Milestone 6

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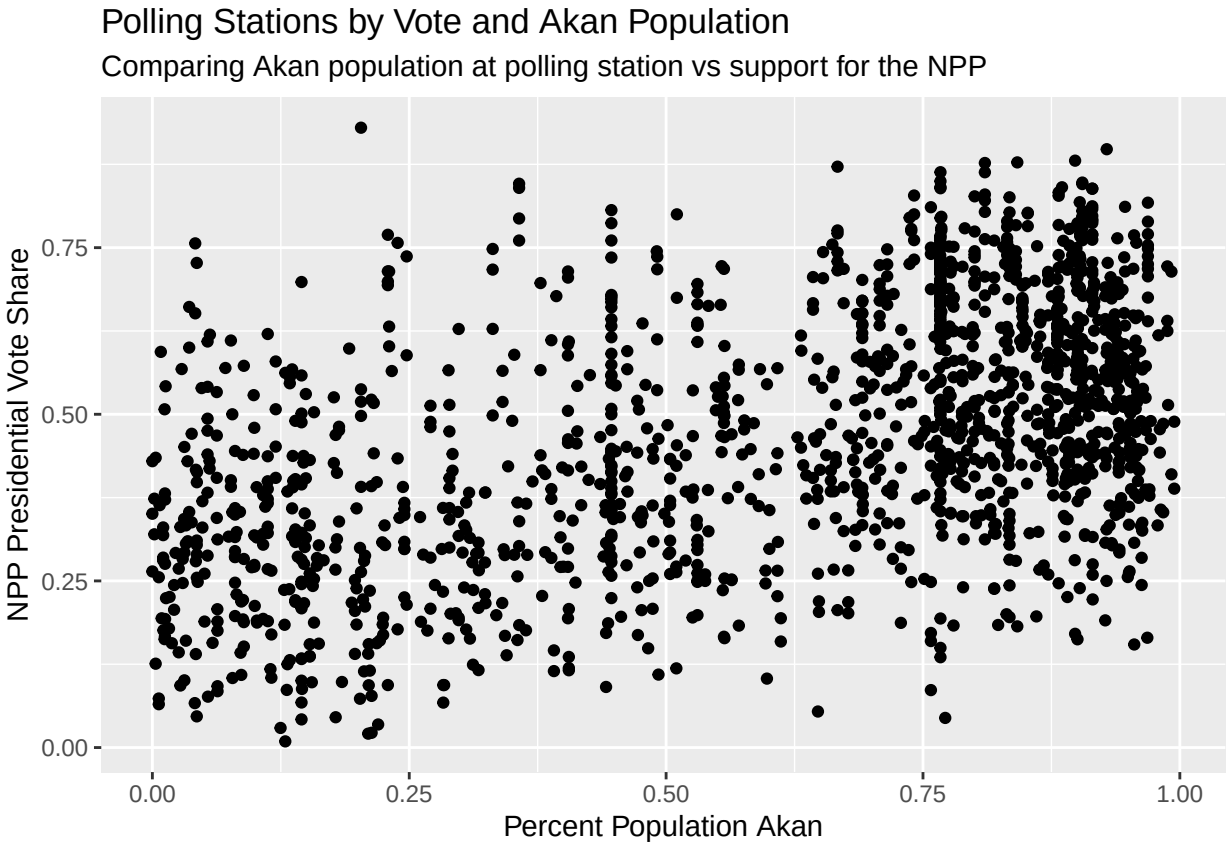
Footnote

Analysis[1]

Graphic



Overview

In their paper "Crossing the Line: Local Ethnic Geography and Voting in Ghana," Nahomi Ichino and Noah Nathan investigate the effects of local ethnic demographics on voters' decisions. To do this, they use data on

[1]All analysis for this paper is available here.

the ethnic composition of the neighborhoods surrounding each polling station in Ghana. They then compare the demographics of that area with the vote share from the 2008 presidential election. For example, at a polling station located in an area dominated by the Akan ethnic group, they found that the vote share for the New Patriotic Party (which is associated with the Akan group) is higher than the population share of Akans. This signifies that people are more likely to vote for the party that is associated with the ethnic group living in their area. To draw this conclusion, Ichino and Nathan build several regression models in which they try to predict the NPP presidential vote share at a certain polling station. Factors included in that regression include ethnic demographics, level of developments, and proportion of the population employed in the public or semipublic sector.

