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**How can political trust be built after civil wars?**

**Lessons from post-conflict Sierra Leone**

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# **How Can Political Trust Be Built after Civil Wars?**

## **Lessons from Post-Conflict Sierra Leone**

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### **Abstract**

Liberal peacebuilding has received a considerable amount of criticism in the recent peacebuilding and state building literature. Critics of the liberal approach argue that electoral democracy is a foreign-imposed institution, which often does not enjoy public acceptance and legitimacy as local institutions do. Post-conflict Sierra Leone has undergone a similar struggle when the Local Government Act was introduced in 2004. Under the new law, much power enjoyed by chiefs was transferred to the elected local councillors. While traditional chieftain governance was blamed to be one of the institutional drivers of the civil war, this customary authority is highly respected and the reform was resisted by many local people. Nevertheless, the new system produces some positive development outcomes and the country has remained largely peaceful. Against this backdrop, this paper investigates the channels through which trust in a poorly trusted government body can be developed. Based on survey data from Sierra Leone, my statistical analysis examines three mechanisms through which political trust can be built: improved public services, clean administration, and responsive governance. It is found that local governments which are willing to listen and respond to their people are more likely to be trusted by the public.

**Keywords:** Political Trust, Decentralisation, Corruption, Public Goods, Sierra Leone

**JEL Classifications:** D73, H11, H41

## **Introduction**

The concept of trust is fundamental to the field of peace research. The concept is embedded in the classical theories of war and conflict resolution. For example, the security dilemma model depicts a strategic environment in which, out of fear, actors keep arming themselves, thus creating an increasingly insecure environment (Jervis, 1978). Conceivably, if the logic of rationality can be harnessed by the positive attitude of trust, the actors may be able to achieve a more cooperative outcome. In fact, in the democratic peace literature, democracies are reasoned to be less likely to engage in war with other democracies because they believe that other democracies are bounded by the normative guidelines and more likely to seek peaceful settlements before full escalation when a conflict arises (Dixon, 1994). In the case of civil war settlement, Walter (1997: 337) notes that because trust could be exploited by the opponent in a security dilemma, the potential for exploitation creates a critical barrier to civil war settlement. As another example, in the bargaining model of war (Fearon, 1995), trust is regarded as a precondition of peace because establishing trustworthiness and credibility is an essential way to solve the commitment problem (Walter, 1999). The lack of trust among belligerents also explains why third-party involvement is conducive to peace (Doyle & Sambanis, 2000; Hartzell, Hoddie & Rothchild, 2001). As the chance of misinterpreting the intentions of other parties is reduced when accidents or skirmishes occur, peace is more likely to be sustained and less likely to be spoiled when a third party is present (Fortna, 2008).

Not only in conflict onset and settlement, trust is also proved to be crucial in a peace process. If one of the conflicting parties in negotiation does not believe that its opponents have some chances of honouring the agreement, an agreement will not be reached in the first place. Even if an agreement is reached, violence would be easily resumed when there is a lacking of trust. For instance, spoilers may manipulate the uncertainty plagued in the tensional environment and restore the state of conflict from which they can benefit; for example, in a war economy (e.g. Keen, 1998). However, as Kydd and Walter (2002, 2006: 72-76) show, spoilers' ability to sabotage peace hinges on the degree of trust that the signatories have on the other party when a new series of attacks are observed.

Though essential, the topic attracts only limited attention. There is a substantial amount of research on generalised or social trust, defined as trust in people whom one does not know. Yet, the primary concern in that literature is generalised trust, not trust in government. The latter concept, also called political trust, is the topic that this paper focuses

on. Focusing on political trust, De Juan & Pierskalla, (2014) show that exposure to violence in civil wars undermines citizen's trust in government. However, we still know little about how one can repair political trust effectively after civil wars. There are some usual candidate factors, for example, accountable and effective governance, but we do not know to what extent these measures really deliver the effect as promised. The study by Hutchison and Johnson (2011) devotes to the topic of political trust in Africa. Their cross-country analysis, however, is not situated in the post-conflict context. In fact, most of the countries in their sample did not experience civil war shortly before the sampling period. Therefore, their findings are better at addressing the question of how political trust affects the likelihood of conflict rather than how political trust could be built after large scale violence. Other contributions that relate trust and conflict include Cuesta & Alda (2012) and Höglund & Svensson (2006), but their primary interests are victimisation in conflict and mistrust in negotiation instead of trust-building after civil wars, a topic that this paper aims to contribute.

This paper will proceed as the following. I will first briefly discuss the concept of trust in the literature, then move on to discuss three mechanisms through which political trust could be enhanced. Afterward, I will provide some details on the institutional reform in post-conflict Sierra Leone. The post-conflict decentralisation reform in Sierra Leone faced a legitimacy crisis when a new level of government was introduced to replace the existing customary authority, which had governed the majority of population since colonisation. Against this backdrop, the case of Sierra Leone provides a unique opportunity to answer the question of how political trust in the newly existed institution is shaped in a post-conflict setting. More specific hypotheses and further details on research design will then be provided before turning to results and conclusion.

## **Building Political Trust**

Galtung (1964) refers positive peace to the 'integration of human society' (Galtung, 1964: 2) and 'cooperation' (Galtung, 1969: 190).<sup>1</sup> Trust is a main component of social capital, a necessary condition of social integration, which helps sustain civil society and associations, and maintains peace and social stability (Newton, 2001: 201-202). Trust could be a rational

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<sup>1</sup> Galtung (1969) later revises his definition of positive peace. He refers it as the absence of structural violence (p. 183 and endnote 31) and defines the notion in terms of social justice.

concept and is embedded in the logic of interests (Hardin, 2006; Hoffman, 2002).<sup>2</sup> This is because, contrary to what most people think, trust is not unconditional as it involves expectations, the expectations that the trustees would honour particular obligations. Without the uncertainty associated with the expectation, trust involves no risks and becomes something trivial. Therefore from the social intelligence perspective, trust can be about the ability to ‘detect and process signs of risks in social interactions’ (Yamagishi, 2001: 126; Lewis & Weigert 1985: 970). The ability offers incentives to be trustworthy, and it is trustworthiness that provides the base of social cooperation (Deutsch, 1957; Nannestad, 2008: 414-415). Experimental economics literature provides such evidence and shows that trust could be calculative and based on the expectation of trustworthiness (Ashraf, Bohnet, & Piankov, 2006).<sup>3</sup> In short, trust is based on both rationality and expectation.

In this light, political trust can be defined as an evaluative orientation toward the government based on ‘how well the government is operating according to people's normative expectations’ (Hetherington, 1998: 791). As people form expectation based on the performance and functioning of a political system, these expectations also determine people’s perception on the legitimacy of the political regime. Given the tie between political trust and legitimacy, political trust could be evaluated based three elements of a political system pertaining to legitimacy: the input and the output sides (Rothstein, 2009) and the principle that the government follows when performing its functions (Rothstein & Teorell, 2008).

