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Ethnic cooperation and conflict in Kenya

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Ethnic Cooperation and Conflict in Kenya

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Ethnic Cooperation and Conflict in Kenya

Abstract

There is growing evidence that ethnic divisions and conflict experience affect social capital and economic interactions, in both positive and negative ways. However, recent work has suggested that the experience of electoral violence in Kenya does not correlate with laboratory behavior between the two largest ethnic groups, the Luo and Kikuyu. We conduct a similar set of experiments measuring social capital and find the same results: altruism, trusting and trustworthy behavior, and cooperation between these two ethnic groups are not affected by priming people on the ethnic identity of their partners or on the salience of election conflict. Our findings suggest electoral violence does not necessarily lead to changes in behavior between ethnic groups and that cooperative failure across groups may be easily overstated or have other mechanisms.

JEL-Code: C90, H41, O43

Keywords: Ethnic cooperation; conflict; election violence; priming

October 2020

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1. Introduction

Ethnic conflict is a large social pressure point in many developing countries as it leads to economic inefficiencies and reduced social welfare (Chen, Loayza and Reynal-Querol 2008; De Luca and Verpoorten 2015). Group-based conflicts remain a major impediment for entrepreneurship (Naudé et al., 2011), human capital accumulation (Leon, 2012; Justino, 2011), social capital (Coletta and Cullen, 2000), health (Ghobarah et al., 2004), and economic growth in general (World Bank, 2011).

Trust and cooperative behavior are crucial for economic development, as they can determine access to jobs, credit, participation in informal saving and insurance arrangements. Such outcomes are particularly relevant in societies where economic interactions are not generally governed by formal contracts (Heikkilä et al., 2016; Kimuyu and Omiti, 2000). Yet, economic cooperation may become more difficult after conflict. Violence may lead to economic and social isolation, influencing individuals' decision-making and intergroup interaction. The literature on ethnic preferences suggests that divisions can negatively affect economic performance (Easterly and Levine, 1997; Cederman et al., 2007 and 2011; Alesina and Spolaore, 1997; La Ferrara, 2003a; Miguel, 2004) and damage productivity, particularly at the firm level (Hjört, 2014).

There is growing literature that seeks to understand the impacts of past ethnic-violence episodes on behavior (see Bauer et al., 2016, for a review). However, few studies look at the inter-ethnic interactions following conflict between members of those groups³. In addition, these papers often use vague measures, like “social cohesion” and “pro-social behavior”, rather than indicators on economic decision-making (Voors et al., 2012; Gneezy and Fessler, 2012; Bauer et al., 2014). In this paper we explore the role that ethnicity plays in individuals' behavior after an episode of interethnic violence. Specifically, we are interested in whether or not the salience of or exposure to memories of past violence changes individuals' economic behavior towards members of their outgroup.

We run a set of experiments in Kenya with the two largest ethnic groups, the Kikuyu and Luo, to explore whether group-based behavioral differences are influenced by whether individuals are reminded about conflict from the 2007 elections. Participants are 654 men from four locations

³ This does not mean that intergroup relationships are not studied, as is the case in, e.g., Bauer et al. (2014a; 2014b) and Cecchi et al. (2015); However, these studies do not differentiate “in-group” along the faultlines of the episode of violence studied. Rather, in-groups (out-groups) are, respectively: people from the same village (distant village); classmates (members of other classes); players in the same team (opposing team).

in Kenya, including three slums in Nairobi, where ethnic groups routinely interact, and villages in Kisumu, a rural and predominantly Luo area. Similar to Berge et al., (2019), we find a modest interaction between reminded experiences of conflict and differences towards in-groups or out-groups in all four games, trust, cooperation, dictator, and public contribution. Our results are robust to the inclusion of controls and hold for individuals coming from the rural areas relative to those who come from Nairobi.

We contribute to the literature on conflict and ethnic salience by examining the long-term behavioral consequences on social capital in Kenya. We find that co-ethnic biases or favoritism towards one's in-group are not as pronounced as they are often hypothesized. Rather, effects are small in the set of games subjects played in the present study. These findings support Berge et al. (2019) who argue other mechanisms might be driving ethnic discrimination. The remainder of this manuscript proceeds as follows. In section 2 we review some of the current research on ethnic interactions. In section 3 we present the experimental methods and the games used. Section 4 shows results, Section 5 discusses findings, and Section 6 concludes.

