CAN YOU SPEND YOUR WAY TO VICTORY? THE CASE OF STATEBUILDING IN AFGHANISTAN

BY

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Abstract

Do statebuilding activities decrease insurgency? Since 2006 General Petraeus's mantra has been that you cannot kill or capture your way out of a complex insurgency. Instead of bullets money spent on development projects, like those funded by the Commander's Emergency Response Program (CERP), are seen to be key to victory. These projects are theorized to decrease insurgency in direct and indirect ways. Indirectly, improvements made to quality of life, and the use of domestic security forces, encourage the population to provide actionable intelligence. CERP projects may directly affect levels of insurgency in three ways: first, by building state institutions that offer insurgents peaceful ways to achieve their goals; second, by shifting the burden of military operations to local citizens who best understand the human terrain; and third, through increased employment which may give young men an alternative to joining the insurgency. This study contributes to the COIN literature by testing each of these theories separately on a unique sub-national panel dataset of over three-hundred an seventy Afghan districts over a fifty-two month period. In so doing, two of five hypotheses examining the effect of over three billion CERP dollars on over sixty-thousand insurgent attacks, find empirical validation. As well, two additional hypotheses focusing on the ability of CERP projects to improve the quality of life of Afghans and increase the legitimacy of the Afghan government do not find confirmation in the data. The major conclusion of this study is that statebuilding through the CERP has not been an effective COIN strategy. Only humanitarian assistance projects, because they are immune to corruption, insecurity, and mismanagement, were found to significantly contribute to success in the ongoing COIN campaign in Afghanistan.

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Abbreviations

ABP	Afghan Border Patrol
ACLED	Armed Conflict Location and Events Dataset
ACOP	Afghan Civil Order Police
ACSP	Afghan Country Stability Picture
AEIC	Afghan Energy Information Center
AIMS	Afghanistan Information Management Services
ANA	Afghan National Army
ANP	Afghan National Police
ANSF	Afghan National Security Forces
AWOL	Absent Without Leave
CALL	Center for Army Lessons Learned
CERP	Commander's Emergency Response Program
CIDNE	Combined Information Data Network Exchange
COIN	Counter Insurgency
CSO	Afghan Central Statistics Office
CSTS	Cross-Sectional Time Series
DABS	Da Afghanistan Breshna Sherkat (National Afghan Power Utility)
Dod	United States Department of Defense
FD	First Difference
FE	Fixed Effect
FOUO	For Official Use Only
GIRoA	Government of the Islamic Republic of Afghanistan
GTD	Global Terrorism Database
IEC	Afghan Independent Electoral Commission
IED	Improvised Explosive Device
ISAF	International Security Assistance Force
IWA	Integrity Watch Afghanistan
NATO	North Atlantic Treaty Organization
MAWS	Money as a Weapon System
NDI	National Democratic Institute
NDS	Afghan National Directorate of Security
NCTC	National Counterterrorism Center
OLS	Ordinary Least Squares
RE	Random Effect
SAFIRE	Surface to Air fire
SIGACT	Significant Act
SIGAR	Special Inspector General for Afghanistan Reconstruction
UNODC	United Nations Office on Drugs and Crime
USAID	U.S. Agency for International Development

VCE	Variance-covariance matrix of the estimator
WITS	Worldwide Incident Tracking System

Chapter 1: Introduction

In December of 2006, after having read a draft of the newly updated Counterinsurgency Field Manual 3-24, a journalist interviewing General David Petraeus commented that it seemed, "the Army of the future will not only be a war-fighting organization, but also a nation-building agency." To this Petraeus replied that,

> we exist in many cases to kill or capture the bad guys. But on the other hand... you're not going to kill your way out of an insurgency. No: you have to take out the elements that will never reconcile with the new government, with the system, but then try to win over the rest. And this part is not done with tanks and rifles (Fichtner, 2006).

In the years since this interview, General Petraeus's mantra has become that you cannot kill or capture your way out of a complex insurgency. Instead, Petraeus has explained that, when levels of violence are low enough, "money is the best ammunition" (Fitcher, 2006). Money is used on statebuilding efforts which build the capacity of new state institutions to deliver improved security, rule of law, infrastructure, health care, education, and other public goods. In fact, the Center for Army Lessons Learned (CALL) has written a handbook, entitled Money as a Weapon System (MAWS), which educates members of the military on how to "employ money as a weapons system to win the hearts and minds of the indigenous population to facilitate defeating the insurgents"(2009). By improving quality of life and providing effective governance insurgents lose the support of the people, and thereby, their ability to recruit and remain undetected.

Statebuilding is not traditionally viewed as a military strategy. Usually, statebuilding occurs after the cessation of hostilities as a means of solidifying an existing peace. Nonetheless, in an effort to defeat the insurgency in Afghanistan, the United States has spent billions of dollars on political and economic development. According to the April 2011 report to Congress by the

Special Inspector General for Afghanistan Reconstruction (SIGAR) $61.78 billion[1] has been spent on reconstruction activities in Afghanistan since 2002 (of which over half was used to build Afghan security forces). As the war in Afghanistan has continued, escalation in violence has been met with increased foreign assistance from the United States. Has spending on these development projects decreased insurgent attacks? This question is at the heart of a theoretical debate on the effectiveness of statebuilding as a Counter Insurgency (COIN) strategy. Specifically, does development spending win the active support of the population, thereby denying insurgents necessary support, or does it simply breed corruption and dependency?

1.1 Purpose of the Study

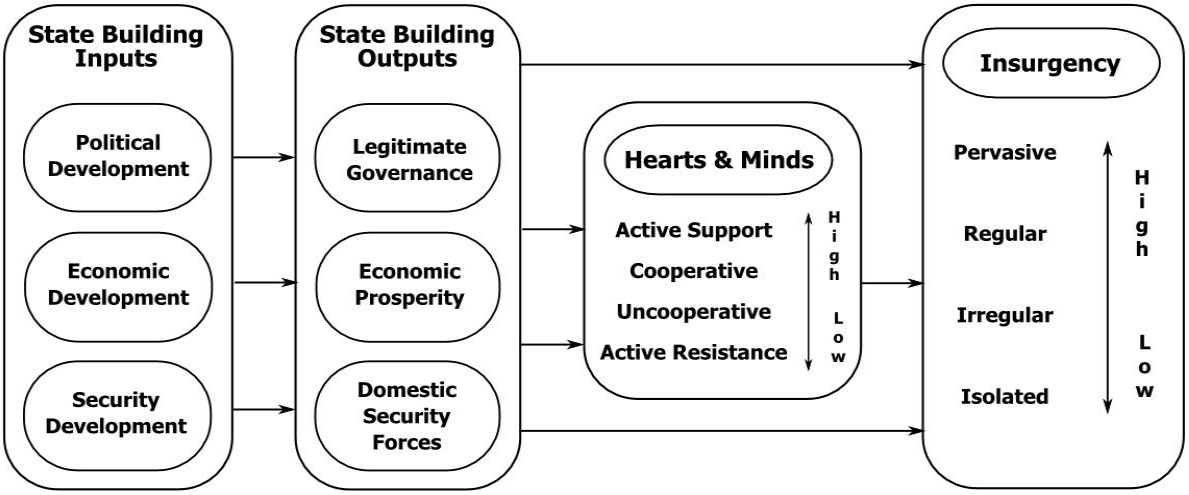
The purpose of this study is to use the case of the ongoing insurgency in Afghanistan to quantitatively test core precepts of COIN theory. Specifically, do statebuilding activities lead to decreases in insurgency? Scholars suggest that statebuilding may decrease insurgency in direct and indirect ways. Indirectly, improvements made in quality of life (through improved governance and economic prosperity), and the visible use of domestic security forces, encourage the population to provide accurate and actionable intelligence. Development projects directly affect levels of insurgency in three ways. First, new state institutions can normalize politics by giving social groups, including insurgents, an alternative and peaceful way to achieve their goals (Joes, 2004; Wagner, 2008; Killcullen, 2009). In this way, insurgent groups may lay down their arms and allow themselves to be socialized into the political system. Second, the creation of a police and military force may be able to shift the burden of military operations to local citizens

[1] In order to help put this number into perspective a 2010 article by the New York Times estimates what could be done with sixty billion dollars. The article can be found at: http://economix.blogs.nytimes.com/2010/12/05/what-does-60-billion-buy/

who best understand the human terrain[2] (Nagl, 2005; Cordesman, 2006). Third, because statebuilding also entails efforts to promote economic growth, increased employment may give impoverished individuals an alternative to joining the insurgency (Metz, 2007; Manwaring, 2004).

Consequently, a visualization of these processes appear in a single model in Figure 1.1. First, spending on development projects is theorized to make improvements to governance, domestic security forces, and economic prosperity. Second, if statebuilding efforts are successful, insurgency is expected to decrease and the level of active support from the people should increase. Lastly, as the active support of the people increases the intensity of the insurgency is expected to decrease.

Figure 1.1: Model of the Direct and Indirect Effects of Statebuilding on Insurgency



In investigating each stage of this model this study proposes seven hypotheses[3]. One hypothesis examines the ability of economic development projects to improve infrastructure

[2] Among the defense community the term human terrain has become vernacular for the cultural customs, beliefs, and practices of a localized population. Human terrain is important in an insurgency because, in order to have successful communication with the local population, you need to understand their culture. Consequently, the DoD has developed a Human Terrain System which deploys social scientists, familiar with human terrain in Iraq and Afghanistan, to help U.S. forces in their strategic communications.

[3] The choice of hypotheses are necessarily restrained by data availability. Subsequently, as will be explained in Chapter 2, were additional data available further hypotheses would also be tested.

critical to economic growth. A second hypothesis investigates the ability of political development projects to increase legitimacy. A third looks at the overall effect of all projects on levels of insurgency. Three additional hypothesis test the ability of political, economic, and security projects to directly decrease insurgency. Lastly, a seventh hypothesis tests the effect of economic development spending on levels of active support from the people.

1.2 Importance and Contributions of the Study

The United States is spending billions of dollars on political and economic development for Afghanistan without confirmation that this spending is helping to defeat the insurgency. Previous studies have investigated the relationship between development projects and insurgency. However, no other study has provided a quantitative analysis of the distinct effects of political, economic, and security projects in the context of a single conflict. As well, no other study has used data to directly test the effect of statebuilding on hearts and minds. In so doing this study is well placed to produce policy relevant findings. This study is also significant in its investigation of the possible harm that statebuilding has the potential to generate. As will be explained in Chapter 2 there are many reasons to believe that the billions of dollars being spent on development in Afghanistan may actually be producing more harm than good. Specifically, many scholars contend that exogenous statebuilding creates at best unresponsive, and at worse predatory, dependent and corrupt state institutions. Consequently, this study is also significant in its evaluation of both the intended and second order effects of statebuilding.

The theoretical contribution of this study is the integration of several theories that predict both direct and indirect effects from a variety of statebuilding activities on counter-insurgency. Specifically, this study surveyed arguments, both from the academic and defense communities, which predict the effects of each type of development project on levels of insurgency. In order to

synthesize theories on statebuilding, it was sometimes necessary to go beyond an original argument to consider logical implications for levels of insurgency. That is to say, many arguments made about the effectiveness of statebuilding were made in the context of peacebuilding and not COIN literature. Peacebuilding literature has long considered the possible benefits and limitation of statebuilding to maintaining peace after the end of conflict. However, the peacebuilding literature has largely not engaged with population-centric COIN literature:

> students of UN peacekeeping and peacebuilding tend to stay analytically within separate circles, contributing to different literatures and publishing in different journals. Put bluntly, 'UN studies' are about 'peace' whereas 'strategic studies' are about 'war'... there is thus limited awareness among military officers in the West about the UN and limited experience among UN troop contributors with Western doctrines (Friis, 2010, p.49).

Consequently, the limitations of statebuilding under post-conflict conditions as described in the peacebuilding literature has not been sufficiently integrated into COIN theory. By bringing together COIN and statebuilding literature this study makes it possible to consider jointly all the ways in which statebuilding may affect insurgency. The model in Figure 1.1 is the product of this effort. For each arrow in the model, arguments for and against a causal relationship between the variables in question are reviewed in Chapter 2.

