

Appendix for “Perceptions of Local vs. National Factors in Ethnic Conflict: Evidence from A
Survey in Jos, Nigeria”

Laura Thaut Vinson
Lewis & Clark College
lvinson@lclark.edu

Peter Rudloff
Oklahoma State University
peter.rudloff@okstate.edu

Do the administered treatments have an effect on how individuals perceive local vs. national causes, regardless of issues (religious or tribal) indicated?

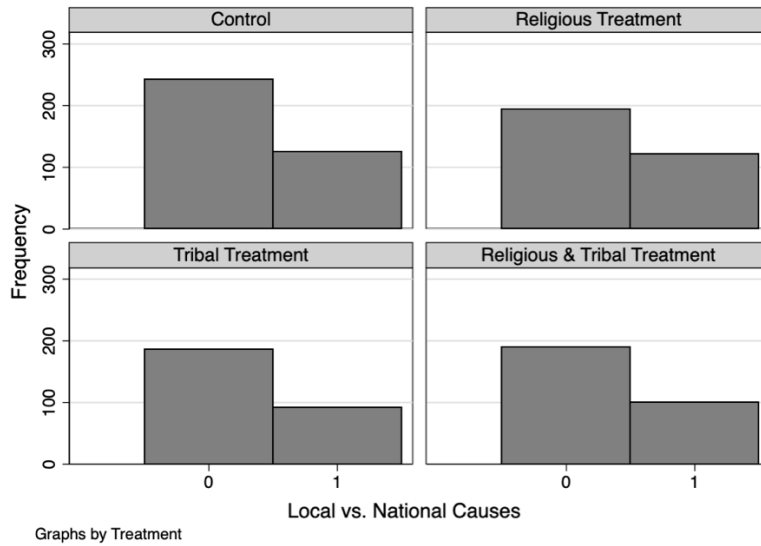


Figure 1: Histograms of Responses to National vs. Local Causes by Treatment Received (0 = Plateau/State, Jos North, or Jos South solution, 1 = National/Federal Solution)

Logistic regression to more directly analyze the effect of treatments:

	Coefficient (Standard Error)
Religious Treatment	0.189 (0.160)
Tribal Treatment	-0.054 (0.169)
Combined “Ethnic” Treatment	0.024 (0.166)
Constant	-0.661*** (0.110)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.001$ $n = 1,248$

Table 1: Logistic regression analysis of relationship between randomized treatments on Local (DV=0) vs. National (DV=1) Causes, across all issues indicated

Do the administered treatments have an effect on how individuals perceive local vs. national causes when they also indicate religious issues as the cause of the conflict?

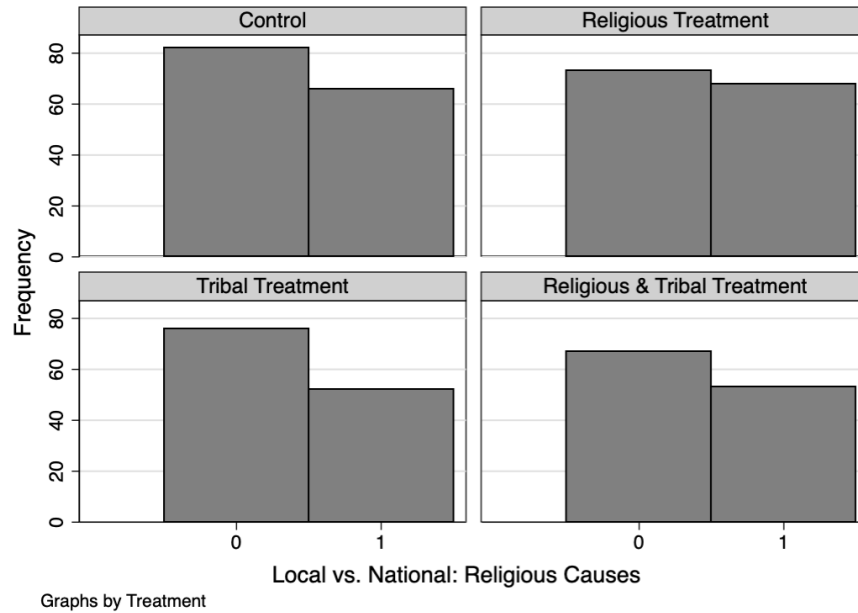


Figure 2: Histograms of Responses to National vs. Local Causes by Treatment Received if Individual Indicated Religious Cause (0 = Plateau/State, Jos North, or Jos South solution, 1 = National/Federal Solution)

Logistic regression to more directly analyze the effect of treatments:

	Coefficient (Standard Error)
Religious Treatment	0.146 (0.236)
Tribal Treatment	-0.162 (0.244)
Combined “Ethnic” Treatment	-0.017 (0.247)
Constant	-0.217 (0.165)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.001$ $n = 537$

Table 2: Logistic regression analysis of relationship between randomized treatments on Local (DV=0) vs. National (DV=1) Causes if Individual Indicated Religious Cause of Conflict

Do the administered treatments have an effect on how individuals perceive local vs. national causes when they also indicate tribal issues as the cause of the conflict?