2. Ethnic interactions: In-group and out-group behavior

The literature suggests that experiencing conflict influences the salience of social identity. A common argument is that people turn favorably towards their in-groups in times of conflict, as norms are enforced more rigidly in-group during these episodes (Gneezy and Fessler, 2011; Voors et al. 2012; Georgia, Bauer et al., 2014a; Bohm et al., 2018; Shayo 2020). For instance, violent conflict along ethnic lines can potentially increase ethnic salience relative to salience of common nationality (Sambanis and Shayo, 2013). A rich body of papers on in-group behavior and bargaining shows that resource allocations are larger towards in-groups (Fehr et al., 2013; Bernhard et al., 2006; Bowles and Gintis, 2004) and that individuals tend to punish more if the dictator is out-group and the receiver is in-group (Schiller et al., 2014; Jordan et al., 2014)⁴. The bias is more likely to be higher if individuals have experienced previously some sort of conflict or if respondents self-reported in-group closeness feelings (Jetten et al., 1996; Bernhard et al., 2006; Chen and Li, 2009; Leider et al., 2009; Fong and Luttmer, 2009; McLeish and Oxoby, 2011; Iyengar and Westwood, 2015; Zhang et al., 2019). Furthermore, studies that examine the role of

⁴ We also note some suggestion that individuals are willing to punish norm violators of their own group more than those of other groups (e.g. Mendoza et al., 2014; Shinada et al., 2004).

conflict on social identity in the domain of cooperation and trust find that, in general cooperation is higher when playing in-group. Trust is on average higher for co-ethnics and sharing ethnicity increases the likelihood of partner choice. In these papers, the in-group bias tends to be higher with out-group competition (Bornstein and Ben-Yossef 1994; Glaeser et al., 2000; Bornstein G. 2003; Eckel and Grossman, 2005).

Another group of studies supports that exposure to violent conflict makes people less favorable towards out-group members (Schubert and Lambsdorff, 2014; Georg et al. 2013). For example, Becchetti et al. (2014) found that victimized subjects exhibit reduced trustworthiness for individuals from different ethnicities. However, ethnic biases driving out-group discrimination is not the consensus. For instance, the contact hypothesis (Allport, 1954) supported by several studies (Pettigrew and Tropp, 2006; Beaman et al., 2009; Mironova and Whitt, 2014; Whitt 2014) argue that intergroup interaction typically reduces discrimination. Moreover, a recent study from Berge et al. (2019) finds little evidence of ethnic biases leading to in-group and out-group preferences and suggest that the individuals' degree of altruism might dilute the possible biases. The authors discuss other plausible mechanisms motivating the observed preferences divergency in the region, such as the way subjects assimilate norms in the context of migration jointly with urbanization and the role of democratization expansion.

3. Experimental Design and Data

Kenya was struck by massive outbreaks of ethnicity-based violence after political elections in 2007/08. To exploit the ethnic dimension of these riots, we only invited subjects of the two formerly clashing ethnic groups, the Kikuyu and the Luo, to be part of the experiment. The sample consists of 654 male subjects⁵ who were recruited from four different Kenyan regions, three of which consisted of informal settlement neighborhoods in Nairobi: Viwandani, Kibera, and Kawangare. The fourth region, Dunga Bay, which is close to the city of Kisumu, is a rural region in the West of Kenya near Lake Victoria.

Individuals played four simple one-shot two-player behavioral games, the trust game, stag hunt game, dictator game, and public goods game. All individuals played the trust game first,⁶

⁵ We invited males subjects only for two reasons: First, males were predominant in the riots. Second, inviting females alongside males might have introduced gender-biased behavior, which could have complicated analysis without need.

⁶ The reason for having the trust game first was to separate sending and responding behavior as far as possible.

