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Working Paper Series

#2017-006

**How development aid explains (or not) the rise and fall of
insurgent attacks in Iraq**

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UNU-MERIT Working Papers

ISSN 1871-9872

Maastricht Economic and social Research Institute on Innovation and Technology

UNU-MERIT

Maastricht Graduate School of Governance

MGSOG

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How development aid explains (or not) the rise and fall of insurgent attacks in Iraq

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Abstract

Despite its uncertain effects on political violence, foreign aid is still used as a means to counter insurgency. Recent examples include the US Commander's Emergency Response Program (CERP) in Iraq and Afghanistan. This paper describes how local political dynamics can complicate the causal effect of development assistance on insurgent attacks and estimates the effect of small development projects on attacks targeting foreign donors. Dynamic panel data analysis shows that development assistance induced more attacks against the Coalition forces than reduced them. To further uncover the causal mechanism behind the relationship, I also examine three prominent explanations in the literature. The analysis reveals that the level of violence increased neither because insurgency became a more attractive option than legal economic activities (the opportunity costs explanation) nor because the insurgents tried to sabotage the development projects to pre-empt the hearts and minds effect (the pre-emption explanation). Furthermore, although the third, enrichment explanation agrees with the case, my analysis reveals that Iraqi insurgents did become stronger not only by looting, as most studies suggest. The level of violence in Iraq increased because project contractors needed to pay local leaders and insurgents to get access and buy security. While the US military buys down violence against them, discontented leaders contract violence out to third-party, most likely foreign fighters, to initiate attacks against the Coalition forces on behalf of them. In this light, future counterinsurgency efforts need to mind the ties between aid recipients and other actors, provide better security to contractors, or try to allocate aid more strategically.

Keywords: Development aid, counterinsurgency, dynamic panel data model, Iraq

JEL classification: D74, F50, O11, O53,

Introduction

Development assistance has long been employed by many state authorities as a policy tool to counter (violent) oppositions. Especially counterinsurgency, it has been used to win the hearts and minds of the public in exchange for support and intelligence (Berman, Felter and Shapiro, 2011; Galula, 1964; Owens, 2013). Its effectiveness, however, is a subject of debate among scholars and policymakers alike. While some empirical studies show that aid is effective in deterring or ending violent conflicts (Bazzi and Blattman, 2014; Berman, Felter and Shapiro, 2011; Collier and Hoeffler, 2002a; De Ree and Nillesen, 2009; Savun and Tirone, 2012), some find it ineffective or, in some cases, counterproductive (Croft, Felter, and Jonston, 2014; Dube and Naidu, 2015; Narang, 2014; Narang, 2015; Nunn and Qian, 2014; Sollenberg, 2012; Wood and Sullivan, 2015).

This paper provides further empirical evidence to the debate and finds that development assistance induced *more* violence in Iraq, a finding consistent with the second body of literature discussed above but in contrary to the ‘hearts and minds effect’ reported in Berman, Felter and Shapiro (2011) and endorsed by Martins (2004).¹ This paper argues that the linear relationship between aid and insurgency in Iraq was plagued by local political dynamics which can cause endogeneity problem that may bias an analysis. This empirical problem is particularly challenging when the number of endogenous variables is numerous and high-quality data are lacking at the same time, a problem commonly encountered by scholars studying conflict-ridden regions. To engage this problem, I instrument all policy variables with their own lags and estimate the models with the difference-GMM and system-GMM methods, a standard technique frequently applied in dynamic panel data estimation (Arellano and Bond, 1991; Blundell and Bond, 1998).² After taking the endogeneity issue into account, my analysis shows that the pacifying effect is induced by the security-related projects of the Commander’s Emergency Response Program (CERP) instead of the development components of it, which is a major part of the hearts and minds argument. To further disentangle the causal mechanism that links aid and violence, this paper also examines which existing theory is most likely to explain the positive correlation between the two. My analysis suggests that the violence-inducing effect of aid can be explained by the capacity explanation, which maintains

¹ See Rangwala (2009) and Cohen (2014) for criticisms to the approach.

² See Dreher, Marchesi, and Vreeland (2008), Fuchs and Klann (2013), Touchton (2016) for examples of application.

that aid may empower rebels and hence fuel violence conflict (e.g. Narang, 2014). This finding also provides a refinement to the theory. Instead of saying that insurgents become more powerful by looting, as most of the studies propose (e.g. Wood and Sullivan, 2015), my finding suggests that corruption and the commensal relationship among local leaders, contractors, and insurgents also explain the violence-inducing effect of aid: while the US military directly paid the Sunni sheikhs to buy down violence, the latter contracted violence out to foreign fighters to induce more attacks. Making use of the payments from sheikhs and project contractors to reinvest in the insurgency, foreign fighters were able to initiate more attacks on behalf of the discontented tribal leaders.

In the following, I will first provide an overview of the literature, and then discuss the local dynamics in Iraq and contend how the dynamics can influence the validity of the results in earlier studies. After introducing data and method and presenting my econometric results, I will show which theory better explains the violence-inducing effect of aid in the case of Iraq. The final section concludes and highlights some policy lessons.

The Impacts of Foreign Aid on Political Violence

In a series of studies, Collier and Hoeffler (1998; 2002a; 2002b) propose that foreign aid is likely to have a pacifying effect in reducing the risks of civil conflict. In brief, they reason that aid can improve the economic health of a country. As a better and healthier economy will raise the opportunity costs of rebellion, aid can help a country escape a conflict trap. Many of the follow-up studies similarly identify this pacifying effect of aid, though through different ways. For example, applying the classical military deterrence argument, Bazzi and Blattman (2014) propose that aid can deter rebellion by increasing the military capacity of the recipient governments. Focusing on aid withdrawal, Nielsen et al. (2011) argue that withdrawal will weaken the military capacity of governments that have long been dependent on foreign assistance to buy peace from potential rebels. In another study, Savun and Tirone (2012) posit that aid can alleviate income shocks, and hence prevents the occurrence of conflict by allowing recipient governments to distribute resources to potential rebels to pre-empt violent oppositions in times of severe economic downturns. In another study, Berman, Felter and Shapiro (2011) theorise that development assistance from the US has improved the living conditions of the Iraqi. Accordingly, it wins the hearts and mind of the people, inducing a higher level of public support and cooperation, discouraging public support to insurgents and

facilitating intelligence gathering. In common, these studies portrait a direct relationship between aid and conflict and consider aid an income source that can strengthen a country's position in combating or co-opting oppositions inside a country.