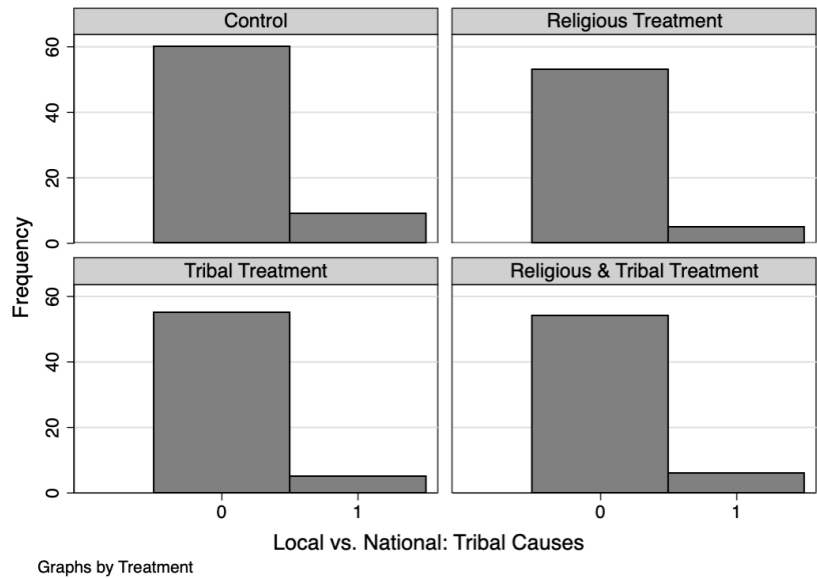


Figure 3: Histograms of Responses to National vs. Local Causes by Treatment Received if Individual Indicated Tribal Cause (0 = Plateau/State, Jos North, or Jos South solution, 1 = National/Federal Solution)

Logistic regression to more directly analyze the effect of treatments:

	Coefficient (Standard Error)
Religious Treatment	-0.464 (0.589)
Tribal Treatment	-0.501 (0.588)
Combined “Ethnic” Treatment	-0.3 (0.559)
Constant	-1.897*** (0.357)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.001$ $n = 247$

Table 3: Logistic regression analysis of relationship between randomized treatments on Local (DV=0) vs. National (DV=1) Causes if Individual Indicated Tribal Cause of Conflict

	Coefficient (Standard Error)	Coefficient (Standard Error)
Religious Issues	0.299** (0.129)	0.300** (0.130)
Tribal Issues	-1.664*** (0.232)	-1.661*** (0.232)
Religious Treatment	-	0.183 (0.166)
Tribal Treatment	-	-0.043 (0.175)
Combined “Ethnic” Treatment	-	0.047 (0.172)
Constant	-0.520*** (0.096)	-0.569 (0.133)
<i>*p < 0.1; **p < 0.05; ***p < 0.001</i>		
	<i>n = 1,248</i>	<i>n = 1,248</i>

Table 4: Logistic Regression Comparing Local (DV = 0) vs. National (DV = 1) Causes between Religious and Tribal Issues, where Economic and Political Causes treated as the baseline for comparison (Column 2 includes randomized treatments)

Do the administered treatments have an effect on how individuals perceive local vs. national solutions when they also indicated tribal solutions as the most important for conflict?