Considering the input side, democracy has been praised for its advantage of holding a government more accountable than other political systems. Under the pressure of being elected, politicians are more likely to be responsive to the demand of their voters. The support from the population, through the link of elections, gains an elected government acceptance and legitimacy. Even though only the interests of the majority could be represented, procedural fairness of the election system grants the elected government certain level of legitimacy, provided that fragmentation is not severe in the society, such that everyone stands a fair chance of becoming majority (Rothstein, 2009: 313). Moreover, participation and deliberation in the policy process could be essential to a state to be viewed as legitimate (Carroll & Carroll, 1999; Rothstein, 2009: 323). With a voice and influence in the process of

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<sup>2</sup> There are more than one way to define trust. For example, trust could also be norm-based; see Nannestad (2008).

<sup>3</sup> In fact, the ability of detecting risks plays a similar theoretical function to the ability to punish deviation in the repeated game framework. See Carpenter, Daniere & Takahashi (2004) for experimental evidence for the use of disapproval of free riding in maintaining cooperation.

formulating policy, the public feel that their interests are respected and protected. Another aspect is about policy influence: to what extent people can influence the policy choice of the government? Policy choice means not only how much public service should be provided but also how public resources are allocated. In general, if the people perceive that the tax rate is reasonable and the taxes are levied for what they desire, the expectations of people are better met, and the less likely the people think that the government is taking advantage from them and a higher level of trust in government will result. The respect to citizen's preference renders legitimacy to the government from the input side of the system.

Rothstein (2009), nevertheless, argues that legitimacy is created, maintained and destroyed by the output of a political system. While people do care about norms and values, they also care about the quality of life, which in many ways are reflected by the quality of such public goods as security and healthcare provided by the government. A government is legitimate if it can prove itself effective in fulfilling its basic function as expected by its citizen by justifying its existence. Many empirical analyses show that deterioration of well-being is a strong predictor of regime change and civil war, exemplars of legitimacy crisis, considering that the state is the final guarantor of the living of the poor (Haggard & Kaufman, 1995; Hegre & Sambanis, 2006; Teorell, 2010). In fact, this idea of effective governance is reflected in the recent shift in state building strategy of the US government (Lake, 2010). In his analysis on the trend of US state building practice, Lake notes that there is a paradigmatic shift from emphasising on democratisation to paying equal attention to public services and the basic needs of the people. Legitimacy flows not only from the building of a representative government but also from the extents that a government fulfils the social contract satisfactorily.

Finally, corruption erodes political legitimacy. Corruption occurs when government officials give preferential treatments to bribers by exchanging their public power for private gains. From an economic point of view, as voluntary exchange implies increases in utilities hence economic welfares, corruption could be a way of realising economic benefits hence greases of wheels. On the other hand, it generates social costs. Mauro (1995) find that corruption causes a lower level of investment and a lower rate of economic growth. More importantly, the exchange violates the principle of impartiality that is often associated with the notion of legitimacy (Rothstein & Teorell, 2008; Rothstein, 2009). Corruption violates the principle because the exchange harms and ignores the interests and rights of other people in the society at the same time, thus violating the social contract that renders legitimacy to the

government. Even though the general economic welfare may sometimes improve in the short run, it is also an abuse of public power. In the case of public goods provision, the impartiality principle is violated when the person who has connection or pays bribery receives preferential treatments from the official. For example, people who refuse to pay bribery may be denied access to or offered inferior public services like education or healthcare to which they are entitled. The connection between corruption and legitimacy becomes salient in the case of access to justice. By favouring one side of a lawsuit, the government fails to be a neutral arbitrator, a role assigned to public authority in case of dispute. The same also holds when the police do not enforce the law by prosecuting suspects who pay bribes. In all three examples, the government breaches the social contract. Despite of the short-term individual material benefits, as social order and justice are failed to be upheld, social costs outweigh social benefits. As corruption harms people's interests and exploits people's rights, a lower level of political trust is resulted.

All in all, the section provides a three-way framework in analysing political trust at a general level. However, before stating the hypotheses, in the following, I will first introduce the background information on the institutional reform in post-conflict Sierra Leone and highlight the relevance of political trust in the case. Afterward, I will state the hypotheses by referring them to the context of the case.

### **Decentralisation and Trust in New Political Institution in Post-Conflict Sierra Leone**

Although the urbanised Freetown was a hotspot of violence in the Sierra Leone Civil War (1991-2002), much of the violence and fights were conducted in rural areas and involved rural youth (Richards, 2005; Truth & Reconciliation Commission, 2004: 94-96). The role of resources, especially diamonds, played in the conflict may give an impression that the war is a product of greed but not grievance, however, qualitative studies reveal that local institution has a significant role to play in the escalation process.

Historically, chiefs in Sierra Leone had been associated with slavery since at least the nineteenth century (Richards, 2005). Local chiefs had immense power in commanding the use of labours under their chiefdoms. For example, they could mobilise people fight in wars, trade people within regions as slaves, and put people to work in subsistence economy. Under the polygyny system, they often force women to perform housework, farming, sexual and



reproductive services in exchange for labours, clients, and political alliances. They made favoured slaves become clients and the territory was governed through the system of clientelism.

The same system was preserved and maintained later under the British indirect rule after colonisation. Except for the Colony (i.e. Freetown and nowadays Western Areas), chiefdoms in the Northern, Eastern and Southern provinces nowadays were made Protectorate. Under indirect rule, chiefs were appointed by the British governor to maintain the 'customary' order without close monitoring. Chiefs, however, were also granted new rights by the British. For instance, chiefs could demand unpaid community work from people under their rule. Though domestic slavery was abolished in 1927 in Sierra Leone, polygyny and customary powers related to taxation, marriage, community works, and dispute settlement made servitude has continued to be part of rural life. It was this unequal power relation which eventually drove young people to rebel and the country to war. At the micro-level, the civil war is a 'slave revolt' with a deep root in local institutions (Richards, 2005: 586). There is evidence behind this claim. For example, Jackson (2005: 51) observes that local government buildings were targeted by the RUF, and Bellows & Miguel, (2006: 394) note that chiefs were targeted for massacres during the civil war.

After independence in 1961, elected local councils were installed. But the institution was abolished by the then president Siaka Stevens for the purpose of centralising and consolidating his authoritarian rule (Srivastava & Larizza, 2011: 142-143). Local councils were abolished in 1972 and their power and resources were centralised in Freetown, and the institution was superseded by management committees, which was staffed by regime supporters. All these changes made traditional chieftaincy the only available form of governance in a large part of the country. This situation had remained unchanged till 2004 when a decentralisation reform re-created the institution of local council. Under the Local Government Act (2004), the local council becomes a higher administrative unit and political authority than chieftaincy. The new institution has the legal rights to set tax rate, oversee tax collection, approve chiefdom council budgets, and amend customary by-laws that impede its legal authority. Various decision-making powers previously granted to chiefs are now handed over to local councils. The reform, nevertheless, retains the chieftaincy system. Local chiefs keep performing certain administration functions such as collection of revenue, maintenance of social orders, and determination of customary rights related to land-use and native status (Fanthorpe, 2005; Jackson, 2005; Labonte, 2011; Srivastava & Larizza, 2011).