A third contribution of this study is an original dataset assembled by collecting data from a number of sources which track variables for Afghanistan at the sub-national level over several years. Specifically, the dataset includes information on poppy cultivation, access to electricity, population, population density, election results, and voter turnout. As well, this dataset uses two sources of data which have yet to be exploited in an academic analysis: declassified data on insurgent attacks as tracked by U.S. and Afghan forces and development spending activities by the U.S. armed forces. A great deal of this data is geo-coded and collected daily. By leveraging this dataset, this study will not only be able to assess the effect of development spending on

insurgency, but also contribute to a broader literature on the sub-national determinants of political violence.[4]

1.3 Definition of Terms

Three central concepts, statebuilding, insurgency, and hearts and minds, need to be defined in order to make clear the nature of this study. Statebuilding and nation building seem to be used interchangeably by the news media. Although these terms are related there is an important difference. Nation building refers to acts which attempt to instill a common identity among a population. Statebuilding, on the other hand, is “the creation of new governmental institutions and the strengthening of existing ones” (Fukuyama, 2004, 17). Statebuilding can be either internal or external. Internal statebuilding is conducted by domestic actors whereas external statebuilding performed by foreign actors. In this study use of the term statebuilding will be referring only to external statebuilding. It is important to note, however, that external statebuilding always occurs alongside internal statebuilding processes. As Paris and Sisk explain, "statebuilding is not limited to 'top-down' approaches of institution-strengthening (i.e., those focusing on national elites), nor does it preclude 'bottom-up' approaches (i.e., working through civil-society groups, or promoting measures to facilitate the accountability of state structures to their societies)" (2009, p.14). Without the cooperation and support of domestic political actors external statebuilding efforts are impossible. In fact, the very goal of external statebuilding activities is to be able to create new institutions capable of self-sufficiency.

Fundamental to the concept of statebuilding is the idea of capacity. Capacity, in terms of statebuilding, is a government's ability to achieve its own objectives. Statebuilding activities attempt to increase the capacity of a government to accomplish goals like alleviating poverty,

[4] Studies from this small but quickly growing body of literature include: Murshed and Gates, 2005; Bohara et al., 2006; Do and Iyer, 2009; Fjelde, 2009; Acharya, 2010; Forsberg, 2010, Kalyvas and Kocher, 2010; Lidlow, 2010; Findley et al. 2011; and Kalyvas and Kocher, 2011.

increasing security, deterring crime, increasing economic growth, or strengthening rule of law. However, external statebuilding has historically been a part of peacebuilding and therefore specifically targets post-conflict states.

State building is a very complex process that involves stabilization, reconstruction, and, institutionalization. In this study development projects are broken out into three main dimensions: economic, political, and security. Economic development has to do with any project which aims to increase economic activity or improve welfare, through access to healthcare, education, humanitarian aid, communication, transportation, and clean water. Political development involves any project aiming to advance governance. Examples of this type of project include anti-corruption campaigns, standing up of local governing councils, and recruitment of public officials. Security projects, such as training and equipping security forces, constructing protective barriers, or building jails, increase the capacity of the state to provide security.

Defining insurgency is a difficult task because it is affiliated with many other terms like revolution, civil war, low intensity conflict, guerrilla war, and terrorism. Insurgencies are characterized by the use of indirect strategies (e.g., terrorism, psychological warfare, and guerrilla tactics) which are intended to erode the means or desire of the state or an occupying force to continue fighting. For this reason, insurgents may not attempt to control any one territory but instead attempt to blend into both urban and rural populations in order to avoid direct confrontations. Therefore, whereas guerrilla fighters are full time soldiers, insurgents may fill multiple roles in society and only intermittently engage their enemies. By taking part in society it becomes much more difficult for authorities to ferret out insurgents from the general population. Since insurgents are adept at evasion, it is often they alone who hold the initiative.

This allows them to strike quickly, to deadly effect, without ever offering themselves up as targets. In this way, attrition becomes the worse enemy of the authorities, who must decide whether to give in to insurgent demands or continue to suffer further losses. While insurgencies differ greatly from one another they all have similar characteristics. O'Neil's characterization of insurgency encapsulates theses similarities:

> insurgency may be defined as a struggle between a nonruling group and the ruling authorities in which the nonruling group consciously uses political resources (e.g., organizational expertise, propaganda, and demonstrations) and violence to destroy, reformulate, or sustain the basis of legitimacy of one or more aspects of politics. Legitimacy and illegitimacy are terms used to determine whether existing aspects of politics are considered moral or immoral... aspects of politics may be identified as the political community, the political system, the authorities, and policies (2005, p.15).

More briefly, we can consider insurgency as the extent to which a nonruling group uses violent and political strategies to destroy a ruling group's authority.

Hearts and minds is a byword for the support a general population feels for either side in an insurgency. As Galula points out, for any political cause there will be, “an active minority for the cause, a neutral majority, and an active minority against the cause” (2006, p.53). The tug of war between insurgents and counterinsurgents for the neutral majority is critical for two reasons. First, because it is from this group that insurgents obtain recruits and resources. Second, insurgents can only survive against the stronger forces arrayed before them if they remain undetected. For instance, during the Soviet-Afghan war, "the bulk of Mujahideen were members of regional groups... when in danger, these Mujahideen would melt into the local population where it was practically impossible to identify them...their main advantage was the active support of the local populace (Grau & Gress, 2002, p.24). If insurgents lose the battle for hearts and minds they no longer retain the ability to hide in plain sight. Consequently, like Petraeus, the Soviets "realiz[ed] that the main methods of fighting the armed opposition could not be military

action by regular forces, but determined social-economic, political, and organizational-propagandistic methods by the government" (Grau & Gress, 2002, p.25). In this case, even the Soviet Union, an extremely authoritarian state, realized repression alone was incapable of defeating the Afghan insurgency. Instead, strategies needed to be devised which win the hearts and minds of everyday Afghans. As Metz explains, the two sides in insurgency warfare must create an identity which will appeal to the population in order to win their support:

> the counterinsurgency strategy must not be based solely on the fact that the enemy has adopted insurgency, but also on the fundamental cause and form of the conflict... in a political struggle, the insurgents must create a new identity structure and attract supporters to it. Hence the conflict is a competition for “hearts and minds.” Advantage accrues to the side which creates the more appealing identity structure (2007, p.83).

However, creating a single universal identity can be difficult because every population has religious, ethnic, tribal, or racial cleavages. In fact, often insurgencies are made up of several different identity groups fighting the state for their own reasons. Killcullen describes how Al Queda has masterfully united differing groups, “whereby transnational extremists infect an existing societal problem, and then through a process of contagion spread instability and violence into the broader society” (p.264, 2009). He calls this the accidental guerrilla syndrome because the majority of these insurgents are being convinced to fight for a larger cause they may or may not be sympathetic to. In describing this syndrome in action he quotes an Afghan provincial governor who stated that,

> ninety percent of the people you call 'Taliban' are actually tribals. They are fighting for loyalty or Pashtun honor, and to profit their tribe. They're not extremists. But they are terrorized by the other 10 percent: religious fanatics, terrorists, people allied to [the Taliban leadership shura in] Quetta. They're afraid that if they try to reconcile, the crazies will kill the (p.39, 2009).

The success of any COIN strategy then must ultimately discredit or co-opt insurgent identities just as insurgents attempt to do the same to the state or occupation force. Consequently,

statebuilding is conducted by an occupying force in order to create an identity of benevolent rule superior to what insurgents can offer.

1.4 Chapter Outlines

This dissertation is organized into six chapters. Chapter 2 is broken into two sections; the first contains a review of previous literature, and the second details the hypotheses and theories that will be tested in this study. As was described in Section 1.1 the literature is divided on the question of the effectiveness of statebuilding as COIN strategy. Some scholars believe that statebuilding, in both direct and indirect ways, is vital to defeating an insurgency. Other scholars believe statebuilding is doomed to fail because of corruption, insecurity, and a lack of preexisting state capacity. The seven hypotheses in this study are tests of the arguments made by these scholars. Chapter 3 is broken into four sections. Leveraging data from the U.S. Departments of Defense and Energy, four Afghan ministries, and the United Nations, the first three of these sections describe sources of data and the process of operationalization for each variable. The fourth section of Chapter 3 describes the statistical models to be used in testing each hypothesis. The data in this study track districts in Afghanistan over fifty-two months. Subsequently, the models employ Cross-Sectional Time Series (CSTS) analysis.

Chapters 4 provides descriptive statistics and reports on preliminary findings based on tests of correlation for each hypothesis. As well, a number of maps with geo-coded data and timelines of development spending and insurgent attacks are displayed. Chapter 5 presents the results of a series of sophisticated statistical models. These results provide corroborating empirical evidence for two hypotheses. Specifically, a single type of statebuilding is found to increase detection of explosives and decrease insurgent attacks. However, other types of statebuilding and overall statebuilding have no effect on insurgency or state capacity. The sixth

and final chapter details the contributions, limitations, directions for future research, and concluding remarks of this study.

Chapter 2: Literature Review, Theory, & Hypotheses

This chapter is broken into two main sections. Section 2.1 will provide a review of literature on the effeteness of statebuilding as a COIN strategy. First is the literature that suggests statebuilding decreases insurgency. Second are a number of arguments from the peacebuilding literature which argue statebuilding is likely to be ineffective. Lastly, a small number of empirical studies that examine the effect of development projects on insurgencies will be discussed. Section 2.2 lays out a number of hypotheses that are derived from the literature presented in Section 2.1. The hypotheses are separated into subsections that consider the effect of economic, political, and security projects separately.

2.1 Statebuilding and Counterinsurgency

Military strategists offer a great deal of advise for countering insurgency. However, in reading through this literature it is possible to see one central tenet around which all other advice stems: winning the support of the people is the key to victory.[5] As Nagl explains, “to defeat an insurgency you have to know who the insurgents are – and to find that out, you have to win support of the people" (2005, p.xiii). In order to win the support of the people many COIN strategists recommend building a legitimate government that can address the people's concerns. Killcullen, a senior advisor to General Petraeus, describes why statebuilding is so important:

> it is fundamental to build the political legitimacy and effectiveness... of a government affected by an insurgency. Political reform and development is the hard core of any counterinsurgency strategy, and provides a framework for all other counterinsurgency program and initiatives... an effective political strategy is designed to undermine support for insurgents, win over their sympathizers to the

[5] The importance of winning support of the people was recognized as early as the 1800's when France used a “political response to insurgency” where the “military would... attempt to win over the population, not only by offering protection but also by such methods as extending free medical help or establishing subsidized markets” so that “soldiers would act not only as administrators and police but also as 'overseers, workshop managers, teachers, gardeners, [and] farmers'” (Beckett, 2001, p.40). In following classic works and recent publications this position has been upheld: Galula, 1964; Kitson, 1974; Tompson, 1978; Hammes, 2004; Joes, 2004; O'Neil, 2005; Nagl, 2005; Corum, 2008; and Killcullen, 2009.

> government side, and co-opt local community leaders to ally themselves with the government (2009, p.255-266).

COIN forces rarely use the term statebuilding to describe many of their operations but in reviewing these activities it is clear that these actions do in fact constitute the creation and strengthening of state institutions.[6] Moreover, many of their recommendations involve elections and democracy. Some go as far to say that, "it is not possible to wage a successful insurgency against a democratic regime" explaining that, "examples abound to verify the aphorism that 'the ballot box is the coffin of insurgency'" specifically mentioning COIN successes in South Africa, the Philippines, Malaya, and El Salvador (Joes, 2004, p.234). It is important, however, not to conflate statebuilding and the establishment of democratic institutions. Statebuilding can refer to the creation and strengthening of institutions from any form of government. Consider, for example, the French occupation of Mexico from 1861 to 1867 in which they installed a monarchy or the Vietnamese occupation of Cambodia from 1979 to 1989 in which they created a communist government. Therefore, while the creation of democratic institutions may be a part of a specific statebuilding effort, all statebuilding does not involve the creation of democratic institutions.

