35.166.09

Rutstein, S. O., & Johnson, K. (2004). *The DHS wealth index*. *DHS Comparative Reports No. 6*. Calverton, Maryland: ORC Macro. http://doi.org/10.1017/CBO9781107415324.004

Salamone, F. A. (2015). Fulani (pp. 2–4). Retrieved from http://www.everyculture.com/South-America/Suya-History-and-Cultural-Relations.html

Upadhyay, U. D., & Karasek, D. (2014). Women's empowerment and ideal family size : An examination of DHS empowerment measures In sub-Saharan Africa. *International Perspectives on Sexual and Reproductive Health*, *38*(2), 78–89.

Weinreb, A. A. (2001). First politics, then culture: Accounting for ethnic differences in demographic behavior in Kenya. *Population Council*, *27*(3), 437–467.