Although frustration and resentment towards chiefs are abounding and chieftaincy was perceived as an instrument of exploitation, democratic decentralisation, which was proposed and advertised as a solution to address the root cause of the conflict, is not widely accepted and is perceived as illegitimate. Lots of local people still value customary authority and consider the new layer of government an extension of Freetown's bureaucratic abuse of power (Fanthorpe, 2005; Jackson, 2006; Sawyer, 2008). Furthermore, the new system is perceived to be associated with corruption, illegal jurisprudence, and metropolitan elite interference in chieftaindom affairs (Fanthorpe, 2005: 39). According to Fanthorpe (2005), legitimacy plays a central role behind the resistance; for example, local landowners expressed bitterness about having union leaders and traders that have non-local origin ahead of them (Fanthorpe, 2005: 38). The ideas of 'sons of the soil', 'strangers', 'external', 'non-local', 'rival chiefly family' pervade in the analysis by Fanthorpe.

The case of Sierra Leone is particularly interesting and relevant given by the mistrust to the new system described above. On one hand, decentralisation has the potential to correct institutional violence that was found to induce grievances and violence. On the other hand, the proposed solution is perceived to be against local tradition hence illegitimate. Given the fragility of peace in a post-conflict environment, how could trust in government be generated? How can we explain the variation in the levels of trust between the new and old institution? Which trust-building mechanisms which are discussed in previous section are more relevant?

Various international aid providers such as the World Bank and UNDP adopts a liberal approach and considers that a democratic local government could improve accountability hence economic outcomes (Casey, Glennerster & Miguel, 2014; Fanthorpe, 2005). In general, they believe that political participation provides a mechanism through which good governance would be promoted. When accountability generates legitimacy, political trust could be enhanced (Hutchison & Johnson, 2011; Roberts 2008). In the case of Sierra Leone, under the traditional chieftaincy rule, the demands of the people were usually ignored, and elite capture is found associated with worse development outcomes (Acemoglu, Reed & Robinson, 2014). Consider that a higher level of policy influence could enhance political trust, as is discussed in the previous section, we have the following hypothesis.

*Hypothesis 1: Trust in government increases when the local people perceive that they have a higher level of policy influence in the policy making process.*

The new government has the major tasks of reconstructing the post-conflict society. Not surprisingly, the local people would assess the performance of the new government based on the overall quality change of the public services provided. If the performance of government is a key determinant of political trust, one would expect to observe the following empirical relationship.

*Hypothesis 2: Trust in local government increases when public goods provision is improved.*

Finally, the context of the Sierra Leone conflict illustrated that the chiefs are often perceived as corrupted and exploitative. At the same time, some local people consider the new system as a new form of abusive governance. However, if political trust is negatively related to the level of corruption, people are more likely to have a higher level of trust to the less corrupted officials.

*Hypothesis 3: Local people have a higher level of political trust in the new institution if it is perceived to be less corrupted than the chiefs.*

The rest of the article will test these three hypotheses based on data from Sierra Leone. Though the findings are likely to be context-specific and may not be generalisable, as long as political trust depends on institution rather than culture, as what Mushler and Rose (2001) found, the findings in this study could inform policymakers which types of policy could generate political trust more effectively than the others in a post-conflict situation.

## **Research Design**

Except for data on the variables *resources* and *ethnolinguistic fractionalisation (ELF)*, all data are from the 2005 and 2007 National Public Services (NPS) surveys conducted by the Evaluations Unit of the Institutional Reform and Capacity Building Project (IRCBP) administrated by the Government of Sierra Leone and the World Bank. NPS is a nationally representative survey. The country was stratified by 19 local councils. Each council was then proportionally divided into smaller enumeration areas (EAs) according to the estimated population living in that area.<sup>4</sup> In each EA, 10 households were selected randomly from the census list. The final sample included 6,345 households in 635 enumeration areas. Since

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<sup>4</sup> However, the smallest Local Council area, Bonthe City, was over-sampled and one EA in Bo district was not located in the 2007 survey.

people in Freetown and the Western Areas have been ruled by elected local governments, the reform mainly affects people living in the Northern, Southern, and Eastern Provinces. Ideally, one may wish to compare the responses from people from the Colony and from other part of the country. Unfortunately, questions that help us to code our key variables hence identify the causal effects were not covered in case the respondents were from Freetown and the Western Areas. For this reason, I include only respondents from the three provinces in the data set. To ensure accuracy of the results, I also exclude observations which the interviewers considered that (1) they did not have confidence in the overall truthfulness of the responses; (2) the respondents had serious problems speaking or understanding the interviewers; and (3) the respondents felt uncomfortable to answer some of the questions because someone else was present during the interviews.

### Model and Identification Strategy

The investigation has three stages. In the first stage, I focus on the determinants of political trust towards local councillor in 2007. The dependent variable is coded based on the response to the following question in the survey: In your opinion, do you believe local councillors or do you have to be careful dealing with them. The trust variable is a dummy variable equal to 1 when the respondent indicated that local councillors could be believed. Given the dichotomous nature of the dependent variable, the logit model was used in this stage of the analysis. The multilevel logistic regression was also used given the hierarchical structure of the data. Different households in the same locality are governed by the same chief, and different chiefs in the same region are governed by the same local councillors. As individuals are influenced by the same contextual factors, observations in the same unit are not completely independent. If dependence is strong, the usual logit model would lead to smaller standard errors hence misleading results (Steenbergen & Jones, 2002). In this case, the multilevel model, which is able to correct for the dependence, as well as unobserved heterogeneity, becomes a better choice. In our case, both two-level (household and chiefdom) and three-level models (household, chiefdom, and local council) fit the context well. To determine which model is superior, I selected models based on the likelihood ratio test. Nevertheless, as I will show later, my main findings are not sensitive to the choice about the number of levels.

Results from the first stage only tell us what determinants are correlated with trust in the new institution after reform, but a similar set of determinants could explain trust in the old institution as well. As a more policy-relevant question is that what makes people trust the much disliked new institution more than the highly respected traditional authority after three years of the reform, the case of Sierra Leone is particularly relevant given by its reform context, a context that I exploit to provide a more specific answer to the research question otherwise cannot be obtained with data from a random country. In the second stage, the dependent variable is the differential in the level of trust between two governing bodies. To code the variable, I compare the responses (from the same individual) to the previously stated survey question that corresponds to chiefdom officials (COs) and local councillors (LCs). More specifically, the dependent variable is an ordinal variable with four categories: (4) LCs can be believed but have to be careful dealing with COs; (3) both LCs and COs can be believed; (2) have to be careful dealing with both LCs and COs; (1) COs can be believed but have to be careful dealing with LCs. The coding rule assumes that if the respondent can believe one party but thinks that has to be careful dealing with the other, the respondent is considered to trust one party more than the other. Given the ordinal nature of the variable, the ordinal logit model was used. Similarly, given the hierarchical structure of the data, the multilevel ordinal logistic model was employed.