Three core rationale are repeated by many COIN strategists in order to explain why statebuilding ought to be so effective. First, is that new state institutions may be able to normalize politics by giving social groups, including insurgents, an alternative and peaceful way to achieve their goals. Thus, insurgent groups might be socialized into the political system. Wagner concurs with this view in terms of the occupation in Iraq, explaining that, "creating an

[6] Statebuilding is only one of many strategies which have been encouraged by military experts. Command structures, the size and nature of unit deployments, and the selecting of targets are all addressed by COIN warfare texts. Similarly, there are also other suggestions which may help to win the support of the people without the use of state-building. For example, COIN strategists stress propaganda, political stability, security for citizens, and the minimization of the use of force. Strategists are also concerned with ending any international support insurgents may be receiving from abroad (in the form of supplies, recruits, and safe havens).

inclusive political process that gives the Iraqis a stake in building their own future is absolutely critical to the success of the overall operation [and that] creating a safe environment and building political capacity are closely interrelated" (2008, p.498). For this reason, Wagner praises US attempts at statebuilding and criticizes earlier strategies which did not take statebuilding seriously. Metz agrees with Wagner because in his view, “protracted conflict, not insurgent victory, is the threat” and therefore a strategy which “integrates insurgents into the national power structure” is vital (2007, p.vi). Second, the creation of a new government, complete with a police and military force, may be able to shift the burden of military operations to domestic institutions while also legitimizing the presence of the occupation. As Cordesman explains, creating new state institutions,

> helps the US compensate for the religious, ideological, and cultural differences that the US faces in fighting the war on terrorism; and it can help compensate for the lack of US civilian counterparts to the US military that can take up many of the potential burdens in stability operations and nation building (2006, p.ii).

Lastly, because statebuilding also entails the creation of a new market economy, growth and development may give impoverished individuals an incentive to refrain from joining the insurgency. As Metz argues, “businesses started and jobs created as are as much 'indicators of success' as insurgents killed or intelligence provided” because “a comprehensive counterinsurgency strategy must offer alternative sources of identity and empowerment for bored, disillusioned, and disempowered young males (2007, p.53). For these reasons, Metz argues that the concept of counterinsurgency should be discarded in favor of “stabilization and transformation operations” in order to “help clarify strategy and priorities” and “reinforce the idea that military force is a secondary factor in counterinsurgency” (2007, p.vii).

While in recent years statebuilding has become popular in COIN research it has traditionally been seen as a subcategory of peacebuilding. Peacebuilding research is concerned

with the creation of self-sustaining peace in post-conflict states. Statebuilding as a strategy of peacebuilding has only been in use since the end of the cold war. Previously, peacebuilding focused on brokering peace agreements and enforcing cease-fires with small numbers of troops. As a result, there has only been about twenty cases in which statebuilding has been used for peacebuilding since 1989 (Paris and Sisk, 2009, p.1). A list of these operations, their duration, and outcomes appear in Table 2.1. In about half of all cases post-conflict states have experienced

Table 2.1 Multilateral Peace building Operations[7]

Location	Duration	Outcome
Namibia	1989 - 1990	Peaceful since intervention
Nicaragua	1989 - 1992	Peaceful since intervention
Angola	1991 - 1997	Continued violence
Cambodia	1991 - 1993	Continued violence
El Salvador	1991 - 1995	Peaceful since intervention
Mozambique	1992 - 1994	Peaceful since intervention
Liberia	1992 - 1997	Continued violence
Rwanda	1993 - 1994	Continued violence
Bosnia	1995 - present	Peaceful since intervention
Somalia	1993-1994	Continued civil war
Croatia	1995 - 1998	Peaceful since intervention
Guatemala	1997	Peaceful since intervention
East Timor	1999 - 2002	Continued violence
Sierra Leone	1999 - 2005	Peaceful since intervention
Kosovo	1999 - present	Peaceful since intervention
DR Congo	1999 - present	Continued violence
Afghanistan	2002 - present	Continued violence
Liberia	2003 - present	Peaceful since intervention
Burundi	2004 - present	Mostly Peaceful since intervention
Iraq	2004 - present	Continued violence
Ivory Coast	2004 - present	Continued violence
South Sudan	2005 - present	Continued violence

a reemergence of violence post-intervention or have continued to experience violence during an intervention. Even in those states that have maintained peace, however, debate exists about

[7] This table is a replica of Paris and Sisk's own table in, "The Dilemmas of Statebuilding: Confronting the Contradictions of Postwar Peace Operations" except an additional column on the outcome of operation has been added along with the cases of Iraq and Somalia. Determination on whether a state experienced continued violence or peace was made by consulting the Major Episodes of Political Violence dataset available at: http://www.systemicpeace.org/warlist.htm

whether peacebuilding operations have been successful, because drivers of conflict and sate weakness persist. These mixed results have led scholars to explored a number of questions about the unintended consequences that often occur as a result of external statebuilding:

> How [can] international actors promote the goals of statebuilding without creating real or perceived 'neo-trusteeship' arrangements over the host state? How [can] 'local ownership' be achieved in the presence of powerful external actors? What about the danger of creating dependency on foreign actors or resources? How [can] international agencies promote statebuilding in a manner that respected local traditions and expectations in political, social and economic life (Paris and Sisk, 2009, p.3)?

As research on use of statebuilding as a peace-building strategy has matured, scholars have begun to assemble recommendations for how to prevent second order effects. For example, Paris put forward, a new peace-building strategy called 'Institutionalization Before Liberalization' which begins from the premise that democratization and marketization are inherently tumultuous transformations that have the potential to undermine a fragile peace" (2004, p.7). With an understanding that liberalization can cause even more instability Paris recommends that statebuilding focus first on establishing working state institutions before holding elections or embarking on major economic reforms.

As well, recognizing the difficult situation new institutions face in post-conflict states face, Call recommends that, "statebuilding should also accelerate the orderly withdrawal of international troops and civilians, ensuring stability and popular support for an emergent regime" (2008, p.13). As long as international forces remain in the post-conflict country the new state lacks the sovereignty it needs to be considered legitimate. Thus, Call argues for international forces to exit as soon as new institutions are up and running. Peace-building practitioners like Kofi Annan have also weighed in on statebuilding best practices explaining that, "the point closest to achieving consensus among experience peace-builders... [is that] without security

almost everything else is impossible: no effective government: no reconstruction: no return of refugees: no return to school: no elections" (2004, p.3).

These lessons learned all have important implications for COIN literature, which proposes using statebuilding as a strategy to win hearts and minds in the midst of insurgency. Since peacebuilding scholars do not agree on whether statebuilding is possible in the post-conflict environment, it goes without saying many believe it is not possible in an ongoing conflict. For example, Kofi Annan's statement predicts failure for statebuilding in Iraq and Afghanistan because of a lack of a minimum amount of security that is a necessary condition for statebuilding success. As well, Call's recommendation for international forces to leave the country after standing up new institutions is impossible if such forces are needed to continue fighting an insurgency. Still others point out the dangers of occupational forces conducting statebuilding because, by militarizing aid, any guise of neutrality for international organizations is lost, causing humanitarian aid workers and reconstruction projects to become legitimate targets to insurgents.[8]

Consequently, despite the well reasoned theory behind the use of statebuilding as a COIN strategy, many peacebuilding scholar are skeptical about its use to defeat insurgency. Consider that Edelstein (2004), who conducted the first comprehensive study of success and failure of military occupations, states that “intuitively, one might expect that indirect rule[9] is more likely to aid in the winning of hearts and minds, but, in reality, both styles of administration are likely to lead to mixed results” (2004, p.67). As he explains, indirect rule may make an occupation seem more legitimate, but this effect can be nullified if the new institutions are seen as lacking

[8] http://www.nytimes.com/2010/02/18/world/asia/18aid.html?pagewanted=all
[9] When Edelstein refers to indirect rule he means a government is created and supported by the occupational force and when he references direct control he means rule by occupational forces without the creations of indigenous institutional structures.

autonomy. Chandler notes in the case of Bosnia, “external pressure created a state, but one with no real basis in Bosnian society and little popular legitimacy” (2006, p.493). It may be that the only people who see these new state institutions as legitimate are newly empowered political elites and the foreign actors who create them. Another case in point would be the new Iraqi constitution which has several provisions that look more like terms of surrender than a framework for new state institutions. Specifically, Article 8 of the Iraqi constitutions states that,

> Iraq shall observe the principles of a good neighborliness, adhere to the principle of non-interference in the internal affairs of other states, endeavor to settle disputes by peaceful means, establish relations on the basis of mutual interests and reciprocity, and respect its international obligations (United Nations Assistance Mission for Iraq, 2006).

How can a constitution, imposed by a foreign state, that limits the way in which foreign policy can be pursued, be seen as legitimate? Similar provisions written into the German and Japanese constitutions after WWII were accepted because the governments of these two states had the unified support of their populace when ordering surrender. In Iraq, however, coalition forces promised to be liberators and not conquerors. It seems that if the goal is to win over hearts and minds it would make more sense to allow local elites to design their own constitution.

If this is the case why are local elites so often divorced from the statebuilding process? As Wesley explains, “the 'failing state' label tends to delegitimize local politics... as a consequence, the process of statebuilding relies heavily on the expectations of international agencies and officials” (2008, p.380). Therefore, statebuilding fails because, “rather than treating local politics as the source of political institutions, international advisers rely on their own political understandings and commitments and their belief in the power of institutions to shape political behavior, rather than vice versa” (Wesley, 2008, p.380). For this reason, Wesley argues that, “to be sustainable, agreement on the nature of the state must arise from existing social forces and

understandings, from 'real interests and clashes of interest which lead to the establishment of mechanisms and organizational rules and procedures capable of resolving and diffusing disagreements.'" (Wesley, 2008, p.380). As long as state-builders fail to give local elites more autonomy, not only will new institutions be viewed as illegitimate, they are also unlikely to be tenable in the long term. At the same time, however, it can be highly problematic to transfer power to local elites. Edelstein explains that to have indirect rule necessitates reliance "on local civilians of questionable loyalty" (2004, p.68). In this way, funds and resources slated for statebuilding and reconstruction may be diverted to either corrupt or anti-occupation goals. In considering the ways in which funds may be misused, Krause and Jutersonke theorize that, "if wrongly distributed, [aid] may reinforce social cleavages and, paradoxically, sow the seeds of conflict and insecurity, rather than alleviate them (2005, p.455).

As explained above there are good reasons to be skeptical that statebuilding may be an effective COIN strategy. In fact, it is possible that state-building, if it involves the promotion of democracy, may actually inflame levels of insurgency. As Belloni notes, statebuilding is often synonymous with the implementation of Wilsonian democracy. Considering the success that developed states have had with their own democracies it is not illogical that statesmen believe replicating such institutions will also meet with success. Unfortunately, as Belloni laments, instituting democracy in conflict or post-conflict zones can have paradoxical results. Instead of bolstering peace and conciliation democracy may increase tensions:

> Contemporary neo-Wilsonianism focuses on political and economic liberalization as means to build viable democracies. As increasingly highlighted by a new generation of democracy analysts, such a formula is often unsuitable for war-torn countries plagued by scarce domestic resources and continuing competition between groups wishing to control the state. At least in the short term, liberalization dangerously heightens competition among groups, thus increasing the possibility of a relapse into war... not only do political and economic liberalization risk promoting further conflict, they are also at odds with other

> important goals of international intervention in weak states; in particular, the attempt to uphold individual and group rights (2007, p.98).

In agreement with Belloni, empirical studies have shown that democratization and economic liberalization tend to increase levels of conflict (Hartzell and Hoddie, 2006; Klopp and Zeurin, 2007; Gromes, 2009). However, in the long run studies show that democratizing states are no more likely to experience domestic conflict than their authoritarian counterparts.

Exacerbating existing ethno-religious tensions by pursuing democratization may be an acceptable trade-off. However, during an insurgency tensions may be purposely inflamed by insurgents in order to produce a chaotic environment that further weakens occupational forces and the new government. In such circumstances an insurgency could grow very quickly as rival identity groups begin to arm themselves. Considering such logic, it is not surprising that early in the current Afghan war there was pessimism about statebuilding in Afghanistan:

> Given the extreme fragmentation and militarization of Afghan society, democratic reconstruction cannot possibly work. Instead, we need to devise a more modest and realistic program, aimed at creating peace and restoring basic economic functions rather than rebuilding the entire state" (Ottaway and Lieven, 2002, p.1).