Yet, every story has a dark side. Some researchers contend that aid can induce violence. According to, Hirshleifer (1991) and Grossman (1992), aid generates economic rents and raises the expected returns of insurrection, and hence increases the chances of conflict. Similar arguments have been proposed in more recent studies. For example, Wood and Sullivan (2015) state that aid is frequently stolen or looted en route by armed groups. Nunn and Qian (2014) point out that donors may have difficulty in excluding local armed groups from benefiting from food aid if their members were malnourished and hence qualified to receive it. Chacón (2013) finds that rebel groups in Colombia often attacked local authorities in order to capture more fiscal transfers from the central governments. Dube and Naidu (2015) add that foreign military assistance may also strengthen armed non-state actors, undermining political institution in Colombia. Last but not least, Narang (2014; 2015) theorises that because humanitarian assistance can improve the bargaining position of the recipients, it may exacerbate the commitment problem and increases the chances of war recurrence.

Local Politics and the Effect of Development Aid in Iraq

In spite of the controversy, foreign aid is still used as a tool to counter insurgencies, for example, by the US military in Iraq and Afghanistan. In a review of the programme, Lieutenant Colonel Mark Martins (2004) refers CERP as a programme that wins trust and meets emergency needs of civilians in Iraq and Afghanistan. According to Martins (2004), the source of the funds was originally from the loot of the Ba'athist Party, which the US forces had discovered shortly after the Iraq War in 2003. The resources were designated to be spent on emergency relief and reconstruction in areas such as food, sanitation infrastructure, healthcare, education, telecommunications, transportation, and irrigation systems, to name but a few. Later on, the use was then extended to pay for services provided by the local people, which included repair and installation of generators, reconstruction of bridge, road, schools, hospitals, and government buildings. The idea was to let local people engage in economic activities that contribute to the rebuild of the country. The assets were also allowed to be used to recruit, train, and deploy police, security guards and civil defence corps units (Martins, 2005: 49). In other words, CERP is not only a development programme that aims to improve

the livelihoods of the local people. It is also a security programme that tries to enhance the law and order of the country through development. In this light, Berman, Felter and Shapiro (2011) argue that CERP successfully won the hearts and minds of Iraqis. And its success explains the plummet of insurgent attacks against the Coalition forces. Yet, in light of the empirical debate and the political dynamics to be discussed below, one may contend that development assistance may not work through the heart-and-mind argument as they propose.

Many studies have demonstrated that rebels are more adaptive than the way policymakers believe them to be (e.g. Hoffman, 2004). When foreign assistance is used to mobilise public support, rebel groups are well aware of the potential challenges the assistance could bring. In fact, they have used the same tactic to gain popularity and legitimacy in their struggles with the authorities.³ This not only means that aid is usually assigned according to the level of violence in a region, but it also implies that the assistance itself could be a potential cause of further violence against the state. In their empirical analysis, Crost, Felter, and Johnston (2014) show that in the Philippines, development assistance in the short run indeed induces more violence. Using the regression discontinuity design, their study exploits the fact that only the poorest 25 percent of municipalities in participating provinces are eligible for the community-driven development programmes in the country. The programme design essentially creates a discontinuity in aid assignment that enables them to estimate the causal effect of development aid on conflict casualties. They found that municipalities that were barely eligible to development programme experienced a large increase in conflict casualties when compared to those just ineligible to it.

Although the clever design clearly shows that aid in some cases does cause more violence, we do not know to what extent the effect passes through the mechanisms that different theories proposed. One major issue related to the argument is that the very action may also undermine public support for the rebels as the public knows that violence risks local development and exacerbates their plight, which in turn may create a similar heart-and-mind effect.

Though in a slightly different way, the above dynamics is indeed observed in the case of Iraq. One component of the Commander's Emergency Response Program (CERP) is payments to the local militia, the so-called Sons of Iraq (SOI) programme in the country (Marten, 2012;

³ One popular example is Hamas. By providing local communities with the necessary public goods and services like education, the organisation managed to secure popular support and political legitimacy among the public (Berman, 2011; Levitt, 2008).

Martins, 2005: 52). While the motives of the local Sunni tribes joining the SOI programme were diverse, a reason that compelled them to ally with their former enemies was to seek protection from the US military against the prey of Al-Qaeda Iraq (AQI) on them (Biddle, Friedman, and Shapiro, 2012). As McCary (2009) delineated, AQI had gradually taken over profitable businesses and smuggling routes, forcibly married (i.e. kidnapped and raped) Iraqi women, and tortured, assassinated, and murdered tribal leaders (Long, 2008: 77; Marten, 2012: 150; McCary, 2009: 47). All these made local sheikhs feel that AQI was in competing for the authority and control of money. Although the acts of AQI were out of their religious ideology and economic interests, and hence differ from the pre-emptive motive underlying the Philippines case discussed above, they produce the same effect of relinquishing the support to their enemy, the US military. As the dynamics above explains both the decline of attacks that directed towards the Coalition forces after the formation of an alliance and the allocation of aid at the same time, this third factor may confound with the heart and mind effect claimed by previous research.