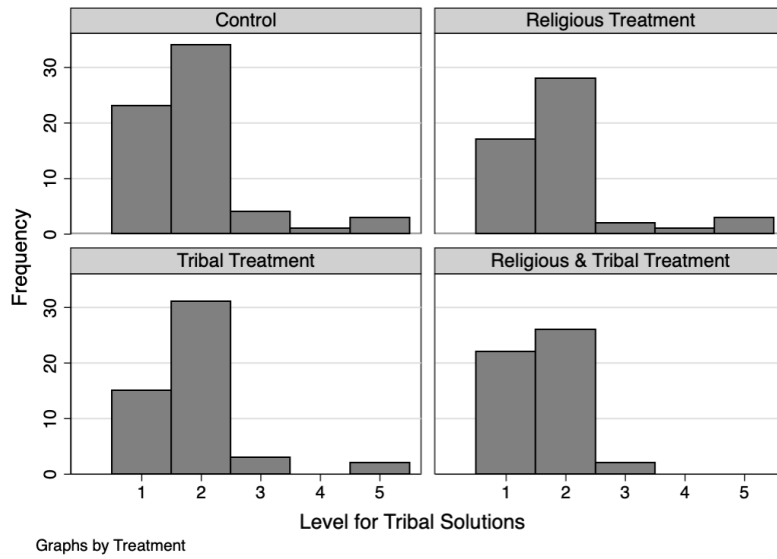


Figure 4: Histograms of Responses to National vs. Local Solutions by Treatment Received if Individual Indicated Tribal Solutions (1 = National/Federal Solution, 2 = Plateau/State Solution, 3 = Jos North Solution, 4 = Jos South Solution, 5 = Not Sure/ Don't Know)

Do the administered treatments have an effect on how individuals perceive local vs. national solutions when they also indicated religious solutions as the most important for conflict?

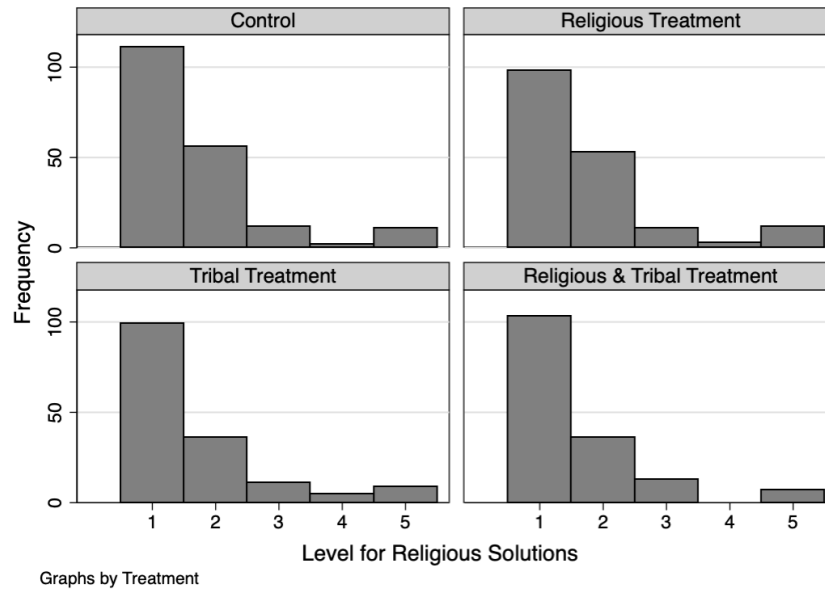


Figure 5: Histograms of Responses to National vs. Local Solutions by Treatment Received if Individual Indicated Religious Solutions (1 = National/Federal Solution, 2 = Plateau/State Solution, 3 = Jos North Solution, 4 = Jos South Solution, 5 = Not Sure/Don't Know)

Is indicating economic or political issues as the cause of conflict associated with indicating local or national causes of the conflict?

	Local Level	National Level	Totals
Economic Issues	72 (1.8)	58 (3.4)	130 (5.3)
Political Issues	219 (0.0)	115 (0.0)	334 (0.1)
Tribal Issues	222 (23.6)	25 (43.7)	247 (67.3)
Religious Issues	298 (7.4)	239 (13.8)	537 (21.3)
Totals	811 (32.9)	437 (61.0)	1,248 (93.8)
Chi² = 93.84 p < 0.001			

Table 5: Cross tabulation of type of issues indicated as the cause for rows, and local and national level causes indicated as the columns. Numbers without parentheses represent sum of cases for each cell, and numbers in parentheses represent contribution of each cell to Chi² statistic. Note that the economic issues and political issues options contribute very little to the overall Chi² statistic, meaning their distribution between local and national level categories varies little from the overall distribution.