while half of our subjects first took the role of the sender, the other half that of responder.⁷ The order of the remaining games was randomized with the restriction that dictator games should not follow the trust game directly, due to their similarity. The trust game is commonly believed to measure the level of trusting Player A has in Player B, while also capturing altruism and risk preferences. In our study, Player A was given an endowment of KSH 250 with the option of sending any increment of KSH 50 to Player B. The amount transferred was tripled before reaching Player B, who was then asked which share of the tripled amount he would return to Player A. We elicited responses using strategy method, so that Player B had to respond to any possible amount received by player A. For each possible tripled amount sent by player A, player B was then provided with a set of increments of KSH 50 from which he had to select his returning choice. We define trustworthiness as a variable that captures the percentage of the tripled amount that was given back. In the stag hunt game, Player A and Player B could simultaneously choose between two options: either opening a joint business with the matched partner or own a business. Opening a business would assure a subject KSH 250, independent of the partner's choice. Opening a joint business introduced the possibility to yield KSH 450 if the partner chose to open the joint business too, but this option came at the risk of earning nothing if the partner chose to open an own business⁸. The joint business is the payoff dominant strategy and business ownership is the risk dominant strategy. The corresponding payoff matrix in KSH is:

Figure 1. Stag hunt payoff matrix

	Joint	Own
Joint	(450, 450)	(0, 250)
Own	(250, 0)	(250, 250)

The third game is the dictator game which is generally taken to capture feelings of altruism Player A feels towards Player B. Player A was given an endowment of KSH 250 with the option of sending any increment of KSH 50 of it to player B.

⁷ The results of a set of Mann-Whitney tests showed that we are not able to reject the null hypothesis that the mean sending or returning behavior differed between subjects playing first movers first and those playing second mover first

⁸ This game has two equilibria in pure strategies: both players choose the large payoff, or both choose the smaller payoff. While the larger payoff is socially optimal, the smaller payoff is risk dominant. The game is commonly thought to measure individuals' abilities to coordinate on higher outcome equilibria.

Finally, in the two-person public good game, both Player A and Player B were given endowments of KSH 250 each and they could simultaneously choose to contribute any increment of KSH 50 to a joint fund. The contributed amount is multiplied by 1.5 and divided equally among both players and the total money each player receives is the money kept plus half of the final amount in the public good. Any monetary unit not contributed would be kept as additional personal income beyond returns from the joint fund.

3.1 Treatments

From the 654 subjects who participated in the experiment, half were randomly selected and received priming treatment referring to their experiences during the 2007/08 post-electoral riots to induce a mindset of exposure to conflict. The prime consisted of asking questions related to ethnic riots before participants undertook the gaming tasks. These questions asked for personal exposure, exposure of relatives, or witnessing other forms of violence. The other half of the subjects were asked an identical number of innocuous socio-economic and demographic questions at the same point, in order to ensure maximum comparability of the experimental setup. Those asked the innocuous questions were asked about their exposure to violence after they had completed the tasks. The innocuous survey questions were then collected from the “treated” group at this same point in time.⁹

Besides assigning individuals to priming or non-priming treatments, they were also randomly assigned either to their own ethnic group (in-group treatment) or the other group (out-group), in which they played either against a co-ethnic or a subject of different ethnicity, respectively. In order to prime ethnicity, we included the mother tongue a partner spoke alongside other innocuous information (age, marital status and employment status)¹⁰. Subjects did not switch treatments during the experiments, and partners stayed matched throughout the play of all four games. The outcome of one game was randomly selected for payout. We present summary statistics for all games in Table 1.

⁹ We are confident that this prime successfully induced a conflict-related mindset. Participants were asked about how they perceived their safety in the presence of members of their out-group immediately following completion of the games. Non-primed subjects responded to this question before being asked about their experiences of conflict. Primed subjects reported feeling significantly less safe (two-sided Mann-Whitney test, $p < 0.01$) than non-primed subjects.

¹⁰ A range of ethnicity primes were considered, and field tested, including: name and hometown, as well as language. Of the primes field tested, language performed best. When asked, players were able to tell us the tribal identity of their partners but were unable to guess that the purpose of our experiment pertained to interethnic attitudes.

Table 1. Summary Statistics

Variable	Treatment	Amount sent (mean)	Std. Dev.	Min	Max
Trust		94.72	59.21	0	250
	Prime	100.38	59.83		
	In-group	98.31	60.28		
	Prime \times in-group	91.24	54.56		
Returned		0.421	0.230	0	0.898
	Prime	0.385	0.228		
	In-group	0.429	0.240		
	Prime \times in-group	0.440	0.226		
Stag		0.64	0.48	0	1
	Prime	0.70	0.46		
	In-group	0.67	0.47		
	Prime \times in-group	0.58	0.49		
Dictator		89.68	54.62	0	250
	Prime	84.21	52.72		
	In-group	95.20	58.55		
	Prime \times in-group	87.29	48.79		
Public		133.26	74.24	0	250
	Prime	127.56	72.84		
	In-group	135.59	77.27		
	Prime \times in-group	138.70	73.17		
Luo dummy		0.37	0.48		
N = 654					
Individuals in priming treatment = 133					
Individuals in in-group treatment = 177					