The final stage of my investigation is a difference-in-difference analysis. In this case, the overtime changes in the level of trust towards chiefs are taken away from that towards local councils. By differencing the relevant dependent variables and independent variables across institution and time, the method improves the quality of my inferences and better captures the causal effects of the independent variables. However, because the question related to trust in chiefs and the questions related to perception of corruption were not contained in the 2005 survey, the difference-in-difference design is imperfect. The accuracy of the results would be based on the assumptions that the reform had minimal impact on people's perception on chiefs, such that both trust in chiefs and perception on the level of corruption of chiefs were held constant across times; however, these assumptions may or may not hold.

### Variables

To test the hypotheses, I include the following three independent variables.

**Corrupt:** A question in the NPS survey asks: If the local council was given 500 million Leones to complete a project in this area, do you believe that he / she would spend all the money doing a good job on the project or would he / she cut some of the money? The variable is the an ordinal variable with four categories: (1) spend all the money; (2) cut a little money; (3) cut most of the money; (4) take all the money. There is a similar question about the behaviours of paramount chief. For the second stage of the analysis, I use a new variable,  $\Delta_k \text{Corrupt}$ , which is equal to the difference between two responses. Given that our interest is trust in the local council, I take the perception of the chief as the baseline. Consequently, a high value of the  $\Delta_k \text{Corrupt}$  variable implies that the respondent considered that the local council was cleaner than the chief. The same variable  $\Delta_k \text{Corrupt}$  was used again in the third stage as the 2005 survey does not contain a similar question for valid comparison.<sup>5</sup>

**Voice:** To evaluate what the people think about their influence in the making of local policy, I rely on the following question in the NPS survey: Do you think the local council listens to what people in this town / neighbourhood say or what they need? This independent variable is a dummy variable equal to one when the respondent considered that people's opinions are being valued in the process. There is a similar question about the behaviours of paramount chief. For the second stage of the analysis, I use a new variable,  $\Delta_k \text{Voice}$ , which is equal to the difference between two responses. Given that our interest is trust in the local council, I take the perception of the chief as the baseline. Consequently, a high value of the  $\Delta_k \text{Voice}$  variable implies that the respondent considered that the local council was more responsive to people's voices than the chief did. In the final stage of the analysis, the variable  $\Delta_k \Delta_t \text{Voice}$  was used. It is equal to the differences in  $\Delta_k \text{Voice}$  across time. A higher value of  $\Delta_k \Delta_t \text{Voice}$  denotes a more responsive local council with respect to a chief.

**Public goods:** There is more than one dimension about public goods provision; for example, quantity, accessibility, quality, affordability, etc. Given data limitation, in this analysis I can only evaluate one aspect: accessibility, which is measured in terms of the walking time that the respondent used to take to reach the nearest facilities. Although walking is the prevailing mode, in some cases, respondents would use bicycle or take public transport to the nearest facilities. But to standardise access time and to avoid inconsistency that was due

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<sup>5</sup> The seemingly similar question (F15) in the 2005 survey is rather ambiguous. It is asking about the effectiveness of using the funds instead of the perception on corruption.

to switching transportation modes, I created the index by only making use of the observations with the walking time information available.

The composite index of public goods provision is an unweight sum of the indices of three public goods (healthcare, road, and water) minus the sum of the indices of the other two (education and markets). I put a minus for two reasons. First, market is an area which the chiefs are held responsible (Foster & Glennester, 2009: 77). Second, although education is part of the reform, unlike the other sectors, education did not start devolving until 2007, the time when the survey was conducted (Foster & Glennester, 2009: 77). This composite indicator should probably be read with a grain of salt because the use of the minus operator rests on the assumption that local people were well aware of the differences. To ameliorate possible bias because of the assumption implied by the aggregation, same analyses were also performed using separate variables. Therefore, both the sign and magnitude of the estimates are remained flexible.

Five facilities are considered: motorable road, health facility/ provider, safe drinking water, primary schools, and markets. Given the design of the questionnaire, the responses could only fall into one of the following categories, which time intervals are unevenly distributed: (1) less than 15 minutes; (2) 15 to 30 minutes; (3) 30 minutes to one hour; (4) between one and two hours; (5) over two hours. Therefore, a high value of the index means that a service was less accessible. For the second stage of the analysis, I use a new variable,  $\Delta_t \text{Public goods}$ , which is equal to the differences of responses across two years: 2005 and 2007. Note that in this case, a high value of the variable indicates that the public services were more accessible across times. Given the context related to the devolution of education and markets which I discussed above, one can read the variable  $\Delta_t \text{Public goods}$  as  $\Delta_k \Delta_t \text{Public goods}$ , because the minus operator performs the required differencing.

Based on the context of the conflict, I also include the following control variables in the analysis.

**Age:** A high proportion (37%) of combatants in the Sierra Leone civil war was school pupils (Humphreys & Weinstein, 2008: 454). If the traditional governance system is a major cause of the conflict, a cause that motivates rural youth to pick up arms to fight, as the major victim of the system (Richards, 2005), young people should be more likely to trust the new institution.

**Gender:** Though there are some female paramount chiefs (Jackson, 2005: 105), women are frequently subjected to mistreatment and abuses (Fanthorpe, 2005). The new Local Government Act enhances women's participation in the decision making process in the new government institution. For example, the Local Government Service Commission is comprised of eight persons: a chairman, three representatives, and four members. The new Act requires that among those four members, at least three of them must be women. Similarly, in the Ward Committee, the number of members is restricted to be a maximum of ten. Among them, at least five must be women. Given the changes, women may have a higher level of trust in the new system than the old one.

**Migrant:** Chiefs have the authority to grant 'native status' to individuals who live in their chiefdoms. These rights, for example, include residential, land-use, political, legal, and social rights (Labonte, 2011: 99). Rarely granted, these rights in many ways adversely influence the livelihood of individual, especially migrants who were not born in the chiefdom that they reside. For instance, chiefs have the power to prohibit a transaction of land to migrants (Acemoglu, Reed & Robinson, 2014: 327). Consequently, migrants are more likely to have a low level of trust in the customary system. The variable is coded as equal to one when respondents lived in chiefdoms different from where they were born.

**Victimisation:** De Juan and Pierskalla (2014) found that exposure to civil war violence reduces one's political trust. This count measure captures exposure by counting the number of the following experience that the respondents encountered during the conflict: members of their households were injured or maimed; members of their households were killed; their houses were burned down; members of their households fled the community; members of their households made refugee to other countries.