Another dynamics, which is specific to the Iraqi case at hand, is related to the self-selected nature of the SOI programme. As Marten (2012: 144) suggests, the militias enrolled in the SOI programme were non-random, self-selected armed bands. Many of them were part of the Saddam's security force and Iraqi Army, which were dismissed by the Coalition Provisional Authority (CPA) immediately after the US occupation in 2003 (Dobbins, 2009). As Biddle (2008:5) testified before the US Senate Committee on National Security on Foreign Relations, those formations "are essentially the same units, under the same leaders, that fought Coalition forces until agreeing to stop in 2007". This observation is important because it points out that the potential recipients of the funds were also the insurgents that are responsible for the attacks. In a nutshell, the SOI programme can be understood as "a series of bilateral contractual agreements in which particular groups of local Iraqis agree not to fight the United States" (Biddle, 2008: 3). It means that at least part of the aid was reversely determined by the number of attacks directed at the Coalition forces.

Furthermore, the security condition of the local community affects the start-up and progress of the development projects as well. In their quarterly report to the Congress, the US Department of Defense (2008) stated that the Coalition forces had seized the opportunities of increased security to promote reconciliation with the local people. Examples of these reconciliation efforts include the reopening of schools, clinics, markets, and other social services (US Department of Defense, 2008). The possibility of implementing these projects

indicates that a region was stable enough for reconstruction.⁴ This implies that aid can be a product instead of the cause of the enhanced security. Consequently, empirical tests that do not distinguish them are likely to overstate of the effect of CERP.

The issues discussed above hint that the relationship between development assistance and conflict is not always straight-forward and more complicated than what existing theories assume to be. More importantly, these dynamics implies that reverse causality and common third factors are shaping the relationship at the same time. Given the challenge of data deficiency in conflict-ridden regions, this kind of endogeneity is difficult to be accounted for. To engage this empirical challenge, I model the relationship between aid and violence using a dynamic panel data model and instrument all policy variables with their own lags (Arellano and Bond, 1991). Admittedly, this identification strategy is based on statistical assumptions (to be validated by statistical tests) rather than on a more acclaimed quasi-experimental design. But when instruments are not available given the difficulty of finding valid instruments for each of the policy variables, this approach at least yields us more reliable results than the usual OLS and fixed-effect models do.

Data

The dependent variable is the number of attacks against the Coalition forces divided by the size of the population.⁵ The key independent variables are different types of funds. In their study, Berman, Shapiro, and Felter (2011; henceforth BSF) only made use of the funding data on the Commander's Emergency Response Program (CERP). The spending on CERP, however, represents only a portion of the project money injected to the country between 2004 and 2009 by the US military. As Figure 1 shows, a larger share of funds is due to other programmes such as Iraq Relief and Reconstruction Fund (IRRF). Given the size and possible correlation between project money to the CERP spending, leaving these funds out in an

⁴ As the CERP variable is calculated by spreading the project money throughout the project period, a secure environment that enables a project to be implemented more smoothly will translate into higher policy intensity in the model. For example, suppose that the cost of a project is \$100,000. If it is completed in 10 months, the CERP spending is \$10,000 per month. If the project is finished in 5 months, the spending becomes \$20,000 per month. A shorter project period due to increased security can be translated into higher policy "intensity".

⁵ Note that the population data is imperfect as population size may change over time.

analysis may lead to omitted variable bias, overstating the true impact of CERP in counterinsurgency in Iraq.

[Figure 1 about here]

Fortunately, the original dataset used by BSF contains detailed information on different types of funds. Based on their dataset, among all 40 funds, I augmented my empirical model by including four other major funds: Iraq Security Forces Fund (ISFF), Iraq Relief and Reconstruction Fund (IRRF), Economic Support Fund (ESF), and Development Fund for Iraq (DFI). These four programmes, plus CERP, in total cover about 90 percent of all projects recorded in the dataset. A brief description of these funds can be found in Table 1.

[Table 1 about here]

To capture the effect of an alliance between the Coalition forces and local power, I rely on the Sons of Iraq (SOI) indicator in the BSF dataset, which indicates whether or not the payments were deemed to be made to the local militias. Based on the dataset, these payments came from four different programmes and CERP accounts for 99.6 percent of them. In their paper, BSF did not distinguish the payments made for development projects and security because both parts form an integral part of their theoretical model. In this way, the negative effect they found may be due to the payments for security instead of the ones for development. To further partial out the effect due to development aid, this study makes such distinction, so the CERP variable in this study is different from the one in BSF and captures mainly the development components (i.e. the non-SOI part) of the programme. According to the dataset, about 10 percent of all CERP projects are related to SOI.

I also included a number of control variables in my analysis. They are population, income change between year 2002 and 2004, the share of the Sunni population, unemployment rate, troop size, and pipeline volume (weighted by the prices of oil and gas adjusted for inflation). Except for the troop size data, which is from Belasco (2009), all data come from the original dataset used by BSF.

Estimation

My analysis will begin with OLS, and then the typical fixed-effect and random-effect models. A potential problem with the estimates from OLS and fixed-effect model is that the level of violence is inherently time-dependent. The time dependence is not only due to district-specific characteristics (e.g. being the capital of the country), which is taken care by the fixed effect, but also inertia (e.g. taking time for adjustments). If time dependence matters, all results based on OLS, fixed-effect, and random-effect models can be potentially biased. Another problem is that OLS and fixed effect estimators assume that the independent variables are strictly exogenous. This assumption is likely to be violated when the allocation of funds is a response to the level of violence observed in a district (i.e. reverse causality).