3.2 Empirical methods

In addition to looking at means by experimental group, we also run a set of regressions on the laboratory-generated data, following the equation:

$$Y_{ij} = \alpha + \beta_1 prime_{ij} + \beta_2 ingroup_{ij} + \beta_3 prime \times ingroup_{ij} + \epsilon_{ij}$$

Y_{ij} is the transfer by subject i to partner in game j , $prime_{ij}$ is an indicator variable for whether the individual i was randomly reminded of violence experienced during 2007/08 elections, $ingroup_{ij}$ is an indicator variable for being paired with a co-ethnic in game j , $prime_{ij} \times ingroup_{ij}$ corresponds to the interaction term of both treatments, and ϵ_{ij} is the error term. We adjust p-values following the Bonferroni and the Family-Wise error-rate (FWER) corrections to adjust for testing multiple hypotheses. We also conduct robustness checks by running specifications that include a matrix of X controls, including age, location, and marital status.

4. Main results

Results from the games for the different groups are presented in Figure 2. We also present the regression analysis of the games in Table 2. All treatments, prime, in-group, and the interaction term, are in the analysis, along with the Bonferroni and FWER p-values. Results for the trust game are shown in column 1. The amount sent for the treatment prime starts with an average of 94 and then it is reduced largely to 7.9 or by 92%. It appears that being reminded of past violence serves to decrease trust overall. Moreover, we find that trust keeps decreasing in-group, yet the coefficient is almost near zero and highly insignificant, indicating there is no in-group preference, like in Berge et al. (2019). The reduction is larger if priming towards the in-group, as the coefficient doubles in size with respect to prime and is significant at 8%, if using the FWER p-values.

We also present an analysis on trustworthiness in the Appendix. Consistent with trust, the proportion of the contribution sent to the first player is negative for primed individuals. The effects are positive but close to zero for the in-group players and players who were primed and interacted in-group. None of the coefficients are statistically significant.

The stag hunt game outcomes are in column 2 and were coded (1) for individuals who chose high values requiring cooperation versus (0) for individuals who chose low values with no cooperation involved. Similar to the trust outcomes, the stag hunt results reveal no significant in-group effect. The probability of cooperation is positive for the treatment prime, it decreases almost to zero in the in-group, and it is reduced significantly and highly if prime is interacted with in-group. Primed individuals within in-group are 16.6% less likely to engage in cooperation.