**Assets:** The variable measures the economic standing of the respondents. Since there are no income data, I construct the measure by counting the number of following items owned by the household of the respondents: generator, car/truck/motorcycle, TV, bicycle, mobile phone, electric fan, radio/radio cassette player. In a sensitivity analysis, I further separate them into two categories: luxury goods (generator, car/truck/motorcycle, TV) and usual goods (the rest).

**ELF:** Ethnic diversity may undermine public goods provision because collective action is more likely to be sustained in an ethnically more homogeneous environment through a denser social network hence stronger social enforcement (Habyarimana et al., 2007). If the



relationship between ethnic diversity and public goods provision is strong, failing to include the variable may cause endogeneity bias. Though a recent study by Glennerster, Miguel and Rothenberg (2013) found that ethnic diversity does not hamper public goods provision in the case of Sierra Leone, to minimise the risk, the variable is included in the analysis. The index is a Herfindahl index, which is equal to the probability that two individuals randomly selected in a chieftaincy belong to different ethnic groups. Data are from Glennerster, Miguel and Rothenberg (2013).

***Diamond:*** According to the customary authority, chiefs are eligible for direct payments of rents for mining activities in their chiefdoms (Acemoglu, Reed & Robinson, 2014: 327). For instance, chiefs are entitled to one-quarter of the 3% tax collected at the centre as development funds for the chiefdom. However, because accountability mechanism is close to non-existence, local people often complain that the funds are appropriated by the chiefs rather than used for development (Jackson, 2006: 100). Not surprisingly, people who live in chiefdom with richer diamond deposits suffer more welfare loss and have less political trust in the chiefdom system. This variable measures the number of diamond mines in a chieftaincy. Data are from Bellows & Miguel (2009).

## **Results**

The main findings are summarised in Table I, full statistical tables, as well as the model specification stated in column (1) in Table I, are subsumed in the Appendix. Here I only provide brief comments on them. First, models with or without the multilevel specification give very similar results. The consistency also holds between the results from the two-level and three-level models. Furthermore, though most of the coefficients of the control variable are short of statistical significance, most of the time they do carry the expected signs, and this always holds when the estimates are statistically significant. These consistency, stability, and expectancy enhance one's confidence in the trustworthiness of the findings. In the following, I will limit my discussion to the main findings pertaining to the hypotheses. Table I presents the estimates of relevant variables in odds ratio.

**[Table I here]**

Regarding the determinants of trust in the new institution in 2007 (see the first two rows in Table I), only the estimates of the coefficient of the corruption and voice variables are

statistically significant. Though a reduction in access time overall improves the level of trust in the new institution, the estimate of the coefficient of the public goods variable is not statistically significant at 10% level. Its substantive effect is also found to be negligible. When time to access for one of the services jumps from one interval to the next higher interval, the odds of an individual changing his or her attitude from distrusting to trusting in the new institution are only about 0.4% lower on average. In contrast, the odds are 23% lower if a local council is perceived to be more corrupted (i.e. moving from one category to the next less well-regarded category) and 112% higher if a local council is perceived to be willing to listen to the people from their constituencies (i.e. moving from one category to the next higher regarded category). Similar findings hold when we disaggregated the public goods index into its individual components. Less accessible healthcare services on average reduce political trust by a moderate 9%. On the other hand, estimates of the coefficients corresponding to road and water do not carry the expected signs, but they are not statistically different from zero. Improvement over accessibility of education has a sizeable and statistically significant impact on trust (a 20% increase in odds). The result may suggest that the public have only partial understanding of or information on the details of the reform.

Turning to the determinants of trust in the new institution in 2007 after controlling for the baseline the chief's (the third and the fourth rows in Table 1), the only major difference is that the statistical significance of the factor corruption disappears. The substantive effects of both corruption and voice factors also decrease. The reduction is expected as a similar set of factors could explain trust in chieftaincy. Without taking the baseline effects (on both dependent and independent variables) into account runs the risk of overestimating the importance of those factors to trust in the new institution. The differencing strategy also helps to eliminate bias induced by omitted variables that contain similarly explanatory power in explaining political trust in different institutions. It should be noted that differencing changes the interpretation of the variables. Now,  $\Delta_k \text{Corrupt}$  indicates how much cleaner the local councils are relative to the chiefs,  $\Delta_k \text{Voice}$  how much more willing the local councillors listen to their people, and  $\Delta_t \text{Public Goods}$  how much more accessible public services becomes relative to 2005. The changes in interpretation explain why the sizes of the odds corresponding to  $\Delta_k \text{Corrupt}$  and  $\Delta_t \text{Public Goods}$  become greater than one. Regarding the substantive effect of the  $\Delta \text{Voice}$  variable, if a local council is considered to be more willing to listen to their people, the odds that the institution is of perceived to be more trustworthy than the chief are 43% higher. On the other hand, the effects of corruption and public goods

provision become negligible and statistically insignificant. Similar results hold when we disaggregate the indicator of public goods provision into its constitutive components.

Finally, the results obtained from the difference-in-difference method are similar to what we have seen so far. Only the estimates for the coefficient of the voice variables are found to be statistically and substantively significant, with the odds ratio of about 72% higher (last row). Yet, this finding is based on a much smaller sample because quite some respondents answered that it was too early to comment on the performance of the new government in the 2005 survey. Furthermore, unlike in the previous two cases, the odds ratios are less stable and vary from 72% to 89%. The variation is possibly due to the fact that the dependent variable now has more categories than before (six versus four), and the top-most category has a smaller baseline probability. As explained in the previous section, due to a major limitation on data availability, this set of results is based on the assumptions that people's perceptions on chiefs were fairly stable between 2005 and 2007. However, unless trust in chief and perception on the level of corruption among chiefs dramatically improve within the period, based on this limited difference-in-difference design, the finding that the voice variable is a strong predictor of political trust is likely to be held.

Overall, my investigation only finds sufficient supportive evidence to Hypothesis 1, which states that increase in influence in the policy-making process is a strong determinant of political trust towards the new institution in post-conflict Sierra Leone. While both perception on corruption and accessibility of public goods have the hypothesised effects, their effects are much smaller and less certain.

### Robustness Checks

Apart from using different designs and models, several additional checks were performed to ensure the robustness of the major findings. The first check is to apply an alternative coding scheme on the variables  $\Delta_k Voice$  and  $\Delta_k \Delta_t Voice$ . Rather than combining two categories (i.e. both parties are equally willing and equally not willing to listen to the people) into one category, I treated them as two distinct categories. Similar results were found. Second, I also use a less strict coding rule in coding political trust in 2005, hence the  $\Delta_k \Delta_t Trust$  variable. Again, similar results were obtained. Third, to check against the proportional odds assumption underlying the ordinal logit model, I employed an

unconstrained partial proportional odds model to re-estimate models (6) and (11), the new models yielded similar results. Finally, I tried alternative coding rule on some control variables and included additional controls. More specifically, in coding the assets variable, rather than assigning an equal weight to assets like generator and radio, I separate generator, motor, and TV from other goods and have two indicators of asset.<sup>6</sup> I also used a stricter standard to code the victimisation index by excluding the experience of refugee and fleeing in the construct. Lastly, I included the following additional controls: urban/ rural dummy, square of age (to capture nonlinear effect of age), distance to major cities (to proxy economic development of the chiefdom; see Acemoglu, Reed & Robinson, 2014), whether the respondent is living with a household member from the ruling family (to account for the possible loss of political power).<sup>7</sup> None of these changes and additions has any significant impact on the key findings.