To engage these empirical challenges, I will use a dynamic panel data model in my estimation with the lags of the endogenous variables as GMM-style instruments (Arellano and Bond, 1991; Holtz-Eakin, Newey, and Rosen, 1988).⁶ In this model, estimation can be challenging because our data have only a short time-dimension. This induces the so-called Nickell bias when the past level of violence is correlated with the fixed-effect (Nickell, 1981). Serial correlation and the endogenous nature due to time dependence will also produce inconsistent estimates. To address these issues, the difference GMM (Arellano and Bond, 1991) and system GMM (Blundell and Bond, 1998) estimators are used to obtain more accurate estimates. In difference GMM, the first-difference transformation is used to eliminate the fixed-effect to get rid of the correlation between the fixed-effect and the error term. In system GMM, lag terms that are uncorrelated with the fixed-effect are used as instruments. A weakness of difference GMM is that we are going to lose some data because of differencing. For comparison, I estimate the model using both methods.

Findings

The estimation results are reported in Table 2. Results based on OLS estimation suggest that development programmes such as CERP have a positive effect on the level of violence. A higher payment amount spent on development projects is associated with a higher level of violence. Payments to militias have a similar effect as well. In contrast, the number of troops on the ground seems to reduce the number of attacks effectively. Model 2 extends Model 1 by

⁶ Interested readers are referred to Roodman (2009) for further discussion on the method.

including other projects. The inclusion of the new variables seems to have no significant impact as the estimates have similar size across two models. Only DFI is found to have a negative and statistically significant effect on the level of violence.

[Table 2 about here]

Results based on OLS are prone to unit-specific unobserved heterogeneity and can be seriously biased. Examples of this unit-specific effect include proximity to the country's political centre and the symbolic importance of the area. To account for these time-invariant effects, I re-estimated the two models using both fixed-effect and random-effect estimators. The p-values obtained from the Hausman test suggest that fixed-effect model better fits the data. Estimation results from the fixed-effect model are reported in columns (3) and (4). Notice that due to data limitation, the Sunni share and income change variables are time-invariant. Therefore, both variables are dropped in the reported fixed-effect models. In the new models, similar results were obtained, but the estimates corresponding to the SOI variables now have the expected sign and are statistically significant at 1% level.

We move on to the results based on dynamic panel data models, which further guard us against bias due to the time-dependent nature of violence and the endogenous relationship between violence and counterinsurgency efforts. Estimates based on dynamic panel data model give results similar to what we have found thus far: CERP has a positive effect and SOI has the expected negative effect on violence. In short, this finding suggests that the negative effect reported in BSF is likely to be due to the SOI component instead of the development component of CERP.⁷

⁷ As Roodman (2009) discussed, while OLS yields upward-biased estimates of the coefficient of the lagged dependent variable, fixed effect model gives downward-biased estimate of the coefficient. In other words, the estimate obtained from the two models should bracket the true size of the coefficients. This property should provide a useful external check on the results obtained from the GMM estimators. As shown in column (5) and (6), the property discussed above implies that the size of the estimate should lie in the range of 0.534 to 0.867, which is less than one, ensuring that the system is stable. Estimates from both difference GMM and system GMM, reported in columns (7) and (8), are equal to 0.799 and 0.845, falling within the prescribed range. As the estimate from GMM estimates could be quite unstable, this finding provides additional support to the reliability of the results obtained from the GMM estimators. In terms of substantive effect, the estimates are sizeable and statistically significant, suggesting that the dynamic effect is strong and present. For model selection, I chose the model based on the AR(2) and the statistic from the over-identification tests (i.e. the Hansen test and the Sargan test). Models (7) and (8) pass the AR(2) and the over-identification tests but not the AR(1) test. But the latter is expected because of the differencing (Roodman, 2009: 105). This property renders the AR(1) test not informative in our case.

Regarding estimates of other control variables, the share of Sunni in the population, income change, population, and unemployment are found to have the expected effects, but they are not statistically significant most of the time. The effect of resource rents is even less certain as the sign of the estimate is not very stable. Though the mostly non-significant results, the pattern are largely consistent with what are reported in other studies. For example, see Berman, Callen, Felter, and Shapiro (2011) on the non-effect of unemployment, and Bazzi and Blattman (2014) on the non-effects of income shocks. Case-study evidence has documented that much of the violence against the Coalition forces were initiated by the Sunni population in the region due to the loss of political power after the Iraq War (e.g. Marten, 2012).

In general, results from models based on four different estimators (OLS, two-way fixed-effect, difference GMM, and system GMM) depict a fairly consistent picture, that development aid induces violence and that payments to local militias (resembling SOI) reduce it. According to the system GMM model, one million US dollars of development aid is associated with about 15 attacks per capita in a half-year period. On the other hand, the success of troop surge is only confirmed by estimates obtained from the OLS and the fixed-effect models. While the coefficient corresponding to the troop surge variable carries the expected sign, the size of the effect is rather uncertain. The p-values are equal to 0.221 based on the model using difference GMM and 0.242 based on the model using system GMM.

Looking Into the Causal Mechanisms

Admittedly, results from the above analysis only inform us that development aid seems to induce more violence in Iraq. It does not tell us how that is the case. In this section, I will inspect which mechanism(s) that have been identified in the literature, reviewed in the second section of this paper, are responsible for the positive effect found in the econometric analysis above. As the success of the SOI programme has been extensively covered by other studies, for example, Biddle (2008), Long (2008), McCary (2009), Marten (2012), and Biddle, Friedman, and Shapiro (2012), among others, I will limit my discussion to the surprising finding between development assistance and insurgent attacks.

The Opportunity Costs Explanation

The opportunity costs explanation maintains that aid will induce more violence when the relative returns from rebellion increase with respect to other economic activities (Grossman, 1992; Hirshleifer, 1991). Indeed, one can apply the general equilibrium model of Grossman (1992) directly to the case of Iraq and infers that Sunni insurgents would remain active because CERP provides a better employment opportunity that otherwise would not have been available to them.