Figure 2. Game results by treatment

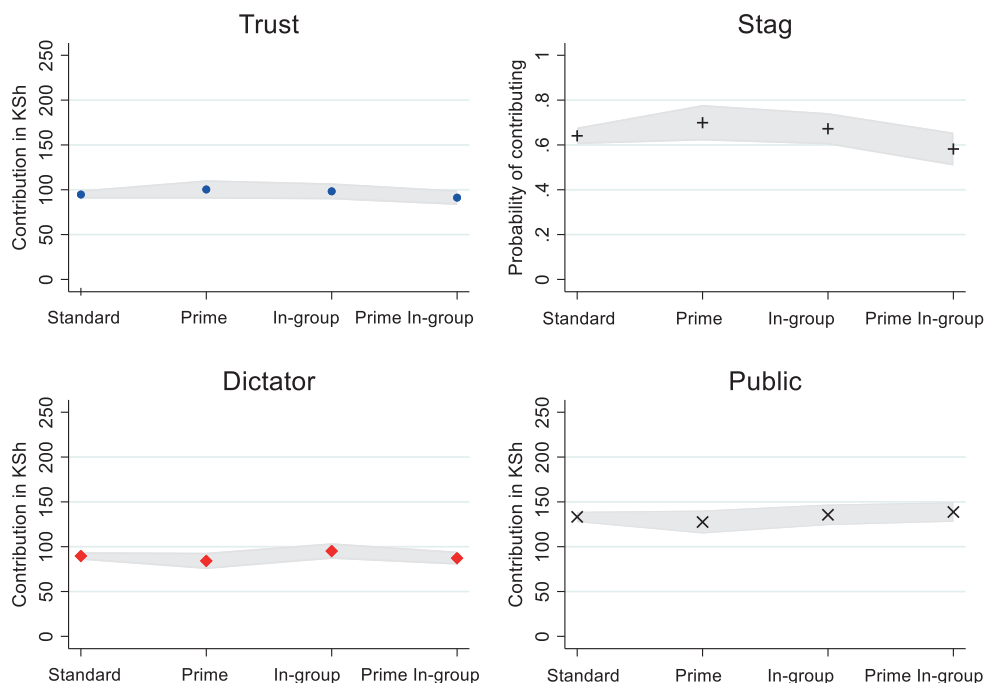


Table 2. Main results

Variables	(1) Trust	(2) Stag	(3) Dictator	(4) Public
Prime	7.921 (0.27) [1.000] {0.32}	0.0757 (0.19) [0.952] {0.16}	-9.298 (0.154) [0.771] {0.26}	-2.3 (0.801) [1.000] {0.87}
In-group	-0.327 (0.971) [1.000] {0.99}	0.00751 (0.916) [1.000] {0.92}	2.05 (0.799) [1.000] {0.83}	5.221 (0.637) [1.000] {0.67}
Prime \times in-group	-15.06 (0.114) [0.571] {0.08}	-0.166** (0.0307) [0.154] {0.04}	1.381 (0.873) [1.000] {0.89}	5.258 (0.661) [1.000] {0.68}
Observations	654	654	654	642

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Unadjusted p-value in parentheses, Bonferroni-adjusted p-value in brackets, FWER-adjusted p-value in curly brackets

Columns 3 and 4 show the amounts sent in the dictator and public games which are negative if individuals were reminded of past violence and positive for the other two treatments. Notwithstanding, coefficients are largely insignificant suggesting an absence of in-group preferences, as in the trust and stag hunt games. Findings are robust to the addition of a set of controls, including location, age, and marital status (Table 3).

Table 3. Robustness checks

Variables	(1) Trust	(2) Stag	(3) Dictator	(4) Public
Prime	7.573 (0.292) [0.877] {0.29}	0.0730 (0.209) [0.627] {0.19}	-9.597 (0.143) [0.429] {0.26}	-2.878 (0.753) [1.000] {0.83}
In-group	-2.441 (0.784) [1.000] {0.95}	0.0162 (0.822) [1.000] {0.92}	0.728 (0.928) [1.000] {0.85}	4.461 (0.688) [1.000] {0.69}
Prime x in-group	-15.00 (0.115) [0.346] {0.08}	-0.164** (0.0334) [0.100] {0.05}	1.354 (0.876) [1.000] {0.88}	5.267 (0.660) [1.000] {0.69}
Observations	654	654	654	642

*** p<0.01, ** p<0.05, * p<0.1

Unadjusted pval in parentheses

Bonferroni-adjusted pval in brackets

FWER-adjusted pval in curly brackets

As preferences may be different between individuals living in urban places relative to those who live in more rural areas, we leverage from our pool of subjects consisting of a sizeable percentage of individuals coming from Kisumu and test these effects. Findings (Table 4) reveal no significant role of location in how money was allocated during the games. In fact, none of the treatments was statistically different between the two samples, the urban (Nairobi) versus the rural (Kisumu). Trust and stag games estimates are positive for primed individuals and negative for those who played in-group. Switching signs for cooperation coefficients among those who come from Kisumu and those from Nairobi, or respectively 4% relative to -6%, may be an indicator of dissimilar preferences, although coefficients are also not significant. Money allocation in the

dictator and public games are comparatively small and do not differ significantly between location groups. Individuals who come from Nairobi tend to contribute less to a public fund, but again estimates are highly insignificant. Our results are consistent with Berge et al. (2019) who test the presence of coethnic biases post-conflict in urban and migrant populations.