Shurke also is pessimistic about democratization in Afghanistan because, as he sees it, "with the national budget mostly financed by foreign governments and institutions, the Afghan government's major responsibility in accounting for the use of these funds is towards the donors, rather than its own people (2006, p.17).[10] Accordingly, he labels Afghanistan a rentier state and explains that this form of government, "is not conducive to either economic development or the evolution of a democratically accountable government" (Suhrke, 2006, p.17). In addition to a lack of accountability is the issue of state strength. By externally providing a weak state with funding a cycle of dependency

[10] Consider that Afghanistan's revenue to GDP ratio is at 5%, meaning 95% of their budget is dependent on foreign funding (Worldbank, 2008, p.7).

begins in which the capacity to tax and move towards "fiscal sustainability" is lost. The consequence of this dependency cycle is the creation of a government that is a government in name only. As Rubin describes it, "electing officials to preside over a non-functional pseudo-state that can provide neither security nor services does not constitute democracy" (2006, p.184). Nevertheless, an argument may be made that a guise of democracy ought to increase the legitimacy of an occupation even if new institutions are lacking. However, as Angstrom explains this argument is flawed: "the liberal statebuilding paradigm starts from the assumption that legitimacy follows from institutions and law," but in fact, "legitimacy follows from order" (2008, p.380). Consequently, this is because the holding of elections and building of new institutions is meaningless if the occupation cannot ensure security.[11] Therefore, she argues that if the occupying force cannot create order, the populace will turn to local elites to provide security. Invariably, these local elites will then be in contest with the occupying force for local control.

Galula, one of the seminal COIN strategists, advocated the use of elections to win over local populations. However, this action was number five out of a list of eight steps. Galula believed that before elections could be held in any one area that the military should first "expel the main body of armed insurgents," then "detach for the area sufficient troops to oppose an insurgent's comeback in strength," make sure to sever any links the population had with insurgents, and only then take part in holding elections (2006, p.55-56). In this way, security would already be in place so that the nascent government would not lose its legitimacy. However, Galula's steps assume it is possible to rid an area of insurgents before support of the people has been won. It is likely that a catch-22 situation

[11] In a poll by Gallup in September of 2003 the Iraqi population was evenly split on the notion of instituting a democracy. This could indicate that the form of government in Iraq was less important than was its effectiveness. http://www.gallup.com/poll/9343/what-form-government-iraq.aspx

could develop whereby support of the people may only be gained through providing security but that security can only be brought about by support of the people. Galula also recommends that military leaders ought "to discover what reforms are really wanted... or determine whether the announced reforms conform with the popular wish" (2006, p.84). This advice is important because it may be that the form of government that an occupier believes is best for the people will only drive entire segments of the population to take up arms. Consider, for example, this very mistake in the case of Iraq:

> American strategy was based on the belief that a functioning constitutional, multi-party democracy was the top priority for all Iraqis except a small number of extremists when, in fact, the security and power of their sect and ethnic group mattered more to a significant number, perhaps most (Metz, 2007, p.84).

As Metz explains constitutional guarantees were not enough to persuade Sunnis that the Shi'ite majority would not take revenge for the atrocities committed by Saddam's Sunni dominated government.

Expectations of statebuilding decreasing levels of insurgency rests on "an assumption that a sophisticated, yet still utopian, 'social engineering' approach could replace, or accelerate, a process of state formation that occurs rather more organically[12] (Krause and Jutersonke, 2005, p.448). At present, the literature addressing this presumption is mixed. The democracies in W. Germany and Japan are two examples of successful statebuilding by occupational forces. As Hippel explains, however, "allied success in implementing democratic reforms was enhanced by respect for education and high literacy rates, advanced levels of industrialization, and, of course, unconditional surrender" (2000, p.103). In other words, because Japan and Germany already possessed many of the ingredients for successful statehood, it was a matter of state rebuilding. For this reason, it would perhaps be best to describe the cases of Japan and Germany as state-

[12] Krause and Jutersonke compare this artificial approach with an organic "historical process...driven by local actors, instrumentally using external alliances and resources to consolidate their power or achieve their goals (2005, p.451).

replacement under which preexisting bureaucrats and their institutional capacity was allowed to endure. However, most present day efforts at statebuilding are pursued because states are weak or failed. Therefore, they have none of the elements which make transitions to new institutions go smoothly. Consequently, it is not surprising that Wesley's survey of current statebuilding endeavors is not hopeful:

> there is little evidence that the new, hands-on statebuilding project is any more effective than the old, arm's-length approaches to nation building. In Iraq and Afghanistan, the statebuilding missions face rising insurgent violence. In East Timor and Solomon Islands, until recently considered "poster children" for successful state-building, unresolved tensions led to serious rioting in early 2006. Bosnia and Kosovo appear no closer to self-administration than they did in 1999, and the state of the Democratic Republic of Congo appears as fragile as it was before the original intervention (2008, p.379).

It therefore stands that statebuilding as anti-insurgency strategy may only work in states where there have previously existed strong state institutions. In this regard, neither Iraq nor Afghanistan offers up a good candidate for this type of COIN strategy.

Thus far, the examination of how statebuilding may affect levels of insurgency has been considered mostly in terms of winning over hearts and minds. However, it is also possible that statebuilding may affect the strategic interaction between insurgents and occupational forces. One such theoretical argument is made by Sullivan (2007). In this article, she is interested in explaining why strong states loose "limited wars," and develops a theory which proposes that foreign policy objectives which require the compliance of those occupied are less likely to succeed. Using this logic, Sullivan explains how the war in Iraq conforms to her expectations:

> Operation Iraqi Freedom is a case in point. U.S. troops attained their first objective—the overthrow of Saddam Hussein's regime—quickly, and few American lives were lost in combat. Less than three weeks after the invasion of Iraq on March 20, 2003, central Baghdad fell to U.S. forces. However, after the fall of the regime, the United States' primary political objective shifted from regime removal, a brute force objective, to regime maintenance, a moderately coercive objective, and the target became a growing insurgent movement (2007,

p.518)

Consequently, state-building, because it requires the compliance from the native population, is dependent on low levels of insurgent resolve. As Sullivan notes, the populace can deny a stronger military force, “simply by refusing to comply regardless of the level of destruction visited on it” and that is because an insurgency “does not need to win or even fight battles to accomplish this, it can avoid direct combat and frustrate a strong state’s efforts to achieve a decisive military victory” (2007, p.507). In this way, new state institutions may act as an Achilles heel for occupational forces, in that such institutions may be easily disrupted.

In reviewing literature on the effect of statebuilding on levels of insurgency we see two distinct positions come into focus. The first position suggests statebuilding is an integral part of a strategy to win over a population in the grips of an insurgency. The second position, held by peacebuilding scholars, holds that statebuilding efforts in the midst of insurgency are incapable of fostering political or economic development, and that for this reason, cannot decrease levels of insurgency.

Only recently have scholars begun to explain patterns of insurgent violence at the sub-state level. Of these analyses three have investigated the effectiveness of statebuilding on levels of insurgency. In each of these studies, statebuilding is operationalized by money spent on development and reconstruction. One study by Crost and Johnson tests the effect of development aid distributed in the Philippines. They theorize that, "if insurgents know that development projects will weaken their position, they have an incentive to oppose them, which may exacerbate conflict" (2010, p.2). In support of this hypothesis the authors find that aid increased casualties by 90% during the period of project implementation (2010, p.33).

However, two separate studies that investigate the effects of statebuilding in Iraq show

development spending has the potential to decrease violence. Specifically, Berman et al. found that, "from January 2007 onwards... every additional dollar per capita of CERP spending predicted 1.59 less violent incidents per 100,000 population per half year" (2009, p.36). Conversely, Hanson et al. found that neither total spending or number of projects devoted to development had any effect on violence. However, once they disaggregated spending to only include labor intensive projects they reported, "an additional 10 percent spent on employment is associated with an approximately 10% reduction in violence" (2009, p.5).

Why did Hanson et al. not find the same violence reduction overall that Bermen et al. found? The dissimilarity in findings could be for two reasons. First, the authors use different sources of data on insurgent attacks. Second, in order to control for endogeneity problems within their statistical models, Berman et al. takes the first difference of their variables to control for district level effects whereas Hanson et al. use an instrumental variable. In comparison to these three articles this study singles out a variety of theories arguing the effectiveness of development spending as a COIN strategy in order to test each separately. In this way, it is possible to understand why, if a negative relationship is found, spending is able to decrease insurgency, while using a unique sub-national dataset for a case that is thus far absent in the literature.

2.2 Theory & Hypotheses

This section presents seven hypotheses and the supporting theories on the effectiveness of statebuilding. For each of these hypotheses, dollars spent on development projects will serve as a quantifiable manifestation of state-building. Testing the effectiveness of statebuilding in this fashion, however, excludes all intervening measures of success in these development efforts. Indeed, there could be two reasons why statebuilding may have no effect on insurgency. On the one hand, development projects may have no effect on insurgency. However, another reason

could be that efforts at development never reach their objectives. In distinguishing between these two possibilities it is important to consider what Kilcullen describes as input, output, and outcome metrics. Input metrics measure efforts, output metrics the success of efforts, and outcome metrics "track the actual and perceived effect of our actions on the population's safety, security, and well-being" (Kilcullen, 2010, p.71-72). An example of an input metric would be dollars spent on training and equipping Afghan police, a corresponding output metric would be the number of police patrolling the streets, and the consequent outcome variable may be a count of criminal events.

Consequently, in testing hypotheses on the effect of statebuilding on insurgency it would be preferable to have corresponding sets of input, output, and outcome variables. Unfortunately, data on output metrics (like district level poverty rates) for Afghanistan are not collected in any temporal or spatial granularity. As well, many important outcome variables, like the number of tip-offs generated from Afghans, remain untracked even at this late stage in the conflict. This lack of data collection is bemoaned by Major General Flynn, who explains that the U.S. intelligence community is too focused on red activity and not enough on white,[13]

> eight years into the war in Afghanistan, the U.S. intelligence community is only marginally relevant to the overall strategy. Having focused the overwhelming majority of its collection efforts and analytical brainpower on insurgent groups, the vast intelligence apparatus is unable to answer fundamental questions about the environment in which U.S. and allied forces operate and the people they seek to persuade. Ignorant of local economics and landowners, hazy about who the powerbrokers are and how they might be influenced, incurious about the correlations between various development projects and the levels of cooperation among villagers (Flynn et al., 2010, p.7).

In this statement General Flynn acknowledges that the U.S. has not put enough effort into collecting the type of data, or doing the types of analysis, needed to assess whether development

[13] Among insurgency specialists and the military community the color red refers to the enemy, white to the population, and blue to friendly forces.

projects increase levels of Afghan cooperation. In the sections that follow a series of hypotheses will be presented which investigates the ability of development projects to motivate Afghans to give their active support to U.S. forces

The first hypothesis in this study predicts development spending decreases insurgent attacks. It will be important to test this relationship for three reasons. First, the results of the test of this hypothesis will allow comparisons with Berman et al., Croston and Johnson, and Hanson et al. Second, no matter the type of project, development spending injects money into a local economy. Regardless of whether the aim is to build a power plant, military base, or court house, construction projects usually involve the creation of new jobs. Therefore, the combined effect of development projects overall may be more powerful than the individual project categories. Third, no matter the type of project, development spending may increase attacks by offering up additional targets for insurgents. This is because development projects, which are themselves likely insurgent targets, increase the likelihood that U.S. or Government of the Islamic Republic of Afghanistan (GIRoA) personnel are in the area. Subsequently, development projects may lead to initial increases in insurgent attacks.

H_1 Development spending reduces insurgent attacks

The first hypothesis uses a general development spending measure that includes economic, political, and security development project costs. Statebuilding as a COIN strategy covers a wide variety of activities, from the distribution of micro grants to farmers, to the construction of a new courthouse. As was demonstrated in the previous section, statebuilding has been theorized to effect insurgency in a number of ways, depending on the type of development project. By categorizing development spending into types each of these theories may be tested separately. For this reason, the following three sections will consider the effect of economic, political, and

security projects separately.

2.2.1 Economic Development

One of the most ardent assertions made by COIN experts is that the active support of the people can be won by improving their quality of life (Metz, 2007). Specifically, providing Afghans access to basic services like healthcare, education, electricity, and clean water may be able convince them that their self interest lies in helping to defeat the insurgency. As well, if providing these services increases economic prosperity, the people may be unwilling to endanger that prosperity by supporting insurgents. Investing in infrastructure and public services is also likely to lead to increased employment. As Nagl explains in the case of Iraq,

> the United States is working diligently... to improve the lives of the people. Dollars are bullets in this fight; the Commander's Emergency Response Program (CERP), which provides field commanders funds to perform essential projects, wins hearts and minds twice over – once by repairing infrastructure, and again by employing local citizens who are otherwise ready recruits for the insurgents (2005, p.xiii).