Several observations render this explanation unlikely. Firstly, though the theory sounds possible, it assumes that the employed local Iraqis were indifferent to the stay of the Coalition forces, an assumption difficult to be substantiated. In their analysis on the security situation in Iraq, the US Department of Defense (2007) stated that violent oppositions came from various political, religious, and ethnic groups. But in common, the primary goal of the destabilising forces in Iraq was to expel the Coalition forces from Iraq (US Department of Defense, 2007). These forces include Sunni insurgents, AQI, and Jaysh al-Mahdi (JAM), all of which recruited both Sunni and Shiite fighters from Iraq and foreign countries.

Different researchers also observe and agree that the local did not want the Coalition forces to have their foothold on their land, even though the protection offered by the Coalition forces against AQI was an important element of the short-term alliance (e.g. Biddle, Friedman, and Shapiro, 2012). Yet, to the tribal leaders, the alliance is no more than a “convenient marriage” and a mean to protect their interests from the prey of AQI. Furthermore, this exchange is not costless to the tribal leaders that had cooperated with the US as they became obvious targets for AQI attacks (Long, 2008; Marten, 2012). And as McCary (2009) pointed out, the perception that the US forces would leave the country is a major determinant of the alliance decision. In short, though we cannot completely eliminate the hypothesis as the short-term interest of employment is still present, the above observations weaken the hypothesis by challenging the underlying assumption of the hypothesis on the willingness of the local Iraqis to compromise their security concern and nationalist sentiment in exchange of short-term economic interests.

Statistical analysis by Berman, Callen, Felter, and Shapiro (2011) provides more decisive evidence against the explanation. Using data from Iraq, Afghanistan, and the Philippines, the study finds a negative relationship between unemployment and insurgent attacks (Berman, Callen, Felter, and Shapiro, 2011), that is, a higher unemployment rate is correlated with *less* violence. They ascribe the rather surprising result of the success of the Anbar Awakening and

argue (1) that the insurgents may be less interested in the economically less advantaged region, or (2) that improved security measures may suppress economic activity, or (3) that a lower cost of obtaining information (intelligence) for counterinsurgency due to a higher unemployment rate. The last two explanations are not particularly applicable in our case as CERP is a programme that aims to engage local people in local economic activities (i.e. improve employment). Neither does CERP a programme for rewards to civilians for information; the Department of Defense had a separate programme for that (Martins, 2005). In short, the above discussion suggests that the positive relationship between development assistance and violence should be due to other competing explanations.

The Capacity Explanation

A large body of research emphasises that aid may strengthen an armed group (Dube and Naidu, 2015; Nunn and Qian, 2014; Wood and Sullivan, 2015). Presenting a slightly different argument, Narang (2014) considers that aid may encourage a group to renegotiate in the bargaining framework. But in common, they predict that aid will strengthen the position of an armed group, enabling it to fight against the authority. This explanation, similar to the opportunity cost theory examined before, claims that aid will induce more violence after some cost-benefit analyses. While the opportunity cost explanation emphasises on the outside option available to the rebels (i.e. the cost side) and considers rebellion as yet another economic activity, the capacity explanation speaks to the revenue side of the calculation and is more open to other motivations of rebellion. Aid can either improve the odds of winning (e.g. more financial resources to buy weapons) or increase the gains from using more violence (e.g. looting), or both. As I will show, among the three theories tested in this study, this explanation is the most promising one.

The first test regards the nature of the assistance. Like the food aid considered by Nunn and Qian (2014), the development assistance in the present case can be captured by rebel groups to improve their (military) capacity. According to Martins (2004), though some of the spendings were on water, food production, and purchases of vehicles, the assistance was also spent on infrastructure (e.g. sanitation, transportation, repair of cultural facilities), services (e.g. healthcare, education, civil cleaning), and institution-building (e.g. rule of law). While the first category of items can be looted, thus contributing to the military strength of insurgents directly, the rest of them cannot be. An inspection on the dataset also reveals that a

portion of the lootable was valuables to insurgents. They include communication equipment, food production, health equipment, military facilities, police facilities, spare part replenishment, and water resources. All these supplies were valuable to foreign fighters, especially those lone-wolf terrorists, who, unlike the local people, fell outside of any command structure and did not receive material assistance from an organisation. However, the test also reveals a potential weakness of the theory—it suggests only one necessary but insufficient factor to the positive relationship between development assistance and violent conflict.

Furthermore, an independent report by the Office of the Special Inspector General for Iraq Reconstruction (SIGIR), a federal agency created by the Congress to oversee the use of CERP funds, lends some support to the hypothesis. Between 2011 and 2012, SIGIR surveyed 390 Army and Marine battalion commanders and civilian personnel and engineers serving in the US Army Corps of Engineers (USACE), the Department of State, and the US Agency for International Development (USAID). According to the report, both military and civilian personnel (76%) acknowledged that part of the funds may have been misused or lost to fraud and corruption. Over 70% believed that the amount lost to fraud and corruption was larger than 10%. Moreover, 35% estimated that the loss was in the range of 10%-25% (SIGIR, 2012: 14).

According to the SIGIR report, there was general agreement among respondents that corruption is endemic in Iraq. It is used by local contractors to gain access, protection, and to get the projects done without being attacked by the locals. As a respondent asserted, it a hidden cost of the programme (SIGIR, 2012: 15). Tellingly, a respondent who stationed in Baghdad between 2005 and 2006 observed that “[m]oney was paid to insurgents for protection—some of the money (usually new US \$100 dollar bills) was found during raids on insurgents [along with] admission from contractors that they paid money ‘for protection’” (SIGIR, 2012: 19).