A Discussion of Jos North vs. Jos South Identity

We include Jos South in the survey area because conflict incidents have occurred across the broader Jos metropolis, which extends into neighborhoods of Jos South. The general tensions and segregation are not limited to the Jos North (predominantly Muslim) part of the metropolis, even though Jos North is a flashpoint and central to the historical and contemporary evolution of the conflict. Individuals affected by the conflict have also migrated after deadly bouts of violence to Jos South to find safety in communities of like identity. To catch any possible nuance, therefore, in how respondents think about the LGA-level dimensions of the conflict, we include Jos South local government area in survey response options discussed below. Furthermore, we ask questions about which single LGA each respondent believes is their “home.” As there are so many LGAs in Nigeria, these answers were hand-entered by research assistants, which led to challenges coding the variables later due to incomplete answers (some would simply indicate “Jos” as their home LGA rather than Jos North/South) and variations in spelling. See Table 6 below regarding how the Jos North and Jos South variables were coded based on the data.

Original Text	<i>n</i>	Coded Jos North	Coded Jos South
JO SOUTH	1	0	1
JOR SOUTH	1	0	1
JOS	13	0	0
JOS NORH	1	1	0
JOS SOUTH	1	0	1
JOS E	1	0	0
JOS EAST	22	0	0
JOS NORH	3	1	0
JOS NORHT	9	1	0
JOS NORIH LGA	1	1	0
JOS NORTH	428	1	0
JOS NORTH LGA	1	1	0
JOS NORTHC	1	1	0
JOS NORUT	1	1	0
JOS NOTH	1	1	0
JOS NRTH	1	1	0
JOS SOUH	2	0	1
JOS SOUHT	1	0	1
JOS SOUTH	221	0	1
JOS-NORTH	1	1	0
JOSEST	1	0	0
JOSNORTH	72	1	0
JOSNOTHE	1	1	0
JOSORTH	1	1	0
JOSSOURTH	1	0	1
JOSSOUTH	2	0	1
JS NORTH	1	1	0
JS SOUTH	1	0	1
NJOS NORTH	1	1	0

Table 6: Details on how Jos South and Jos North binary variables were coded. First column indicates each unique spelling related to a Jos LGA (displayed in a monospace font to aid in distinguishing between text). Second column is the number of times this spelling appeared in the data. Final two columns indicate whether a particular spelling was included in the Jos North or Jos South variable (1 = inclusion, 0 = exclusion).

	Model One	Model Two	Model Three	Model Four	Model Five
Religious Issues	1.77*** (0.24)	1.11*** (0.26)	1.09*** (0.26)	1.22*** (0.27)	1.20*** (0.27)
Religious Treatment	0.08 (0.22)	0.16 (0.23)	0.15 (0.23)	0.18 (0.23)	0.17 (0.23)
Tribal Treatment	-0.23 (0.23)	-0.26 (0.23)	-0.26 (0.23)	-0.25 (0.24)	-0.25 (0.24)
Combined “Ethnic” Treatment	-0.05 (0.23)	-0.003 (0.24)	-0.002 (0.24)	-0.006 (0.24)	-0.01 (0.24)
Christian	- -	1.95*** (0.27)	- -	2.16*** (0.30)	- -
Muslim	- -	- -	-2.01*** (0.27)	- -	-2.24*** (0.31)
Jos North	-0.49** (0.22)	- -	- -	0.48* (0.27)	0.52* (0.27)
Jos South	0.47** (0.23)	- -	- -	0.59** (0.24)	0.60** (0.24)
Constant	-1.95***	-3.004***	-1.03***	-3.46***	-1.29***
<i>n</i>	784	782	782	782	782

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

DV: 1 if cause is national, 0 if local for tribal and religious cause responses

Table 7: Logistics regression analyses exploring the link between religious issues (the key independent variable) and whether or not one indicated local or national causes associated with either religious or tribal causes.

	Model One	Model Two	Model Three	Model Four	Model Five
Tribal Issues	-1.77*** (0.24)	-1.11*** (0.26)	-1.09*** (0.26)	-1.22*** (0.27)	-1.20*** (0.27)
Religious Treatment	0.08 (0.22)	0.16 (0.23)	0.15 (0.23)	0.18 (0.23)	0.17 (0.23)
Tribal Treatment	-0.23 (0.23)	-0.26 (0.23)	-0.26 (0.23)	-0.25 (0.24)	-0.25 (0.24)
Combined “Ethnic” Treatment	-0.05 (0.23)	-0.003 (0.24)	-0.002 (0.24)	-0.006 (0.24)	-0.01 (0.24)
Christian	- -	1.95*** (0.27)	- -	2.16*** (0.30)	- -
Muslim	- -	- -	-2.01*** (0.27)	- -	-2.24*** (0.31)
Jos North	-0.49** (0.22)	- -	- -	0.48* (0.27)	0.52* (0.27)
Jos South	0.47** (0.23)	- -	- -	0.59** (0.24)	0.60** (0.24)
Constant	-0.17	-1.89***	0.06	-2.24***	-0.09
<i>n</i>	784	782	782	782	782

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

DV: 1 if cause is national, 0 if local for tribal and religious cause responses

Table 8: Logistics regression analyses exploring the link between tribal issues (the key independent variable) and whether or not one indicated local or national causes associated with either religious or tribal causes.