Extension

In my extension, I will be reexamining the logistic regressions used to analyze individual-level data. Ichino and Nathan built several regressions to predict the likelihood that an individual supports the NDC or the NPP. Their variables include the respondent's ethnicity, the ethnicity of the area in which the respondent lives, the respondent's gender, and the respondent's attitudes toward other ethnic groups and the government, among other variables. One other additional variable I would like to explore in these regression models is trustown, which measures whether a respondent trusts other members of their own ethnic group. This measure should affect whether a person is willing to support a party associated with their own ethnic group. I would also like to add an interaction term between economy_oneyear (measures whether the respondent believes economic conditions have worsened or improved) and poverty (measures poverty of respodnent) because the two are likely to be linked. A respondent in severe poverty will likely believe the economy has worsened.

Replication

I was able to replicate almost all of the major results. I did have issues replicating the standard errors found in the logistic equations because Ichino and Nathan used Stata to build their regressions, which include clustering. I can achieve the same results using glm.cluster, but that model is not supported by stargazer, so I am currently looking into other ways to calculate the clustered standard errors.

Appendix

Table 1
Summary Statistics for Enumeration Areas around Brong Ahafo Polling Stations

Variable	Mean	SD	Min	Max
Area (sq. km.)	19.63	49.41	0.09	630.71
Total population	8287.48	14400.89	176	61992
% Akan at polling station	0.61	0.3	0	0.99
% Ga-Dangbe at polling station	0.02	0.04	0	0.72
% Ewe at polling station	0.03	0.07	0	0.8
% Guan at polling station	0.04	0.13	0	0.99
% Gurma at polling station	0.05	0.12	0	0.93
% Mole-Dagbon at polling station	0.16	0.17	0	0.93
% Grusi at polling station	0.05	0.11	0	0.95
Mande at polling station	0.02	0.06	0	0.83
% Other ethnic groups at polling station	0.03	0.1	0	0.9
Ethnic fractionalization	0.41	0.21	0.01	0.83
% Speak English	0.47	0.17	0.02	0.89
% Public/semipublic employment	0.05	0.05	0	0.56
Development index (EA)	1.21	2.13	-0.48	8.45

Akan in 30 km (spatially weighted)	0.63	0.22	0.05	0.92
Segregation (H) in 30 km	0.06	0.05	0.01	0.28

Note: $n = 1633$. Data sources described in the text

TABLE 2. Local Ethnic Geography and NPP Vote Share in the 2008 Presidential Election

	(1)	(2)	(3)
% Akan in 30 km (spatially weighted)		0.316***	0.336***
		(0.082)	(0.091)
% Akan in 30 km (spatially weighted)			−0.055
			(0.109)
% Akan at polling station	0.386***	0.286***	0.325***
	(0.055)	(0.061)	(0.098)
% Mole-Dagbon at polling station	0.120*	0.075	0.075
	(0.063)	(0.064)	(0.064)
% Minor ethnic groups at polling station	0.228***	0.260***	0.265***
	(0.054)	(0.054)	(0.055)
% Public sector employment	0.086	0.083	0.070
	(0.121)	(0.120)	(0.123)
Development index (EA)	0.025***	0.024***	0.024***
	(0.003)	(0.003)	(0.003)
R^2	0.377	0.383	0.383

Notes: Significant at p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001. n = 1580. Weighted least squares with weights equal to total votes cast in the first round of the 2008 presidential election by polling station. All models include parliamentary constituency fixed effects (not shown). Standard errors in parentheses

TABLE 3
Summary Statistics for Individual-Level Analysis

Variable	Mean	SD	Min	Max
Afrobarometer				
Akan	0.48	0.5	0	1
Ewe	0.14	0.35	0	1
Ga	0.08	0.28	0	1
Dogomba (Mole-Dagbon	0.06	0.25	0	1
Vote NPP	0.48	0.5	0	1
Vote NDC	0.23	0.42	0	1
Economy approval	2.91	1.11	1	5
Unfair	0.56	0.5	0	1
Poverty (individual)	0.03	1	-1.28	1.85
Urban	0.17	0.38	0	1
Trust other group	0.43	0.5	0	1
Enumerator sent by government	0.62	0.49	0	1
Male	0.49	0.5	0	1
Central Region	0.09	0.29	0	1
Round 4	0.5	0.5	0	1
Local Area Characteristics (from Census)				
% Akan in 30 km (spatially weighted)	0.48	0.32	0.01	0.96

% Ewe in 30 km (spatially weighted)	0.13	0.21	0	0.91
% Akan in 5 km (spatially weighted)	0.5	0.28	0.01	0.94
% Ewe in 5 km (spatially weighted)	0.14	0.18	0	0.86
Population density (5-km x 5-km area)	750.36	1448.33	5.36	5561.99
Development index (EA)	-0.07	0.97	-1.14	3.47

Notes: All Afrobarometer variables are binary, except for Economy Approval (1 to 5) and Poverty. Data sources described in the text. $n = 2287$, except for 'Trust other group,' which is Round 3 only (n=1108)

Bibliography

Barak Hoffman, Karen E. Ferree, Clark Gibson, and James D. Long. 2009. *Explaining the African Vote.* American Political Science Association. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1450123.