Growth and development can give impoverished individuals an incentive to refrain from joining an insurgency. As Manwaring explains, there is a "very real enemy in the form of poverty, disease, and other nonhuman destabilizers." (2004, p.41). If local governments can effectively address community grievances, then insurgent recruiters will find it more difficult to win the common man to their side. Joining a militia or an insurgent group may be a young man's only choice to earn a salary[14] and be given respect. However, if the economy is full of opportunity, that youth will have other choices.

The arguments made above lead to two testable hypotheses. First, economic development spending, because it improves the lives of Afghans, will increase the level of active support garnered from the local population. Second, that economic development spending will decrease

[14] In fact, the U.S has had to increase their pay to soldiers and officers in the Afghan Army and Police in order to match the $300 a month the Taliban offers (CNN, 2009).

insurgent attacks through providing more jobs into the economy.

H_2 *Economic development spending will increase the active support of the people*

H_3 *Economic development spending will reduce insurgent attacks*

There are, however, reasons to believe spending on economic development will not lead to decreased insurgency. As was argued by Crost and Johnson (2010) construction projects may lead to increased attacks because they represent a threat to insurgents. Examples of this type of targeting have been plentiful in the Afghan campaign. For example, girls' schools in Afghanistan have been targeted by bombs and chemical attacks on multiple occasions. The targeting of these schools is likely motivated by the Taliban's ideology which claims that "female education is contrary to Islam" (Washington Times, 2009). Insurgent attacks can easily cripple development projects and thereby render them ineffective. In reports prepared for Congress, SIGAR has repeatedly highlighted the great degree of waste that is the result of insecurity at the sites of development projects in Afghanistan. Unfortunately, providing security for new schools, police head quarters, and other structures, is nearly impossible because there are simply too many targets for insurgents to select from.

An available output variable that could assess the effectiveness of economic development spending in Afghanistan is the number of electricity customers in a district. In 2011 the World Bank described the percentage of Afghans with access to electricity at 30%, "among the lowest in the world." This level, however, is much improved compared to 2001 when only 6% of Afghans had access to electricity (USAID, 2008). A great deal of development spending dollars in Afghanistan are dedicated to electricity generation projects because, as USAID explains, "access to reliable, affordable power is... critical to a sustaining private sector" (2008). Economic development spending in Afghanistan includes projects which target more than the energy sector.

They also target access to potable water, sanitation, transportation, and media. Focusing on electricity, however, is a good indication of the overall level of success of economic development spending for two reasons. First, many of the public services listed above either require or are improved by access to electricity. Second, improved access to electricity increases opportunities for economic growth (USAID, 2011). For these reasons, access to electricity is a useful outcome variable to assess the input of spending on infrastructure in Afghanistan.

H_4 Development spending on infrastructure increases access to electricity

Previous studies which assess the effectiveness of reconstruction dollars on improvements to infrastructure and public services are few and use qualitative data.[15] Subsequently, to the knowledge of this author, the use of sub-national data on energy use is a novel approach to assessing success in reconstruction activities.

2.2.2 Political Development

Building new state institutions is often part of an occupier's exit strategy. As an instrument of COIN, however, new state institutions act as an intermediary between the occupation and local citizens. State builders create institutions with the hope that both citizens and elites will view government as legitimate. If citizens view the government as legitimate they will be more likely to work with and not against COIN forces. As well, insurgent soldiers are more likely to be demobilized and reintegrated if they will be handing in their weapons to their own people. One sign that citizens perceive new institutions as legitimate is if they are willing to vote in elections (Gilley, 2006; Gronlund & Setala, 2004). Voter turnout data for the two most recent elections in Afghanistan is available at the district level and can be used as an output metric for the input of political development projects. Examples of political development projects in Afghanistan illustrate their importance in increasing participation rates. Several of

[15] Some examples of this research include Barakat et al., 2005; Brown, 2005; and SIGIR, 2009.

these projects entail the building of district centers which house local government offices. Statebuilding in a country like Afghanistan is a lengthy process. The physical structures which house government offices need to be built and equipped before officials can be recruited to serve. Concepts like rule of law and democracy need to be taught to a general populace that is largely illiterate.[16] If these projects are successful, then Afghan citizens are more likely to vote.

H_5 Districts with higher amounts of spending on political development projects will have higher voter turnout

Voter turnout is only one possible outcome metric for political development. Other useful metrics would be number of cases heard by Afghan judges, the number of members of parliament who live in the districts they represent,[17] the number of insurgents reintegrating, or rates of corruption.

In addition to increasing support for COIN forces and encouraging reintegration the strengthening of institutions also have the ability to co-opt elites. If elites view new institutions as an acceptable alternative to using violence to pursue their interests they may decide to entice entire segments of the population to side against the insurgency. For this strategy to work, however, new institutions must be capable of giving all major segments of the population a way to simultaneously pursue their goals. Ethnic, tribal, and religious cleavages can make this process very difficult. Two factors can alleviate this challenge. First, participation in new institutions gives elites access to rents and power. In the case of Afghanistan, this means access to the millions of dollars that fund the budgets of over a dozen ministries. Ethnic groups, sects, and tribes risk losing out on their cut of these resources if they choose not to participate in new

[16] One of the projects in the CERP dataset describes the creation and distribution of comic books to teach concepts like of rule of law to illiterate children and adults.

[17] Many representatives and official in Afghanistan are unable to administer their districts because it is too unsafe for them to live there. Instead, they live in Kabul and make unscheduled visits in order to avoid assassination by insurgents.

institutions. Second, new institutions can devolve power and give elites sway over their own local populations. As the following anecdote from the Iraq war indicates, one of the most powerful Shi'ite militia leaders allowed himself to be co-opted into the new electoral system:

> Allawi and Casey immediately poured $70 million in reconstruction and compensation funds into the city. Najaf would remain quiet for the next three years, and Sadr started pursuing power through political means instead of violent ones" (Malkasian, 2008, p.249)

If insurgent leaders like Sadr begin to enjoy rents and power from new institutions they will use their own resources to protect those institutions. The process is self-reinforcing, the more elites who participate in new institutions, the stronger they become, which in turn encourages elites to participate. In the case of Afghanistan, warlords like Atta Muhamad Noor, who became a provincial governor, and Gen. Abdul Rashid Dostum, who is President Karzai's military chief of staff, have been willing to use their own power to fight against the insurgency.[18] If spending on political development increases the legitimacy of government, encourages insurgents to demobilize, and elites to be co-opted, then spending should decrease levels of insurgency.

H_6 *Political development spending will reduce insurgent attacks*

Despite the rationale provided above there are also reasons to expect that spending on political development will be unable to provide functional institutions. Reliance on foreign funding could lead to fiscally unsustainable governance. A government recently created by an occupying force has no tax base. Therefore, the occupation is forced to provide a great deal of monetary support for any new institutions they create. As Suhrke explains, external funding can lead to "structures of dependence, whose overt sign is a widespread and visible foreign presence in much of the country, and with results that are distinctly contradictory in terms of the goals of the modernization enterprise itself" (2006, p.15). Specifically, because the state receives external

[18] Other warlords, like Gulbuddin Hekmatyar, leader of the insurgent group Hezb-e-Islami, have remained unwilling to be co-opted into the Afghan government.

funding it is never forced to establish its own capabilities. This means that exogenous statebuilding tends to create weak institutions with little fiscal sustainability. Additionally, the interests of citizens are likely to be ignored by the new government because the state is only accountable to donors (Suhrke, 2006).

The weakness of dependent institutions, and their lack of accountability, creates a great deal of space for corruption, and this problem represents a second reason we should not expect newly created institutions to be legitimate. In a recent survey it was found 52% of Afghans had reported paying a bribe and that the average cost of that bribe was just over one-hundred fifty dollars. Further, the survey found that 59% of Afghans chose corruption as the most serious problem facing their country over insecurity and unemployment (IWA, 2010, p.9-10). Integrity Watch Afghanistan (IWA) has described corruption in Afghanistan as rampant, entrenched, and likely destabilizing the country,

> corruption threatens the legitimacy of state-building, badly affects state-society relations, feeds frustration and the support for the insurgency, leads to increasing inequality (which spurs social conflict), violates basic human rights on a daily basis and impedes the rule of law according to Afghan standards, hinders access to basic public services, which impacts the poor most severely, and has a major negative effect on economic development (2010, p.9).

If governing institutions are depended on foreign aid, unaccountable, and corrupt, their positive effects may be counteracted. On the other hand, if NATO (through the International Security Assistance Force (ISAF)) had decided to directly rule Afghanistan, it is likely that insurgents would be more popular. Despite the corruption endemic to the Afghan government approval ratings for the Taliban, who have a reputation for fairness, have been remained low. In fact, even in the Taliban's historic stronghold in the South a recent poll found only 27% supported the

Taliban, compared to 10% in other regions.[19]

2.2.3 Security Projects

Spending on security projects is intended to defend against insurgency through the erection of barriers, equipping of local forces, and the construction of structures like prisons and barracks. However, the bulk of security projects spending goes to the recruiting and training of domestic military and police forces. Deploying local forces has three potential COIN benefits. First, it can help to legitimize the use of force and reduce the visibility of the occupation until the occupying military personal can be phased out. One commonly used COIN tactic in Afghanistan is night raids in which ISAF forces knock down doors and search for insurgents and their weaponry. Heavy handed tactics like night raids may weaken insurgents in the short term, but in the long term, insurgents can use these actions to paint a negative picture of the occupation. In Afghanistan, as in many other countries, the Army is held in high regard. A survey by the Asia Foundation found that 92% agree that the Afghan National Army (ANA) is honest and fair and 86% believe they help to improve security[20] (2010, p.42). For this reason, locals may be more willing to provide intelligence to the ANA rather than ISAF soldiers. By taking Afghans soldiers along on night raids, or having them lead these missions, the population may be more willing to blame insurgents for home invasions instead of foreigners. Second, domestic forces can shift the burden of security from occupational forces increasing the number of soldiers ready to engage with insurgents and provide security. Providing extra troops can be very important in a COIN campaign. Cassidy, in a study of the use of indigenous forces in COIN campaigns in the Philippines, Indochina, Algeria, and Vietnam found that, "these programs expanded the quality

[19] It is possible the poll is highly biased by feelings of intimidation and non random sampling but numerous other polls have found similar results. The poll was conducted by ABC, the BBC, and ADR and the results can be found at http://abcnews.go.com/images/PollingUnit/1099a1Afghanistan-WhereThingsStand.pdf

[20] The same two questions asked in regards to the Afghan National Police (ANP) led to 84% and 77% respectively.

and quantity of the forces conducting pacification and counterinsurgency, improve[ing] the capacity for dispersed small-unit patrolling" (2006, p.60).

Second, as Nagl explains, the occupation can utilize domestic forces' greater understanding of local politics, customs, and cultural competency in order to improve intelligence gathering,

> local forces have inherent advantages over outsiders in a counterinsurgency campaign, They can gain intelligence through the public support that naturally adheres to a nation's own armed forces. They don't need to allocate translators to combat patrols. They understand the tribal loyalties and family relationships... [and] have an innate understanding of local patterns of behavior that is simply unattainable by foreigners (2005, p.xiv).

For example, ISAF may have a network of informants but be unsure of which reports to believe. Kalyvas (2003) has explained that during times of conflict, individuals are often motivated more by private rather than political identities. For example, a farmer may report that his neighbor is an insurgent so that he can gain access to his land. If ISAF teams with the local police force they may be able to gain information that would discount a report of this nature. Additionally, knowing who the local power brokers are in a community is also very important. COIN forces need to be able to meet with local elites in order to protect and secure an area. By working with local forces they are more likely to find out who those individuals are. By legitimizing the use of force, increasing the numbers of forces providing security, and improving intelligence, spending on domestic security may be able to decrease levels of insurgency.

H_7 Security spending will decrease insurgent attacks

The benefits described above, however, can only accrue if domestic forces are an effective fighting force. However, there are three reasons to suspect that creating such a force can be extremely difficult. Specifically, domestic forces may desert in large number, be unwilling to engage their kinsmen, or too willing to abuse their power. The case of Iraq provides much

anecdotal evidence that armed indigenous forces can cause more problems than they solve,

> Iraqi Army units often turned a blind eye to militia attacks on Sunnis in Baghdad and Diyala Provinces, the sectarian battlegrounds. Worse, the special police commandos (later known as the National Police), the paramilitary force of the ministry of Interior, were heavily influenced by the Badr Corps (a Shi'a militia) and actively participated in ethnic cleansing (Malkasian, 2008, p.255).