A point particularly relevant to the capacity explanation is that looting is not the only way that made insurgents stronger. Additionally, part of the aid money was transferred to insurgents indirectly, a finding not been emphasised in the literature. As noted earlier, transfer usually took different forms; for example, fraud, corruption, and security payments from contractors. An engineer from the SIGIR survey stated that some contractors were conspired with the insurgents and/or paid them to ensure their own security (SIGIR, 2012: 32). A commander,

who had served in Kirkuk, also pointed out that they were well-aware that part of the funding would be reinvested in insurgency and paid to local leaders susceptible to insurgent support (SIGIR, 2012: 32). A quote from a Marine officer, stationed in Anbar, made this point straight, “the better we were at leveraging CERP, we saw a corresponding increase in the sophistication of enemy equipment and training” (SIGIR, 2012: 32). While losses due to fraud and corruption were expected, the drippings from disgruntled leaders to insurgents, possibly foreign fighters that did not directly benefit from the aid, were unanticipated, eventually spoiling the fruits of the counterinsurgency efforts.

In sum, the explanatory power of the capacity argument is better supported by some of the anecdotes evidence. The finding also informs us that the increase in capacity is possibly through a different channel. Apart from looting, it is fraud and corruption that link aid, capacity, and increased level of violence in Iraq in the whole causal chain.

The Sabotage Explanation

The sabotage argument posits that it is the pre-emptive motive of insurgents that drives them to attack the authority (Croft, Felter, and Jonston, 2014). Expected that the assistance is going to win the hearts and minds of the population, insurgents will try to undermine those projects proactively, preventing aid programmes to be undertaken in the first place. A corollary of the theory is that if insurgents found out that development assistance does not work, the number of attacks should decrease, because the plan of attack is contingent on the (expected) effectiveness of the assistance. Once the reason of attack disappears, the number of attacks should fall accordingly.

An examination of the public opinion of the Iraqi people towards the US and the Coalition forces, however, proves this theory not applicable in the Iraqi case. After analysing the polling data from Iraqi conducted in February 2008,⁸ Cohen (2014) considered public opinion is less malleable than the proponents of the theory thinks it should be. According to the poll data,⁹ Iraqis expressing “a great deal” and “quite a lot” of confidence in the US occupation forces

⁸ The survey was conducted by the D3 Systems (Vienna, Virginia) and KA Research Ltd (Istanbul) on behalf of three major media outlets in the US (ABC News), Britain (the BBC), and Japan (NHK).

⁹ Global Policy Forum. 2016. Iraq Opinion Poll (March 2008). Available at:

<https://www.globalpolicy.org/invasion-and-war/iraqi-public-opinion-and-polls.html>. Access 9 May, 2016.

had changed from 19% (2003), to 25% (2004), to 18% (2005), to 18% (2007), to 15% (2007), and to 20% (2008). There was an up in 2004 and a down in 2007, but the general attitude is quite stable at around 18%. How does the number correlate with CERP? Figure 2 puts the above poll data along with the (annual) CERP data with the SOI component removed. It clearly shows that the two series are *negatively* correlated, with the correlation coefficient equal to -0.83. The relationship, in sharp contrast to what the theory predicts, could be due to the long-held discontent of the Iraqis, especially the Sunni, towards the invasion and occupation, explained before. As the construction works may recreate and enhance the image of occupation vividly, CERP programme may further fuel the negative view towards the occupation forces, at least in the short run. This explanation finds some supports from the same poll data: CERP spending peaked in 2007. In that year, when were asked when the US and other Coalition forces should remain in Iraq, a record-high 47% of Iraqis indicated that they should “leave now”. Project spending also increased within 2007 (see Figure 1). And during that period, the percentage corresponding to the poll question increased from 35% to 47%. In contrast, when the project subsided between 2007 and 2008, the share of people holding the same opinion drops to 38%.

[Figure 2 about here]

Because the theory contradicts to the prediction of the theory, the sabotage explanation is unlikely to explain the positive relationship between development assistance and attack in Iraq grounded in the econometric analysis.

Conclusion

What does the Iraqi case tell us about the effectiveness of foreign assistance on counterinsurgency? Firstly, local politics shapes the relationship between aid and conflict. As a result, reverse causality, selection effect, and common third factor are likely to exist and

influence the causal relationship. Secondly, similar to what is reported in other studies, in the short-run, development assistance can induce more violence but not reduce it. Finally, some existing theories are unable to explain the positive association between aid and conflict completely, at least in the case of Iraq. Both the opportunity cost theory and the sabotage argument seem to have little role to play in the case at hand. In contrast, the capacity explanation offers the most promising explanation. Yet, unlike what is usually proposed, that insurgents will loot the aid and equip themselves, insurgents in Iraq were better at that. They connected with local leaders that had allied with their enemies and extracted rents from the contractors. By doing so, the insurgents avoided crossfires, reducing the risks associated with looting and pocketing the money, reinvesting in their attacks. Ironically, while the US military brought down violence against them by allying with local tribes, adopting the same alliance strategy, some of the tribal leaders contracted violence out to insurgents, most likely the foreign fighters that were not direct beneficiaries of the development assistance. In this light, future counterinsurgency efforts should mind the ties between aid recipients and other actors, provide better security to contractors, or allocate aid more strategically. Similarly, development agencies should be more selective in choosing partners. Whenever possible, they should also provide assistance that is less likely to be looted (e.g. projects aiming at building institutions), such that it can be handed to the needed.

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Table 1. Major US-Led Development Assistance in Iraq

Fund	Description
Iraq Security Forces Fund (ISFF)	The Fund provides assistance to the security forces of Iraq, including training and provision, transportation, and maintenance of equipment.
Iraq Relief and Reconstruction Fund (IRRF)	The Fund disburses relief aid (e.g. food, medicine, and water) and provides assistance to the rebuild of infrastructure (e.g. electricity) and institution (election) in Iraq.
Economic Support Fund (ESF)	The Fund supports programmes that help achieve U.S. foreign policy objectives, e.g. building accountable and transparent institutions, creating economic and educational opportunities for youth, and countering extremist ideology.
Development Fund for Iraq (DFI)	Managed by the Coalition Provisional Authority, the fund is to strengthen the financial stability of the Iraq economy. For example, it is used to meeting cash payment requirements in the wheat purchase programme, the currency exchange programme, the electricity and oil infrastructure programmes, equipment for Iraqis security forces, and for Iraqi civil service salaries and ministry budget operations.