Gary King, Michael Tomz, and Jason Wittenberg. 2000. *Making the Most of Statistical Analyses: Improving Interpretation and Presentation.* American Journal of Political Science. https://www.jstor.org/stable/pdf/2669316.pdf.

Ichino, Nahomi, and Noah L. Nathan. 2013. *Crossing the Line: Local Ethnic Geography and Voting in Ghana.* American Political Science Association. https://www.jstor.org/stable/43654018.

Kimenyi, Mwangi S. 2006. *Ethnicity, Governance and the Provision of Public Goods.* Journal of African Economies. https://academic.oup.com/jae/article-abstract/15/suppl_1/62/707092?redirectedFrom=fulltext.

Michael Bratton, Ravi Bhavnani, and Tse-Hsin Chen. 2011. *Voting Intentions in Africa: Ethnic, Economic or Partisan?* Afrobarometer. https://afrobarometer.org/publications/wp127-voting-intentions-africa-ethnic-economic-or-partisan.

TABLE 4. Local Ethnic Geography and Individual-Level Party Support: Rural

	NPP	NDC	NPP	NDC
	(1)	(2)	(3)	(4)
% Akan in 30 km (spatially weighted)	0.872***	−1.387***		
	(0.218)	(0.268)		
% Akan in 30 km (spatially weighted) * Central Region	−1.967***	2.367***		
	(0.729)	(0.898)		
% Ewe in 30 km (spatially weighted)			−1.216***	1.929***
			(0.366)	(0.368)
Akan	0.730***	−0.617***	1.071***	−1.176***
	(0.148)	(0.196)	(0.118)	(0.153)
Ewe	−0.407**	0.845***	0.111	−0.060
	(0.172)	(0.163)	(0.246)	(0.255)
Dagomba (Mole)	0.079	0.249	−0.113	0.510**
	(0.207)	(0.210)	(0.203)	(0.208)
Male	0.082	0.034	0.091	0.008
	(0.100)	(0.118)	(0.099)	(0.118)
Economic approval	0.226***	−0.139**	0.222***	−0.124**
	(0.048)	(0.055)	(0.048)	(0.055)
Poverty (individual)	−0.149***	0.144**	−0.164***	0.174***
	(0.053)	(0.061)	(0.052)	(0.061)
Development index (EA)	−0.228***	−0.026	−0.196***	−0.079
	(0.070)	(0.084)	(0.070)	(0.084)
Central Region	0.862	−0.951	−0.611***	0.739***
	(0.582)	(0.721)	(0.168)	(0.209)
Round 4	−0.230**	0.013	−0.211**	−0.028
	(0.105)	(0.123)	(0.105)	(0.124)
Intercept	−1.310***	−0.276	−0.955***	−0.813***
	(0.186)	(0.204)	(0.172)	(0.195)
N	1,858	1,858	1,858	1,858

Notes: *p < 0.05; **p < 0.01; ***p < 0.001. Logistic regression coefficients with standard errors clustered at EA level in parentheses. Outcome in columns 1 and 3 is support for NPP; outcome in columns 2 and 4 is support for NDC. Data are from Rounds 3 and 4 of the Ghana Afrobarometer, excluding respondents from local areas estimated to have more than 1000 people per sq. km

TABLE 5a. Local Ethnic Geography and Individual-Level Party Support: Urban

	NPP	NDC	NPP	NDC
	(1)	(2)	(3)	(4)
% Akan in 30 km (spatially weighted)	1.240	0.677		
	(0.873)	(0.969)		
% Ewe in 30 km (spatially weighted)			−1.551	1.175
			(2.230)	(2.543)

*p < .1; **p < .05; ***p < .01

TABLE 5b. Local Ethnic Geography and Individual-Level Party Support: Urban

	NPP	NDC	NPP	NDC
	(1)	(2)	(3)	(4)
% Akan in 5 km (spatially weighted)	1.240	0.216		
	(0.793)*	(0.886)		
% Ewe in 5 km (spatially weighted)			−0.987	2.327
			(1.397)	(1.475)

*p < .1; **p < .05; ***p < .01