Iraq may be a poor example because of a concurrence of sectarian violence and insurgency. Afghan forces, however, have also had their share of corruption and delinquency. In documents leaked to the British press it was discovered that attrition rates among the police, as high as sixty percent in Helmand province, were caused by drug abuse, deaths, desertion, and dismissals (Brady, 2010). The latest official ISAF Figures on desertion range from 47% among the Afghan Civil Order Police (ANCOP) to 16% and 23% for the ANP and ANA respectively (Livingston et al.,2011a, p.7). Perhaps even more worrisome is that ISAF reports 0% of all assessed Afghan forces are capable of operating independently. This number compares with 41% of the ANA "that are totally dependent on coalition forces partnering for missions" (Livingston et al.,2011, p.8). Corruption, however, is also pervasive among Afghan security forces. Specifically, the problem of ghost soldiers has forced ISAF to use biometric enrollment to stem the problem. For these reasons, even though as of December of 2010 there were 266,389 total security forces operating in Afghanistan, these forces may have less of an effect on the insurgency than would be expected (Livingston et al.,2011, p.6).

Chapter 3: Research Design and Methodology

Chapter 3 provides a description of the data and methodology to be used in testing the hypotheses listed in Chapter 2. Section 3.1 identifies a measure of insurgent violence and proxy for active Afghan support. Section 3.2 describes a dataset on development projects funded by the DoD. Section 3.3 is an overview of the data sources and operational measures for variables on seasonality, opium production, population, energy consumers, and voter turnout. In addition, this section also details a number of control variables that will be useful in assessing the effect of political development projects on voter turnout. Lastly, Section 3.4 details out the statistical models to be used in testing each hypothesis.

3.1 Data on Insurgent Attack

Four sources of data on insurgent violence for the ongoing war in Afghanistan are currently available. The first is a declassified U.S. dataset of Significant Acts (SIGACTs). SIGACTs encompass many types of acts which take place in Afghanistan. Anything from a Improvised Explosive Devise (IED) blast to a key leader engagement by an International Security Assistance Force (ISAF) soldier with a tribal leader. The SIGACTs in the declassified dataset, however, are all kinetic (meaning they involve violent confrontation with insurgents). SIGACTS are collected by the US Military, the Afghan National Army (ANA), Afghan National Police (ANP), the Afghan Border Patrol (ABP), and the Afghan National Directorate of Security (NDS) and are deposited into a central database called the Combined Information Data Network Exchange (CIDNE). The declassified SIGACT dataset has approximately sixty-thousand geo-referenced incidents from January of 2004 to May of 2010. For each incident SIGACTs assigns

one of the following seven categories: direct fire (44%)[21], indirect fire (19%), Surface to Air fire (SAFIRE) (2%), IED/mine explosion (16%), IED/Mine found and cleared (18%), night letter (.65%), and own goal/premature detonation[22] (.54%). Unfortunately, the SIGACT dataset does not record number killed or wounded in an attack.

The remaining three sources of data on insurgent attacks are generated using open source reports. These include the Global Terrorism Database (GTD), the Armed Conflict Location and Events Dataset (ACLED), and the Worldwide Incident Tracking System (WITS). Of these three WITS data is superior for coverage of insurgency in Afghanistan because it extends over a longer period of time (January of 2004 to September of 2010), carries a greater amount of detail for each event, and at over eight-thousand terrorist incidents, it has over two times the number of events than in the GTD and ACLED datasets combined. WITS, collected by the National Counterterrorism Center (NCTC), defines a terrorist incident as, "groups or individuals acting on political motivation deliberately or recklessly attack[ing] civilians/non-combatants or their property," where the "attack does not fall into another special category of political violence, such as crime, rioting, or tribal violence" (NCTC, 2011). Despite this definition WITS does record attacks on government entities, soldiers, and police officers.

SIGACT and WITS both have advantages and sources of bias. The greatest advantage to the SIGACT dataset is that it has so many incidents recorded that it allows an analysis of attacks

[21] In parentheses is the percentage of attacks for each category out of all attacks.

[22] Direct fire refers to any attack by a weapon with a line of sight on its target. Indirect fire, like mortar barrages, have no direct line of sight. Surface to air fire refers to attacks on aircraft from the ground. IEDs and mines come in a variety categories. VIEDs are vehicle born IEDs, SIEDs are suicide IEDs, and both IEDs and mines can target vehicles or dismounted (on foot) soldiers. Night letters are written messages posted to doors and public places or phone calls and SMS messages send to threaten Afghan civilians for any cooperation with GIRoA or ISAF. Own goals refer to accidental instances when insurgents accidently kill or injure themselves in an explosion or friendly fire. Premature detonation indicates an insurgent IED explodes before it can acquire its target. An additional category, IED Hoax, is also present in the data. IED hoaxes may refer to harmless objects deliberately planted to fool ISAF into wasting time and resources in calling in bomb squads. However, they could also simply be objects that look like a possible IED and turn out to be harmless. Since there are so few SIGACT IED hoaxes, and the category does not necessarily denote an insurgent act, all hoax SIGACTS have been deleted from the SIGACT data set for the purposes of this analysis.

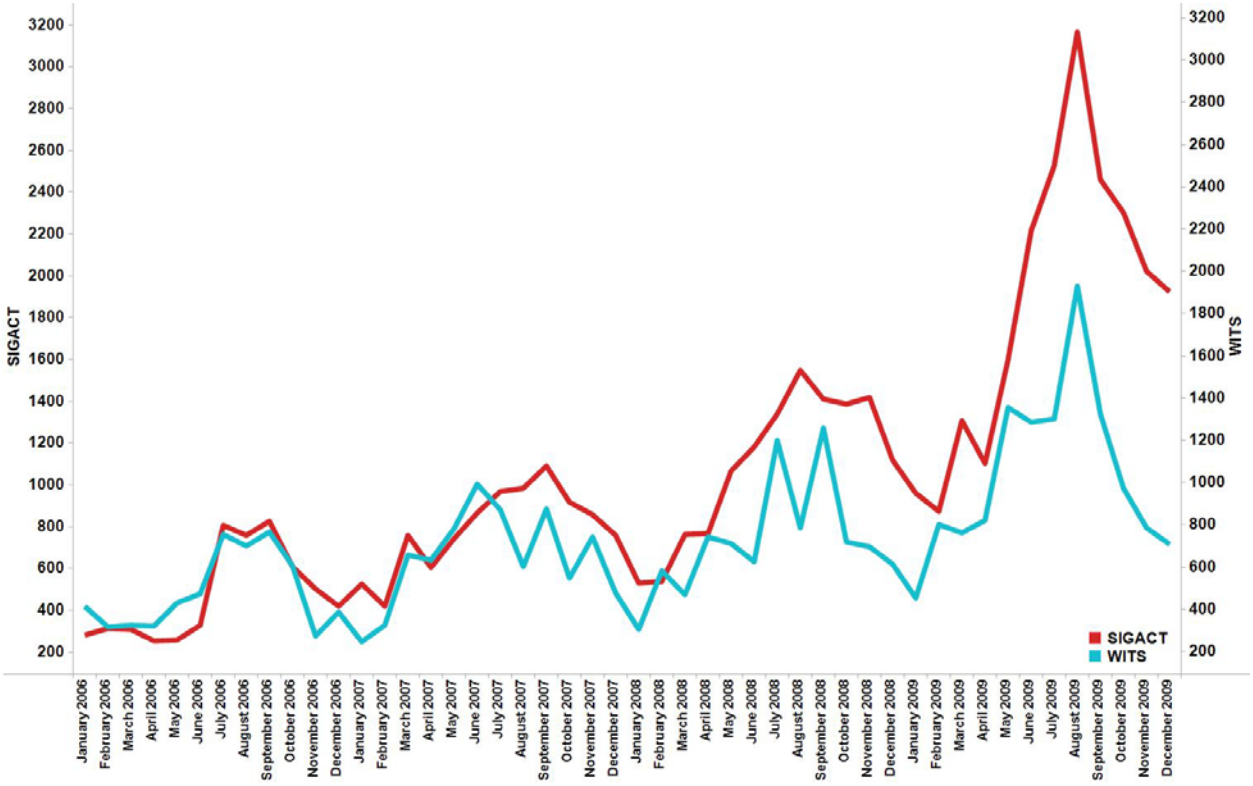
at the district month level. While this is a rich data set, it also has important limiting factors. First, soldiers in the field collected the data. Thus, it is likely that how attacks are coded is not entirely reliable. In fact, the SIGACT dataset likely underreports the number of attacks in the most violence areas because the threshold for what constitutes an attack is higher. A second limitation of the SIGACT dataset is that, because it is collected by US and Afghan forces alone, it may leave out violent events in areas without a US or Afghan security presence. Therefore, it underreports violence against civilians, NATO allied forces, and private security contractors. A final drawback to the SIGACT data is that there is no way to compare the magnitude of attacks. For example, a complex suicide IED attack that kills dozens is counted the same as a potshot taken at a soldier from a far distance.

WITS data resolves many of the problems inherent to the SIGACT dataset. It records insurgent violence on civilians even when ISAF or Afghan security forces are not present to record it. As well, instead of giving a simple count of attacks, each record in the WITS dataset records the number of victims killed, wounded, or taken hostage. However, because WITS has fifty-thousand less events it may be too insensitive at the district level to register substantive changes in violence over time. Another weakness of the WITS data is that, because it relies on media reports, events are likely to biased towards areas large population centers where journalists are more likely to have access to.

Using the timeline in Figure 3.1 it is possible to compare SIGACT and WITS insurgency data. The WITS line measures attacks by totaling the number of victims as well as number of attacks per month. The SIGACT line is simply a count of attacks overall. As can be seen, though there are fewer WITS attacks, the two lines match up very well. Although the WITS and SIGACT data are collected differently, there is a very similar pattern of events between the two.

This indicates the validity of both measures of insurgent violence. As well, because WITS data is focused on violence against civilians, and SIGACTs on violence against security forces, the data suggests that if violence is high against security forces it is also likely to be high against

Figure 3.1: SIGACTs & WITS Attacks, 2006-2009



civilians. Consequently, it is best to use the SIGACT dataset to measure insurgent attacks because it has over six times the amount of recorded attacks. Subsequently, the measure of insurgency in this study will be a count of kinetic events in a district month as recorded by the SIGACT dataset.

In order to test the effect of development spending on the hearts and minds of Afghans, a measure of the level of active support of the population for GIRoA and ISAF forces is needed. A conceivable measure of support could come from polls which question Afghans on their feelings towards GIRoA and ISAF forces. Such a measure, however, would be biased towards the more

secure and geographically accessible areas of Afghanistan. As well, while many polls have been taken over time of the Afghan people, none have a sampling size large enough to remain representative at the district level. A better measure of active support would be the number of accurate tips provided by Afghan civilians to ISAF or GIRoA. Tip-offs do more than simply lead to the capture of an insurgent or the location of an insurgent weapons cache. Tips signify a desire among the populace to help eliminate the insurgency and also support the government. Unfortunately, while a dataset of Afghan generated tips may exist, none are currently available for analysis. An alternative proxy for local support, however, is a count of the number of IEDs/mines found and cleared. As Kilcullen notes,

> reporting IEDs is an important subset of the voluntary reporting metric, because accurate reporting indicates that the population is willing to act voluntarily to protect the security forces. These devices account for roughly 50 percent of ISAF casualties in Afghanistan. Yet approximately *80 percent of IEDs* [italics added] that are discovered (as distinct from those that explode) are spotted simply because someone, often an Afghan, sees the IED on the side of the road and tells someone. Variations in the percentage of Afghan-originated IED reports that are accurate may therefore correlate with variations in levels of local support for ISAF and the government (2010, p.72).

Unfortunately, SIGACT data does not report whether an IED or mine that is found and cleared is the result of a metal detector, a sharp-eyed soldier, or a tip-off. Of the approximately sixty thousand events listed in the kinetic dataset 10,484 are reports of cleared explosive devices compared to 9,389 devices that are detonated by insurgents. This means explosive devices are just about as likely to be cleared than to explode. While not all IEDs and mines are found because of reporting by the local population, as long as the percentage found because of tips remain fairly constant across time and space, it ought to be a good indicator of active support[23]. Subsequently, a count of cleared explosive devices will act as a proxy for active support.

[23] Another known determinant of the ratio of IEDs cleared to exploded is road quality. Paved roads make it more difficult to burry an IED whereas an unpaved road with potholes presents many opportunities for concealment.