Table 4. Heterogeneity by location

Variables	(1)		(2)		(3)		(4)	
	Trust		Stag		Dictator		Public	
Nairobi =	0	1	0	1	0	1	0	1
Prime	6.815	6.847	0.175	0.049	-10.81	-10.21	27.11	-12.4
	(0.659)	(0.406)	(0.179)	(0.448)	(0.466)	(0.165)	(0.215)	(0.214)
	[1.000]	[1.000]	[0.538]	[1.000]	[1.000]	[0.494]	[0.645]	[0.641]
	{0.65}	{0.42}	{0.13}	{0.42}	{0.53}	{0.17}	{0.27}	{0.29}
In-group	-3.899	-1.204	-0.0395	0.0589	-4.069	2.997	9.386	5.228
	(0.786)	(0.918)	(0.743)	(0.519)	(0.768)	(0.773)	(0.643)	(0.704)
	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
	{0.89}	{0.93}	{0.74}	{0.57}	{0.83}	{0.83}	{0.76}	{0.70}
Prime \times In-group	-15.8	-5.589	-0.0553	-0.0726	-12.01	-4.898	7.799	10.93
	(0.272)	(0.631)	(0.646)	(0.427)	(0.384)	(0.637)	(0.7)	(0.427)
	[0.815]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]	[1.000]
	{0.29}	{0.72}	{0.69}	{0.44}	{0.48}	{0.66}	{0.73}	{0.42}
Observations	178	476	178	476	178	476	178	464

*** p<0.01, ** p<0.05, * p<0.1

Unadjusted pval in parentheses

Bonferroni-adjusted pval in brackets

FWER-adjusted pval in curly brackets

5. Conclusion

It is a common understanding that people often prefer to interact with those who are similar to themselves. Furthermore, the literature shows strong evidence that cultural and ethnic boundaries can be foundations for nationalism, war, and genocide. Evidence from previous conflicts indicates there could be important tensions between ethnic groups during and after the 2007/08 Kenyan elections. However, consistent with results from Berge et al. (2019), we find no general preferences towards one's in-group. In fact, neither treatment seems to be driving significant differences on how individuals allocate money in the games. Overall, exposure to violence affects baseline

estimates, but changes are modest and significant at the 10% level. Our findings also reveal no significant differences in money allocation associated with where subjects live (Nairobi and Kisumu). We interpret our results as largely confirming results from Berge et al. (2019) that reveal bias is not due to individual interaction.

We conclude that something in elections may trigger civil unrest and agitation between ethnic groups, but this behavior is not present in daily interactions. Where then does this conflict come from? One possible answer is that conflict is simply a means that politicians use to contest elections. By stoking anger and fear during elections politicians may gain an upper hand over opponents, even if this anger and fear is not present during normal interactions. Future research could explore this question more, including by examining post-conflict effects on daily activities under different conditions and regions.

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Appendix

Figure A1. Trustworthiness results by treatment

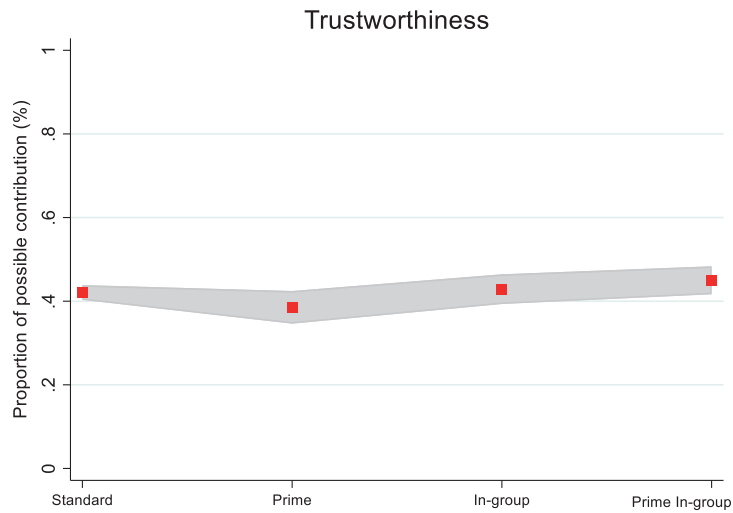


Table A1. Trustworthiness results

Variable	Trustworthiness	
	(1)	(2)
Prime	-0.0362 (0.193) [0.580] {0.17}	-0.0369 (0.186) [0.557] {0.12}
In-group	0.00686 (0.842) [1.000] {0.91}	0.00564 (0.870) [1.000] {0.92}
Prime x In-group	0.0277 (0.419) [1.000] {0.38}	0.0192 (0.578) [1.000] {0.53}
Controls		Yes
Observations	654	

Unadjusted pval in parentheses

Bonferroni-adjusted pval in brackets

FWER-adjusted pval in curly brackets

*** p<0.01, ** p<0.05, * p<0.1