Source: Coalition Provisional Authority 2004); US Department of Defense (2012); US Department of State (2006; 2010)

Table 2. Effect of Foreign Assistance on Conflict Intensity in Iraq

Dependent variable: Intensity _t	(1) OLS	(2) OLS	(3) FE	(4) FE	(5) OLS	(6) FE	(7) Diff. GMM	(8) Sys. GMM
Intensity _{t-1}					0.867*** (0.027)	0.534*** (0.053)	0.799*** (0.258)	0.845*** (0.199)
ln(population)	-12.237 (12.980)	-12.108 (12.839)	-25.173 (24.857)	-24.083 (24.906)	-1.198 (2.257)	-22.735** (10.717)	13.416 (86.615)	-8.152 (11.857)
Resources	-0.707* (0.371)	-0.682* (0.371)	-0.116 (0.258)	-0.085 (0.253)	0.026 (0.055)	-0.033 (0.358)	4.733 (6.567)	-0.019 (1.568)
Unemployment	-3.480** (1.603)	-3.496** (1.599)	0.076 (0.731)	0.060 (0.737)	-0.766* (0.407)	-0.435 (0.614)	17.828 (12.335)	1.788 (4.322)
Troops	-1.256*** (0.382)	-1.146*** (0.347)	-1.193*** (0.332)	-1.171*** (0.337)	-0.950 (0.603)	-0.467 (0.525)	-6.815 (5.415)	-3.027 (2.570)
CERP	57.080** (22.877)	57.714** (22.970)	6.601*** (0.641)	6.189*** (0.696)	3.478*** (0.288)	4.945*** (0.388)	19.683*** (6.184)	15.403*** (1.850)
SOI	15.892*** (5.884)	15.741*** (5.914)	-40.126*** (6.710)	-40.160*** (6.747)	-38.837*** (4.537)	-52.784*** (9.012)	-48.916*** (13.459)	-66.187*** (20.068)
ISFF		-0.969 (1.537)		-2.812** (1.173)	-1.933** (0.853)	-2.979*** (1.009)	-17.809 (18.411)	-1.755 (1.902)
IRRF		-0.431 (0.553)		0.364 (0.275)	-0.061 (1.823)	0.204 (1.474)	-29.620*** (7.560)	-38.154*** (7.041)
ESF		-8.952 (14.609)		-1.755 (6.990)	-9.280** (4.003)	-9.761* (5.030)	-86.961 (75.342)	27.872 (27.484)
DFI		-14.893** (5.879)		-0.786*** (0.180)	1.325*** (0.343)	0.559 (0.511)	30.885 (147.343)	-40.084 (120.420)
Sunni share	2.110*** (0.532)	2.152*** (0.547)						
Income change (2002-2004)	-0.048** (0.022)	-0.048** (0.022)						
Constant	425.497** (208.703)	404.689* (204.380)	582.159* (344.524)	565.113 (346.190)	196.714 (122.986)	394.845** (193.495)		648.628 (427.463)

Period dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.261	0.263	0.132	0.135	0.743	0.402	-	-
Hausman test (p-value)	-	-	0.000	0.000	-	-	-	-
No. of instruments	-	-	-	-	-	-	37	38
GMM lag range	-	-	-	-	-	-	5 to 8	5 to 7
Instrumented variables	-	-	-	-	-	-	Intensity _{t-1} , Troops, and all funds	Intensity _{t-1} , Troops, and all funds
AR(1) test (p-value)	-	-	-	-	-	-	0.058	0.068
AR(2) test (p-value)	-	-	-	-	-	-	0.778	0.176
Hansen test (p-value)	-	-	-	-	-	-	0.529	0.219
Sargan test (p-value)	-	-	-	-	-	-	0.686	0.458
No. of districts	100	100	104	104	104	104	104	104
Observations	1,000	1,000	1,040	1,040	936	936	832	936

Note: Robust clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. CERP= Commander's Emergency Response Program; IRRF=Iraq Relief and Reconstruction Fund; ISFF=Iraq Security Forces Fund; ESF=Economic Support Fund; DFI= Development Fund for Iraq.