Note that those indicating Jos South as their home tend to blame national issues, and this relationship remains consistent across all models, even when religious identity is included. On the other hand, those indicating Jos North as their home tend to view causes of conflict as local without controlling for religious affiliation, however, the sign of the coefficient flips when accounting for religious identity. This may not be surprising given that Jos North tends to be Muslim, and identifying as Muslim is strongly associated with blaming local governance (see Models Three and Five in Table 8 above). Control of or representation in Jos North local government (appointed or elected positions) has also been a point of significant contestation for the past 25 years between the Hausa Muslim and indigenous Christian population. Finally, it is important to note that although the treatments included in the survey may have other important framing effects (self-citation omitted), the treatments have no effect on the level of government blamed for conflict in Jos.

	Christian	Muslim	Decline Ans.	Total
Jos North	137	387	0	524
Jos South	175	55	1	231
Total	312	442	1	755
Chi ² = 166.35 $p < 0.001$				

Table 9: Cross tabulation of those indicating Jos North and Jos South as their home and religious self-identification.

	Model One	Model Two	Model Three	Model Four	Model Five
Religious Solutions	0.96*** (0.17)	0.89*** (0.17)	0.88*** (0.17)	0.89*** (0.17)	0.89*** (0.17)
Religious Treatment	-0.10 (0.20)	-0.09 (0.20)	-0.10 (0.20)	-0.09 (0.20)	-0.10 (0.20)
Tribal Treatment	0.03 (0.20)	0.09 (0.21)	0.09 (0.21)	0.10 (0.21)	0.10 (0.21)
Combined “Ethnic” Treatment	0.30 (0.20)	0.32 (0.21)	0.32 (0.21)	0.32 (0.21)	0.32 (0.21)
Christian	- -	1.18*** (0.16)	- -	1.21*** (0.19)	- -
Muslim	- -	- -	-1.20*** (0.16)	- -	-1.23*** (0.19)
Jos North	-0.64*** (0.17)	- -	- -	0.05 (0.20)	0.06 (0.20)
Jos South	-0.25 (0.22)	- -	- -	-0.12 (0.23)	-0.12 (0.23)
Constant	-0.28	-1.25***	-0.06	-1.28	-0.06
<i>n</i>	858	858	858	858	858

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

DV: 1 if solution is national, 0 if local for tribal and religious solution responses

Table 10: Logistics regression analyses exploring the link between religious solutions (the key independent variable) and whether or not one indicated local or national solutions for either tribal or religious solutions.

	Model One	Model Two	Model Three	Model Four	Model Five
Tribal Solution	-0.96*** (0.17)	-0.89*** (0.17)	-0.88*** (0.17)	-0.89*** (0.17)	-0.89*** (0.17)
Religious Treatment	-0.10 (0.20)	-0.09 (0.20)	-0.10 (0.20)	-0.09 (0.20)	-0.10 (0.20)
Tribal Treatment	0.03 (0.20)	0.09 (0.21)	0.09 (0.21)	0.10 (0.21)	0.10 (0.21)
Combined “Ethnic” Treatment	0.30 (0.20)	0.32 (0.21)	0.32 (0.21)	0.32 (0.21)	0.32 (0.21)
Christian	- -	1.18*** (0.16)	- -	1.21*** (0.19)	- -
Muslim	- -	- -	-1.20*** (0.16)	- -	-1.23*** (0.19)
Jos North	-0.64*** (0.17)	- -	- -	0.05 (0.20)	0.06 (0.20)
Jos South	-0.25 (0.22)	- -	- -	-0.12 (0.23)	-0.12 (0.23)
Constant	0.68	-0.37**	0.82***	-0.38*	0.83***
<i>n</i>	858	858	858	858	858

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

DV: 1 if solution is national, 0 if local for tribal and religious solution responses

Table 11: Logistics regression analyses exploring the link between tribal solutions (the key independent variable) and whether or not one indicated local or national solutions for either tribal or religious solutions.