## **Conclusion**

The concept of political trust is connected to the field of peace research in various ways. Political trust is not only associated with the onset of civil war, but also the stability of negotiated settlement, the success of state building, and the spell of peace. Like other post-conflict state building projects, decentralisation reform in Sierra Leone encountered, and is still encountering, a substantial amount of mistrust from the public. Fortunately, Sierra Leone has survived through the process. Characterised by a low level of political trust in new institutions, the case of Sierra Leone presents a unique opportunity to understand how political trust can be built. Three mechanisms were examined in this study: political integrity, political participation, and public goods provision. It is found that political participation in the form of giving citizens a voice in the policy making process has the most promising effect in building political trust in post-conflict Sierra Leone. By contrast, though corruption and improvement in public goods provision carry the proposed effects, the effects are more uncertain and short of substantive effects.

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<sup>6</sup> My main findings are not sensitive to the aggregation, probably because about half of the households own none of the above. Those who own cheaper items would not own those expensive items anyway and those who own the expensive items would own most of the cheaper goods. In fact, only about 1% of the household fall under the intermediate cases of owning five or six items.

<sup>7</sup> According to the custom established since colonisation, paramount chiefs must come from the ruling families recognised by British colonial authority (Acemoglu, Reed & Robinson, 2014).

These findings have important implications for the state building literature. The US government has changed their state building strategies from enforcing marketisation and democratisation to winning hearts and minds by improving public goods provision to civilians (Berman, Shapiro & Felner, 2011; Lake, 2010). My findings suggest that, though enhancement of public services may carry other strategic or normative values, if trust is considered to be a crucial step in state building, the strategy is unlikely to be effective in state building through the trust channel. Listening and responding to the locals are the most effective ways of restoring trust and peace.

## References

- Acemoglu, Daron, Tristan Reed & James A Robinson (2014) Chiefs: Economic development and elite control of civil society in Sierra Leone. *Journal of Political Economy* 122(2): 319-368.
- Ashraf, Nava, Iris Bohnet & Nikita Piankov (2006) Decomposing trust and trustworthiness. *Experimental Economics* 9(3): 193-208.
- Bellows, John & Edward Miguel (2006) War and institutions: New evidence from Sierra Leone. *American Economic Review* 96(2): 394-399.
- Bellows, John & Edward Miguel (2009) War and local collective action in Sierra Leone. *Journal of Public Economics* 93(11-12): 1144–1157.
- Berman, Eli, Jacob N Shapiro & Joseph H Felter (2011) Can hearts and minds be bought? The economics of counterinsurgency in Iraq. *Journal of Political Economy* 119(4): 766-819.
- Carpenter, Jeffrey P, Amrita G Danieri & Lois M Takahashi (2004) Cooperation, trust, and social capital in Southeast Asian urban slums. *Journal of Economic Behavior & Organization* 55(4): 533-551.
- Carroll, Barbara Wake & Terrance Carroll (1999) Civic networks, legitimacy and the policy process. *Governance* 12(1): 1-28.
- Casey, Katherine, Rachel Glennerster & Edward Miguel (2014) Healing the wounds: Learning from Sierra Leone's post-war institutional reforms. In Sebastian Edwards, Simon Johnson, and David N. Weil (ed.) *African Successes: Government and Institutions*. Chicago: University of Chicago Press, forthcoming.
- Cuesta, José & Erik Alda (2012) The effects of trust on victimization in Colombia. *Journal of Peace Research* 49(6): 833–846.
- De Juan, Alexander & Jan Henryk Pierskalla (2014) Civil war violence and political trust: Microlevel evidence from Nepal. *Conflict Management and Peace Science*, forthcoming.
- Deutsch, Morton (1957) Trust and suspicion. *Journal of Conflict Resolution* 2(4): 265-279.
- Dixon, William J (1994) Democracy and the peaceful settlement of international conflict. *American Political Science Review* 88(1): 14-32.
- Doyle, Michael W & Nicholas Sambanis (2000) International peacebuilding: A theoretical and quantitative analysis. *American Political Science Review* 94(4): 779-801.
- Fanthorpe, Richard (2005) On the limits of liberal peace: Chiefs and democratic decentralization in post-war Sierra Leone. *African Affairs* 105(418): 27-49.
- Fearon, James D (1995) Rationalist explanations for war. *International Organization* 49(3): 379-414.

- Foster, Elizabeth & Rachel Glennester (2009) Impact of decentralization on public services: Evidence to date. In Yongmei Zhou (ed.) *Decentralization, Democracy, and Development. Recent Experience from Sierra Leone*. Washington, DC: World Bank, 73-84.
- Fortna, Virginia Page (2008) *Does Peacekeeping Work? Shaping Belligerents' Choices after Civil War*. Princeton, NJ: Princeton University Press.
- Galtung, Johan (1964) An Editorial. *Journal of Peace Research* 1(1): 1-4.
- Galtung, Johan (1969) Violence, peace, and peace research. *Journal of Peace Research* 6(3): 167-191.
- Glennester, Rachel, Edward Miguel & Alexander D Rothenberg (2013) Collective action in diverse Sierra Leone communities. *Economic Journal* 123(568): 285-316.
- Habyarimana, James, Macartan Humphreys, Daniel N Posner & Jeremy M Weinstein (2007) Why does ethnic diversity undermine public goods provision? *American Political Science Review* 101(4): 709-725.
- Haggard, Stephan & Robert R. Kaufman (1995) *The Political Economy of Democratic Transitions*. Princeton, NJ: Princeton University Press.
- Hardin, Russell (2006) *Trust*. Cambridge: Polity Press.
- Hartzell, Caroline, Matthew Hoddie & Donald Rothchild (2001) Stabilizing the peace after civil war: An investigation of some key variables. *International Organization* 55(1): 183-208.
- Hegre, Håvard & Nicholas Sambanis (2006) Sensitivity analysis of empirical results on civil war onset. *Journal of Conflict Resolution* 50(4): 508-535.
- Hetherington, Marc J (1998) The political relevance of political trust. *American Political Science Review* 92(4): 791-808.
- Hoffman, Aaron M (2002) A conceptualization of trust in international relations. *European Journal of International Relations* 8(3): 375-401.
- Humphreys, Macartan & Jeremy M Weinstein (2008) Who fights? The determinants of participation in civil war. *American Journal of Political Science* 52(2): 436-455.
- Hutchison, Marc K & Kristin Johnson (2011) Capacity to trust? Institutional capacity, conflict, and political trust in Africa, 2000-2005. *Journal of Peace Research* 48(6): 737-752.
- Höglund, Kristine & Isak Svensson (2006) "Sticking one's neck out": Reducing mistrust in Sri Lanka's peace negotiation. *Negotiation Journal* 22(4): 367-387.
- Jackson, Paul (2005) Chiefs, money and politicians: Rebuilding local government in post-war Sierra Leone. *Public Administration and Development* 25(1): 49-85.
- Jackson, Paul (2006) Reshuffling an old deck of cards? The politics of local government reform in Sierra Leone. *African Affairs* 106(422): 95-111.