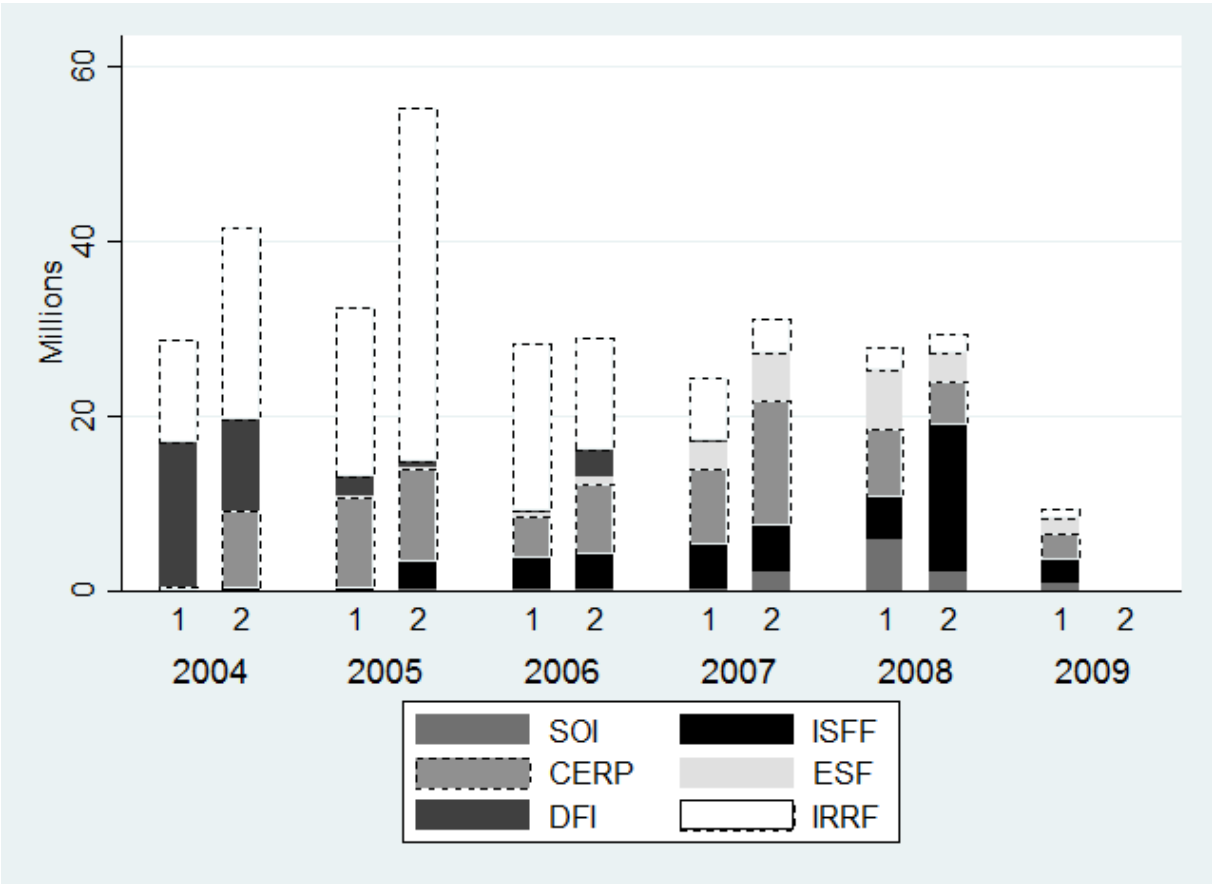


Figure 1. Distribution of aid programmes between 2004 and 2009

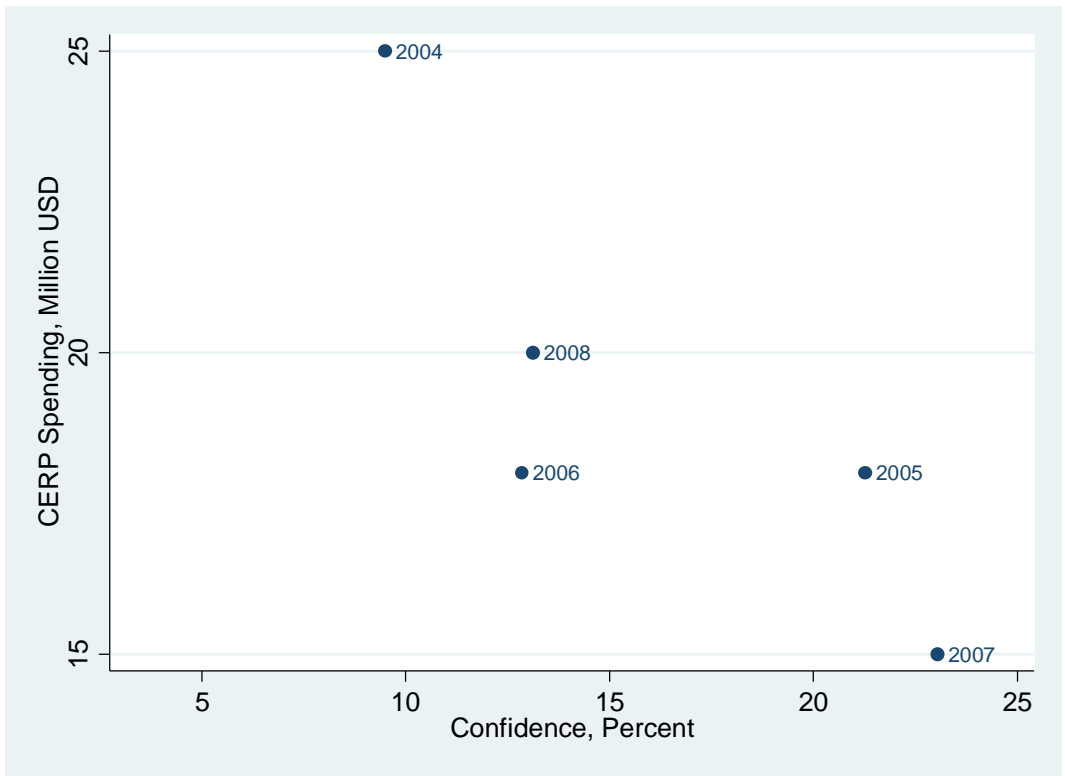


Figure 2: Iraqis' confidence in the US occupation forces and CERP spending

Appendix

Table A1: Summary Statistics

Variable	(1) N	(2) Mean	(3) SD	(4) Min	(5) Max
Intensity	1,040	66.54	179.40	0	2,275
Troops	1,040	189.90	13.22	170.5	219.00
Unemployment	1,040	10.51	6.95	0	50.90
Sunni share	1,144	19.99	34.02	0	100.00
Income change	1,100	-334.10	655.70	-1,837	1,642
ln(population)	1,040	12.04	1.03	9.303	14.34
Resources	1,144	11.36	25.63	0	220.80
SOI	1,040	0.04	0.46	0	14.18
ISFF	1,040	0.19	1.88	0	53.64
CERP	1,040	0.40	2.98	0	78.18
ESF	1,040	0.041	0.28	0	8.018
DFI	1,040	0.30	6.10	0	189.00
IRRF	1,040	0.57	5.26	0	157.30

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