3.2 Development Spending Data

The primary independent variable in this study is development spending. One of the largest sources of development spending in Afghanistan is the Commander's Emergency Response Program (CERP). CERP allocates funds for US soldiers to spend on development tasks they believe to be crucial to bringing stability to the areas in which they operate. However, it is problematic to use CERP as a sole development spending proxy because it is only one of many entities involved in development in Afghanistan (others include USAID, international organizations, foreign governments, and Afghan ministries). As of October 2010 the United States had spent $18.23 billion dollars on governance, development, and humanitarian aid in Afghanistan. Of that amount $2.64 billion was by CERP, $11.14 was by USAID, and the remainder was distributed to multiple agencies (SIGAR, 2011). The United States, along with a group of international donors, also contribute to the Afghanistan Reconstruction Trust Fund ($335 million since 2011) which is used to pay for the salaries and support the budget of the Afghan government (SIGAR, 2011). While a more comprehensive dataset of development spending in Afghanistan exists, called the Afghan Country Stability Picture (ACSP), it remains For Official Use Only (FOUO), and therefore cannot be used in this analysis.

While the CERP dataset only includes a percentage of overall US development projects, those fighting insurgents spend the money in order to decrease insurgent activity in their area of operation. By comparison, other organizations do not have a clear mandate in their development spending to directly win support of the Afghan people or decrease levels of violence. For this reason, this analysis will provide an empirical test of the effectiveness of the stated mission of CERP. Furthermore, it could be that the same factors which lead American commanders to invest

CERP funds in certain districts in Afghanistan also lead to other organizations to target these same districts for development. If this is the case CERP spending may serve as a proxy for development spending overall. Nonetheless, the inability to control for development spending by other organizations is a limiting factor in this analysis.

The original CERP dataset had several means of categorizing spending by type. Unfortunately, none of these classification systems were complete for all projects, and for some CERP projects, none of the classification systems assigned a type. In order to create a manageable number of classifiers projects were grouped into the following categories: agricultural, condolence, general, governance, humanitarian, infrastructure, public services, and security. In order to code projects into one these eight types the existing classifiers and free text project descriptions were used. Using these classifiers it will be possible to distinguish between economic, political, and security development projects. In Table 3.1 each spending category is listed with associated figures to describe its frequency and portion of total spending in the dataset.

Table 3.1: CERP Projects Types in Number of Projects and Dollars Spent

	Number of Projects	Percentage of Projects	Amount of money spent	Percentage of money spent
Agricultural	1,450	11%	$94,876,427	3%
Condolence	353	3%	$2,981,902	.09%
General	882	7%	$18,784,159	1%
Governance	965	8%	$58,537,154	2%
Humanitarian	863	7%	$75,347,734	2%
Infrastructure	3503	28%	$1,062,951,198	34%
Public services	3593	29%	$228,247,132	7%
Security	854	7%	$1,615,902,939	51%

The condolence category captures payments made to the family of Afghan security forces when they have been killed in action as well as to families who have lost either property or loved ones

due to the actions of US forces. Condolence payments will be subtracted from the overall development spending variable because the money is not intended for political or economic development.

The general category is made up of projects that either had no project classifiers or were classified for multiple categories. Spending in the general category will be represented in the total development spending variable. Governance and security projects will be used as the proxy for political development spending. The majority of governance projects involve either the construction of government structures or the training of government officials. The security projects tend to either involve the construction of military barracks, police departments, or the building of defensive compound walls or the installation of outdoor lighting in public areas. The humanitarian category is for all spending that involves giving out food and blankets for poor Afghans or those Afghans affected by natural disasters. The infrastructure category is predominantly road construction and snow removal off of roads but this category also includes water, electricity, and sanitation projects as well. The public services category is any spending on public service delivery like education and health. The agriculture, humanitarian, infrastructure, and public services will be used to create and economic development variable.

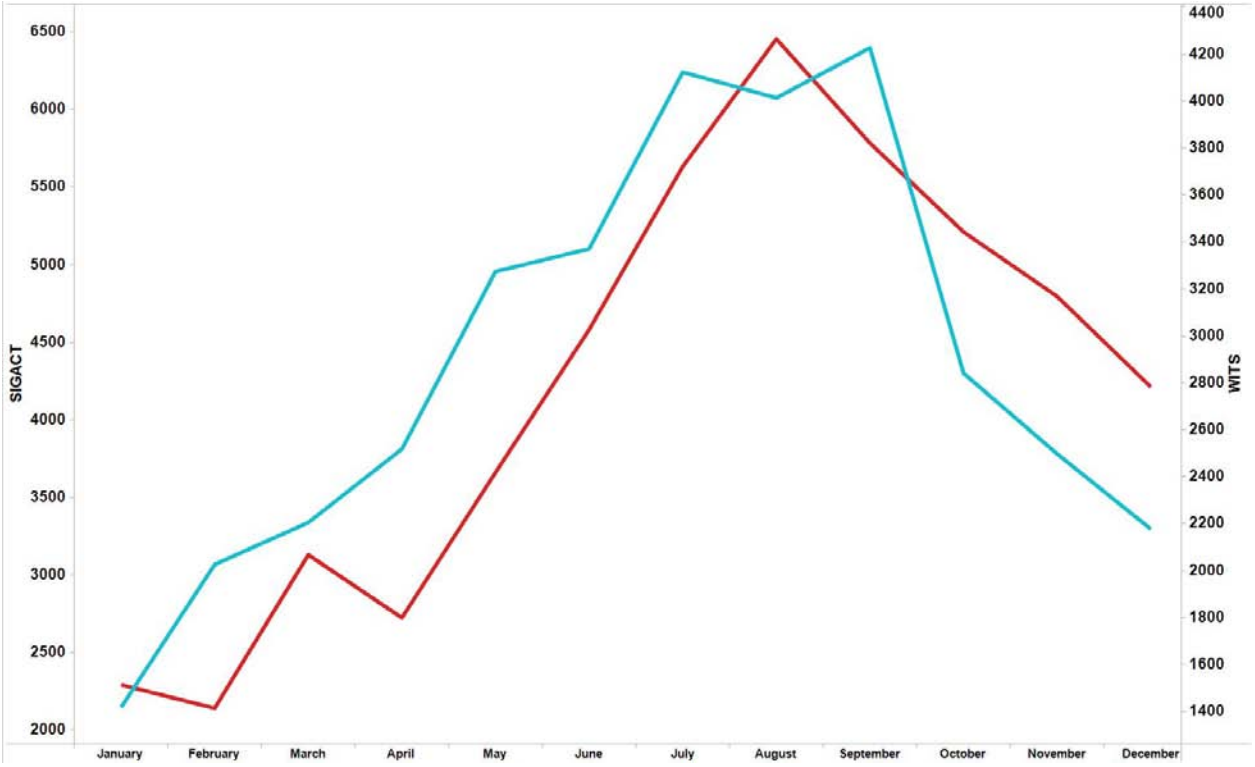
3.3 Data on Additional Variables

The number of insurgent attacks in any district month is the result of many factors. This analysis will control for three variables that are likely to affect these levels.[24] First, a seasonal dummy will be added because, as seen in Figure 3.2, insurgent attacks begin to rise dramatically in April and then fall as abruptly in October. In Figure 3.2 the red line and the left hand scale

[24] Unfortunately, many important control variables will be missing in this study because the data needed for a proxy only exists at high levels of classification. For example, it is a commonly held assumption that the most significant determinant of insurgent violence is the number and location of "blue forces" (Afghan and NATO soldiers). While this data is collected it is classified.

represents insurgent attacks as tracked by the SIGACT dataset whereas the blue line and right hand scale represents a violence index using the WITS dataset. The five most violent months are June, July, August, September, and October. Subsequently, these months will be coded one and all other months zero. One important factor to note, however, when considering seasonality is that it likely to be less pronounced lower elevations and in the South where the climate is more temperate. For this reason, seasonality will be more pronounced in certain districts. While temperature data would likely be a better predictor of violence than a seasonal dummy such data is not available at the district level.

Figure 3.2: SIGACTS and WITS Index Violence Totaled by Month, 2006-2009



An additional predictor of insurgent attacks is poppy cultivation. Many studies show that internal large-scale violence can be predicted by the presence of “lootable” resources (examples

include Doyle and Sambanis, 2000; Fearon and Laitin, 2003; Collier et al., 2009).[25] Poppy production is likely to be related to insurgent violence because money derived from the sale of poppy funds insurgent activities. In fact, it has been estimated that from 2005 to 2008, the Taliban earned $450-600 million through taxation of the opium trade in Afghanistan (UNODC, 2009, p.3). Of course, because the Taliban may tax all economic activity in the areas they control, poppy production may not have a strong effect on levels of attacks. In fact, in a recent study of the effects of opium prices on insurgency, a positive relationship was only found in two of Afghanistan's thirty-four provinces (Bove, 2011, p.15). Bove (2009) suggests this may be because the effect of increased income and employment, resulting from the lucrative but labor intensive production of poppy, may be more powerful than the effect of poppy taxation by insurgents. Yearly district level poppy production data is collected by UNODC using a mix of survey and remote imagery analysis. [26]

A third control variable is population. Population varies significantly across districts in Afghanistan. By controlling for population it will be possible to put development spending and the number of insurgent attacks in perspective. For example, if two districts get a similar amount of spending but one has double the population we should not expect each dollar to have the same effect. For this reason, it will be important to control for population. Two sources of district level population data exist. The first is from the Afghan Central Statistics Office (CSO). While a national census has not been conducted in Afghanistan since 1979 the CSO has estimated Afghanistan's population through sub-national censuses and surveys.[27] CSO district level

[25] Studies have yet to confirm whether lootable commodities have violence increasing effects at the sub-national level in states experiences civil war. However, Bahaugh and Gates (2002) do find that the presence of these resources increase the size of contested areas during a civil war.
[26] Data on poppy production is available at http://www.unodc.org/unodc/en/crop-monitoring/index.html?tag=Afghanistan.
[27] The CSO website (http://www.cso.gov.af/) does not specify how it estimates district level population.

population data for 2010 is available on the AEIC website.[28] A second source for population district level population data is LandScan.[29] LandScan uses a sophisticated algorithm, that is region specific, to analyze ambient light from night satellite imagery to produce population estimates to the one kilometer range for the entire planet.

Both data sources are likely imperfect. The CSO data may contain error related to survey methodology and also be biased for political reasons. CSO population statistics are used by the Afghan government to make important policy decisions about where budgetary resources should be spent. For this reason, certain districts in Afghanistan may have inflated population figures. LandScan data, because it is based on the use of electricity, may bias population estimates in areas without access to energy. By having both measures of population it is possible to compare them in order to cross-validate their accuracy. The correlation coefficient between the two measures of population returned a 99.17 association. This extremely high level of association indicates either dataset would be provide an acceptable population measure. However, if you take the sum of all districts, to find the national level population, the two figures are for the CSO and LandScan data are 24,455,800 and 28,406,174 million respectively. That the CSO figure is about four million less than LandScan estimate, which is very close to other national population estimates, means that the CSO has likely underestimated population levels across districts. Using either estimate of population it is also possible to create a population density measure. The Afghanistan Information Management Services (AIMS) has data on the area, in square kilometers, for each district in Afghanistan[30]. Afghanistan is slightly smaller than Texas, and the average size of a district in Afghanistan is 2,476 SqKm, which is about the size of Luxemburg

[28] http://www.afghaneic.org/Data/CSO%20Population%20Data/Afghanistan%20CSO%20population%20data%201389%20%282010%20-11%29%20update%20July%208-2010.pdf
[29] http://www.ornl.gov/sci/landscan/index.shtml
[30] www.aims.org/af

and slightly smaller than the state of Rhode Island.[31]

The Afghan Energy Information Center (AEIC) will provide the data to test the ability of infrastructure projects to increase access to electricity. USAID created AEIC in order to provide an organization that would be responsible for collecting, analyzing, and making available data on Afghanistan's energy sector. There is a single power utility in Afghanistan called Da Afghanistan Breshna Sherkat (DABS). AEIC's DABS dataset has yearly totals of the number of electricity customers, broken down by customer type[32], by directory. Each directory is a district or city that receives electricity, for each directory, a district code is assigned. This data was then collapsed to customers per district year. According to the AEIC dataset, only sixty-two districts (about 17% of all districts) have energy customers. This small number is not too surprising considering, as was reported in Chapter 2, that only 30% of Afghans have access to electricity. In 2010 DABS reported that Afghanistan had 684,419 residential customers. Considering the average Afghan household is made of up of seven people[33] using the DABS dataset we can estimate there are 4.8 million Afghans with access to electricity in 2010.[34] Considering Afghanistan's population is just under 30 million people this would mean only 17% of Afghans have access to electricity in their homes. This much lower estimate, compared to 30%, may be due to theft of electricity through illegal taps of the electrical grid.[35]

District level data exists for the two most recent elections in Afghanistan, the 2009 presidential election and the 2010 Wolesi Jirga elections. In the 2009 election incumbent

[31] The CIA Factbook provides comparisons of the area of countries to US states.
[32] There are seven customer types: Commercial, Government, Holy Places, Industrial Registered, Industrial Unregistered, NGOs, Residential.
[33] http://ec.europa.eu/europeaid/where/asia/documents/afgh_nrva_2007-08_full_report_en.pdf
[34] In order to see how electrical substations, production facilities, and transmission lines are plotted spatially across Afghanistan go to http://www.afghaneic.org/gis-maps.php
[35] Another reason why this number may be much smaller is how you measure access to electricity. It could be that if a town is wired to provide electricity the town's population is considered to have access even if each individual household is not receiving electricity.