- Jervis, Robert (1978) Cooperation under the security dilemma. *World Politics* 30(2): 167-214.
- Keen, David (1998) *The Economic Functions of Violence in Civil Wars*. Oxford: Oxford University Press.
- Kydd, Andrew & Barbara F. Walter (2002) Sabotaging the peace: The politics of extremist violence. *International Organization* 56(2): 263-296.
- Kydd, Andrew & Barbara F. Walter (2006) The strategies of terrorism. *International Security* 31(1): 49-80.
- Labonte, Melissa T (2011) From patronage to peacebuilding? Elite capture and governance from below in Sierra Leone. *African Affairs* 111(442): 90-115.
- Lake, David (2010) The practice and theory of US state building. *Journal of Intervention and Statebuilding* 4(3): 257-284.
- Lewis, J David & Andrew Weigert (1985) Trust as a social reality. *Social Forces* 63(4): 967-985.
- Mauro, Paolo (1995) Corruption and Growth. *Quarterly Journal of Economics* 110(3): 681-712.
- Mishler, William & Richard Rose (2001) What are the origins of political trust? Testing institutional and cultural theories in Post-Communist societies. *Comparative Political Studies* 34(1): 30-62.
- Nannestad, Peter (2008) What have we learned about generalized trust, if anything? *Annual Review of Political Science* 11: 413-436.
- Newton, Kenneth (2001) Trust, Social Capital, Civil Society, and Democracy. *International Political Science Review* 22(2): 201-214.
- Roberts, David (2008) Post-conflict state building and state legitimacy: From negative to positive peace? *Development and Change* 39(4): 537-555.
- Richards, Paul (2005) To fight or to farm? Agrarian dimensions of the Mano River conflicts (Liberia and Sierra Leone). *African Affairs* 104(417): 571-590.
- Rothstein, Bo (2009) Creating political legitimacy: Electoral democracy versus quality of government. *American Behavioral Scientist* 53(3): 311-330.
- Rothstein, Bo & Jan Teorell (2008) What is quality of government: A theory of impartial political institutions. *Governance* 21(2): 165-190.
- Sawyer, Edward (2008) Remove or reform? A case for (restructuring) chiefdom governance in post-conflict Sierra Leone. *African Affairs* 107(428): 387-403.



- Srivastava, Vivek & Marco Larizza (2011) Decentralization in postconflict Sierra Leone: The Genie is out of the bottle. In Punam Chuhan-Pole & Manka Angwafo (ed.) *Yes Africa Can: Success Stories from a Dynamic Continent*. Washington DC: The World Bank, 141-154.
- Steenbergen, Marco R & Bradford S Jones (2002) Modeling multilevel data structures. *American Journal of Political Science* 46(1): 218-237.
- Teorell, Jan (2010) *Determinants of Democratization: Explaining Regime Change in the World, 1972–2006*. Cambridge: Cambridge University Press.
- Truth & Reconciliation Commission (2004) *Witness to Truth: Report of the Sierra Leone Truth & Reconciliation Commission, Volume 2*.
- Walter, Barbara F (1997) The critical barrier to civil war settlement. *International Organization* 51(3): 335-364.
- Walter, Barbara F (1999) Designing transitions from civil war: Demobilization, democratization, and commitments to peace. *International Security* 24(1): 127-155.
- Yamagishi, Toshio (2001) Trust as a form of social intelligence. In Karen S Cook (ed.) *Trust in Society*. New York: Russell Sage Foundation, 121-147.

**Table I: Determinants of Trust in Local Councils, in Odds Ratio**

<u>Description</u> <sup>+</sup>	<u>DV: Trust</u>			<u>Independent Variable</u>						
	<u>Institution</u>	<u>Year</u>	<u>Corrupt</u>	<u>Voice</u>	<u>Public Goods</u>	<u>Health</u>	<u>Road</u>	<u>Water</u>	<u>Education</u>	<u>Markets</u>
Model (3)	Local	2007	0.771***	2.119***	0.996					
Model (5)	Local	2007	0.771***	2.091***		0.911*	1.029	1.035	0.796**	0.999
			<u><math>\Delta_k</math>Corrupt</u>	<u><math>\Delta_k</math>Voice</u>	<u><math>\Delta_t</math>Public Goods</u>	<u><math>\Delta_t</math>Health</u>	<u><math>\Delta_t</math>Road</u>	<u><math>\Delta_t</math>Water</u>	<u><math>\Delta_t</math>Education</u>	<u><math>\Delta_t</math>Markets</u>
Model (8)	Diff.	2007	1.022	1.432***	1.013					
Model (10)	Diff.	2007	1.025	1.429***		1.012	0.977	1.116*	1.011	0.960
				<u><math>\Delta_k\Delta_t</math>Voice</u>						
Model (13)	Diff.	Diff.	0.906	1.893***	1.020					
Model (15)	Diff.	Diff.	0.936	1.718***		1.085	0.992	0.962	1.010	0.934

Note: <sup>+</sup> See Tables AI-AIII in the Appendix for full model specification. \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.

## Appendix

Table AI: Determinants of Trust in Local Councils in 2007

Trust	(1) Logit	(2) 3L Logit	(3) 3L Logit	(4) 2L Logit	(5) 3L Logit
Corrupt	-0.248*** (0.074)	-0.310*** (0.069)	-0.261*** (0.080)	-0.258*** (0.079)	-0.260*** (0.080)
Voice	0.691*** (0.154)	0.570*** (0.140)	0.751*** (0.167)	0.720*** (0.165)	0.738*** (0.168)
Public goods	-0.031 (0.023)	0.003 (0.026)	-0.004 (0.027)	-0.016 (0.027)	
Health					-0.093* (0.053)
Road					0.028 (0.055)
Water					0.035 (0.095)
Education					-0.229** (0.113)
Market					-0.001 (0.051)
Age	0.003 (0.004)		0.003 (0.004)	0.003 (0.004)	0.003 (0.004)
Migrant	0.233 (0.172)		0.264 (0.187)	0.263 (0.186)	0.250 (0.189)
Female	0.173 (0.127)		0.158 (0.135)	0.180 (0.134)	0.142 (0.135)
Victimization	0.099** (0.048)		0.067 (0.055)	0.071 (0.054)	0.064 (0.055)
Assets	-0.031 (0.067)		-0.043 (0.071)	-0.037 (0.071)	-0.062 (0.073)
ELF	-0.265 (0.361)		-0.370 (0.506)	-0.190 (0.483)	-0.523 (0.513)
Diamond	-0.030*** (0.012)		-0.021 (0.017)	-0.028* (0.016)	-0.018 (0.017)
Constant	-0.703* (0.388)	-0.149 (0.260)	-0.604 (0.437)	-0.651 (0.423)	0.761 (0.741)
var (council)	-	0.125 (0.079)	0.115 (0.084)	-	0.108 (0.082)
var (chief)	-	0.267*** (0.103)	0.242** (0.107)	0.324*** (0.120)	0.244** (0.109)
# Local council	-	16	12	-	12
# Chief	-	142	136	136	136
LR test (p-value) <sup>^</sup>	-	0.0067	0.0193	-	0.0297
Observations	1,268	1,643	1,268	1,268	1,268

Note: <sup>^</sup> Test between two- and three-level multilevel logit models. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table AII: Determinants of Trust in Local Councils in 2007 after Differencing Across Institutions

$\Delta_k$ Trust	(6) O. Logit	(7) 2L O. Logit	(8) 2L O. Logit	(9) 3L O. Logit	(10) 2L O. Logit
$\Delta_k$ Corrupt	0.001 (0.069)	0.113* (0.066)	0.022 (0.074)	0.017 (0.074)	0.024 (0.074)
$\Delta_k$ Voice	0.399*** (0.130)	0.237** (0.117)	0.359*** (0.137)	0.358*** (0.137)	0.357*** (0.138)
$\Delta_t$ Public goods	0.010 (0.019)	-0.006 (0.019)	0.013 (0.021)	0.010 (0.021)	
$\Delta_t$ Health					0.012 (0.050)
$\Delta_t$ Road					-0.023 (0.038)
$\Delta_t$ Water					0.110* (0.066)
$\Delta_t$ Education					0.011 (0.045)
$\Delta_t$ Market					-0.041 (0.048)
Age	0.004 (0.004)		0.003 (0.004)	0.003 (0.004)	0.003 (0.004)
Migrant	0.282 (0.173)		0.352* (0.188)	0.349* (0.188)	0.363* (0.189)
Female	0.143 (0.125)		0.141 (0.131)	0.143 (0.131)	0.145 (0.131)
Victimization	0.033 (0.047)		0.030 (0.053)	0.030 (0.054)	0.029 (0.053)
Assets	0.056 (0.066)		0.019 (0.070)	0.017 (0.070)	0.014 (0.070)
ELF	-0.155 (0.358)		-0.252 (0.504)	-0.153 (0.523)	-0.247 (0.510)
Diamond	-0.027** (0.011)		-0.026 (0.017)	-0.027 (0.017)	-0.025 (0.017)
Threshold 1	-1.094*** (0.298)	-1.583*** (0.136)	-1.261*** (0.335)	-1.241*** (0.344)	-1.358*** (0.366)
Threshold 2	0.856*** (0.297)	0.600*** (0.129)	0.850** (0.333)	0.870** (0.343)	0.762** (0.363)
Threshold 3	3.092*** (0.324)	2.847*** (0.168)	3.224*** (0.359)	3.246*** (0.369)	3.140*** (0.387)
var (council)	-	-	-	0.070 (0.068)	-
var (chief)	-	0.415*** (0.118)	0.406*** (0.127)	0.343*** (0.122)	0.419*** (0.130)
# Local council	-	16	-	12	-
# Chief	-	136	130	130	130
LR test (p-value) <sup>^</sup>	-	0.0555	0.1454	-	0.1172
Observations	949	1,227	949	949	949

Note: <sup>^</sup> Test between two- and three-level multilevel ordinal logit models. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table AIII: Determinants of Trust in Local Councils (Difference-in-Difference)**

	(11)	(12)	(13)	(14)	(15)
$\Delta_k \Delta_t \text{Trust}$	O. Logit	3L O. Logit	3L O. Logit	2L O. Logit	3L O. Logit
$\Delta_k \text{Corrupt}$	-0.050 (0.086)	-0.027 (0.083)	-0.099 (0.091)	-0.066 (0.093)	-0.098 (0.091)
$\Delta_k \Delta_t \text{Voice}$	0.517*** (0.120)	0.451*** (0.107)	0.638*** (0.129)	0.540*** (0.127)	0.637*** (0.130)
$\Delta_t \text{Public goods}$	0.020 (0.026)	-0.003 (0.025)	0.019 (0.027)	0.014 (0.028)	
$\Delta_t \text{Health}$					0.073 (0.065)
$\Delta_t \text{Road}$					0.010 (0.050)
$\Delta_t \text{Water}$					-0.051 (0.083)
$\Delta_t \text{Health}$					-0.002 (0.061)
$\Delta_t \text{Road}$					-0.065 (0.064)
Age	0.002 (0.006)		0.001 (0.006)	0.001 (0.006)	0.002 (0.006)
Migrant	0.192 (0.239)		0.248 (0.251)	0.240 (0.254)	0.260 (0.251)
Female	0.077 (0.170)		0.021 (0.177)	0.043 (0.178)	0.007 (0.178)
Victimization	0.048 (0.064)		0.063 (0.071)	0.051 (0.069)	0.065 (0.072)
Assets	0.011 (0.091)		-0.042 (0.094)	-0.014 (0.095)	-0.045 (0.095)
ELF	0.220 (0.473)		-0.264 (0.578)	0.119 (0.562)	-0.289 (0.584)
Diamond	-0.031** (0.014)		-0.004 (0.019)	-0.028 (0.017)	-0.005 (0.019)
Threshold 1	-2.071*** (0.436)	-2.549*** (0.227)	-2.384*** (0.491)	-2.285*** (0.472)	-2.461*** (0.518)
Threshold 2	-0.838** (0.426)	-1.263*** (0.202)	-1.092** (0.478)	-1.000** (0.458)	-1.166** (0.506)
Threshold 3	0.306 (0.423)	-0.097 (0.195)	0.126 (0.471)	0.211 (0.451)	0.056 (0.499)
Threshold 4	1.547*** (0.427)	1.229*** (0.204)	1.436*** (0.474)	1.516*** (0.454)	1.369*** (0.501)
Threshold 5	3.713*** (0.505)	3.198*** (0.288)	3.656*** (0.545)	3.730*** (0.528)	3.589*** (0.568)
var (council)	-	0.172* (0.102)	0.253 (0.158)	-	0.252 (0.160)
var (chief)	-	0.094 (0.106)	0.092 (0.119)	0.276* (0.160)	0.093 (0.120)
# Local council	-	16	12	-	12
# Chief	-	129	121	121	121
LR test (p-value) ^	-	0.0027	0.0016	-	0.0020
Observation	492	640	492	492	492

Note: ^ Test between two- and three-level multilevel ordinal logit models. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

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