President Karzai was up for reelection on Aug.20th. Afghanistan has a two-round system for presidential elections. If no candidate receives a majority of the votes the two top vote getters move on to a run-off election. In 2009 Karzai received over half the votes, but because of strong evidence of fraud, almost a third of those votes were thrown out by an international commission. Although a second round election was scheduled for Nov.7th, Abdullah Abdullah pulled out of the race six days before after several demands he made to ensure fair elections were denied. Consequently, Karzai won reelection without facing a second round election amid controversy and a bevy of complaints.

In 2010 controversy continued in the second ever elections for the Wolesi Jirga which took place on Sept.18th. Widespread fraud led the Afghan Election Complaints Commission (ECC) to refer rulings over hundreds of complaints involving crimes to the Afghan Attorney General who in turn referred the cases to the Supreme Court. Karzai then formed a special court to investigate the elections, as advised by the Supreme Court, even though the Afghan Independent Electoral Commission (IEC) and the EEC correctly identified such a move as unconstitutional. From June.22, when the Special Court ruled that sixty-two members of parliament replaced, to January of 2011 when Karazi finally gave in an seated the original winners, the Afghan political system was in crisis. In sum, the two elections showcase that, while elections are far from free and fair, Karzai in not yet able to completely dominate the process.

Election data used in this study is derived from the Afghan Independent Electoral Commission (IEC) but formatted and compiled by the National Democratic Institute (NDI). Unfortunately, the NDI does not supply voter turnout rates. However, they do provide an estimate of possible voters and the actual number of votes from each district. Using these to figures voter turnout was calculated. This study will control for a number of factors which may

affect voter turnout: number of security incidents on Election Day, a count of insurgent attacks, population density, and number of energy customers. Additionally, data on fraud also exists for both elections, though the figures are not calculated in the same way. For the 2009 election NDI provides a percentage of polling stations that were audited for fraud:

> On September 8, declaring that it had found 'clear and convincing evidence of fraud', the Election Complaints Commission (ECC) ordered the Independent Election Commission to conduct an audit and recount of polling stations nationwide that had vote totals equal to or greater than 600, or that had returns with any presidential candidate receiving 95 percent or more of the total valid votes cast... more than 3,300 polling stations and over 1.5 million ballots came under this order. Given the findings of the audit and the electoral complaints process, 19 percent of all votes cast on August 20 were excluded from the final presidential vote tally (NDI, 2011).

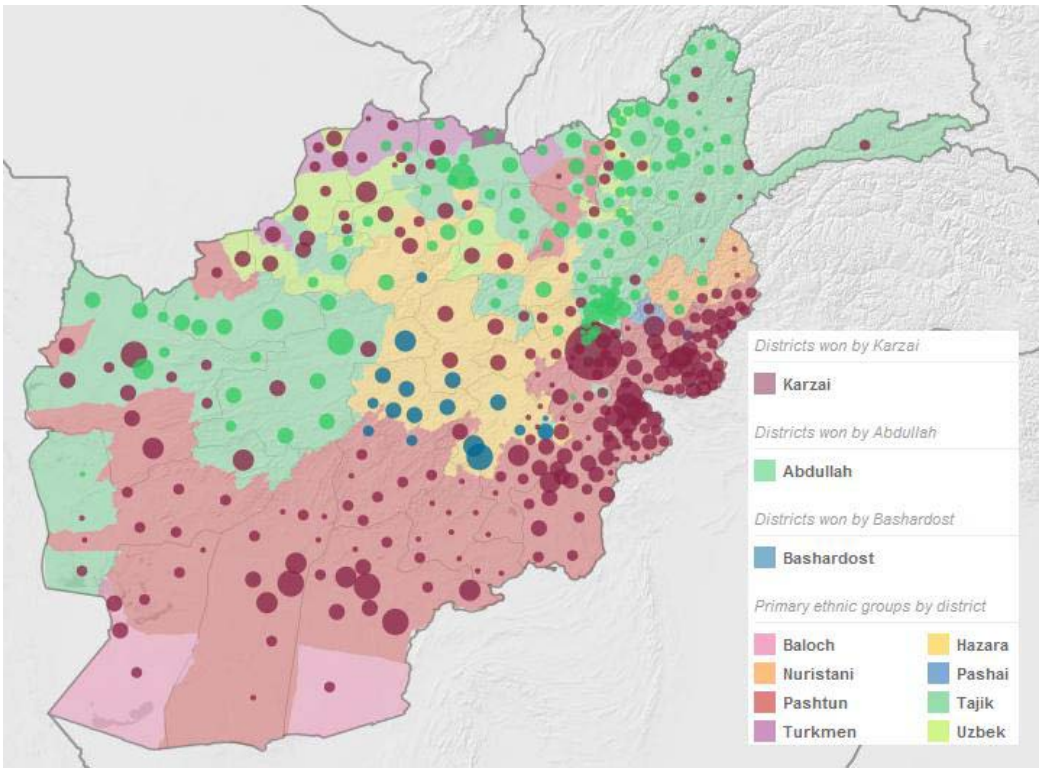
In the 2010 election, however, NDI reports the percentage of votes per district that were thrown out due to fraud. In either case it is likely that the more fraud in a district the higher turnout will appear, even though this is simply the result of stuffing ballot boxes. The 2010 election data also has the percentage of the vote that was cast by women. This percentage is a helpful control because, when only men vote, turnout tops out at fifty percent.

One last control variable that will be added to the analysis of voter turnout will be the percent of voters casting their ballot for incumbent President Karzai in the 2009 election. This percentage may be acting as a proxy for two dynamics. First, it may be a sign of approval for the new Afghan government. Districts in which support for GIRoA is high are likely to have higher turnout rates. Second, voting patterns in Afghanistan tend to be largely motivated by tribal and ethnic membership, this percentage may be a proxy for how many Pashtuns live in the district. This tendency is show in Figure 3.3[36] in which a map of tribal and ethnic boundaries is overlaid by districts which were won by each of the top three presidential candidates.

[36] This image was generated by the National Democratic Institute using a dynamic mapping feature on their Afghan election website http://afghanistanelectiondata.org/election/2009/data?views-mode=views-mode-map#layers=district_map_openlayers_1&baseLayers=afghanistan-grey

It is important to know that Karzai is a Pashtun, Abdullah has a mixed tribal background of Tajik and Pashtun, while Bashardost is of the Hazara tribe. As can be seen the areas that are predominantly Pashtun are almost all won by Karzai, areas that are largely Tajik vote for Abdullah, and principally Hazara areas vote for Bashardost. There is a relatively strong

Figure 3.3: Districts Won by Top '09 Presidential Candidates with Ethnic Group Overlays



correlation between the percent of voters casting their ballot for President Karzai and the percent of Pashtun within a district.[37] Why would the number of Pashtuns in a district affect voter turnout? Members of the Taliban, the largest insurgent group operating in Afghanistan, are primarily of the Pashtun tribe. Consequently, Pashtun areas are more supportive of the insurgents than are areas in the north and west where many tribes fought against the Taliban.Thus, Pashtun areas are less likely to show voter support for GIRoA in elections.

3.4 Method of Analysis

[37] The correlation coefficient is .64. Also the data on tribal membership for districts was only available for 162 out of 399 districts.

Six of the seven hypotheses are analyzed using statistical models which draw from a Cross-Sectional Time Series (CSTS) dataset. The methods that will be used to test the hypothesis on voter turnout will differ, however, because the data is not longitudinal. Specifically, an Ordinary Least Squares (OLS) regression will be used to test the effect of political development spending, collapsed for the entire time series, on turnout for each district in the 2009 presidential election and the 2010 Wolesi Jirga elections.

There are many types of analyses which can be used to test CSTS data. However, in this study the First Differences (FD) will be taken of each variable to be used in an OLS regression. Taking FD is important for many reasons. First, it controls for some of the endogeneity present in the data. Specifically, because CERP spending and insurgent attacks have both been increasing each year, it may appear (spuriously) as if CERP is positively correlated with attacks. However, taking FD detrends the data so that existing levels of violence are irrelevant. Second, histograms of the longitudinal dependent and independent variables in this study show non-normal distributions and overdispersion. Both qualities violate key assumptions made in statistical modeling. By using FD each variable is transformed and the data will not be overdispersed or necessitate a count model. Third, the FD transformation also ensures the data is stationary[38], thereby avoiding possible spurious results caused by seasonality and sudden troop surges. As can be seen in Table 3.2 six of the eight variables in this study which vary over time are not stationary but become stationary once the first difference has been take.[39]

Lastly, the FD approach automatically controls for all time-invariant variables associated

[38] The large number of months used in this study means that variables have the potential to be nonstationary. Nonstationary data can allow spurious significant results in seventy-five percent of regressions in Monte Carlo simulations (Granger & Newbold, 1974, p.p.115). Nonstationary data creates these spurious results, which intensify as T becomes larger, because of serially correlated errors.

[39] In this test the null hypothesis is that the data is not stationary, so when the probability that chi-square < .05, we can assume the data is stationary.

with each district. This means that it will not be necessary to control for factors like variability of altitude or tribal make up because these variables do not change over time. It is possible, however, to include time-invariant variables into a FD model if they are interacted with a variable which does change over time. In this study, district level monthly spending on CERP

Table 3.2: Results of Tests for Panel Unit Root Using Phillips-Perron Test

	No Transformation	First Difference
Insurgent Attacks	1.00	.000
Cleared Explosives	.000	.000
Development Spending	.000	.000
Economic Development Spending	1.00	.000
Political Development Spending	1.00	.000
Security Project Spending	1.00	.000
Poppy Cultivation	1.00	.000
Energy Customers	1.00	.000

projects will be divided by district population in order to derive CERP spending per capita. Theoretically, a set amount of spending on a CERP projects ought to have less of an impact in a district with a larger population and a greater effect in a district with a smaller population. By taking CERP spending per capita into the model it will be possible to account for this dynamic.

Chapter 4: Summary Statistics & Preliminary Analysis

This chapter provides the descriptive statistics and visualizations for key variables and also reports the results of preliminary statistical analyses. Section 4.1 presents a set of descriptive statistics and figures for key variables. Section 4.2 lays out the timelines of attacks and spending by regional command as well as the results of a number of bivariate tests. These preliminary results will provide a starting point for further analysis presented in Chapter 5. In the end, none of the correlation coefficients in the bivariate tests are strong enough to provide any corroboration for the hypotheses listed in Chapter 2, and four of the results indicate relationships opposite to what COIN theory predicts.

4.1 Descriptive Statistics

Table 4.1 shows the descriptive statistics for key variables. The table is broken into three sections depending on the unit of analysis. Insurgent attacks are a count of kinetic incidents of all types. The average number of attacks per district month is 2.89 but the median is 0. This is because insurgent attacks are concentrated into a minority of hotly contested districts. In comparison, in Iraq the average number of attacks each district month is much higher at 97.6, but is much lower in the Philippines at .12 attacks per municipality month[40] (Berman et al., 2009; Crost and Johnston, 2010). The maximum amount of attacks in any one district month is 551 or about eighteen attacks a day. The number of explosives cleared is a proxy for the active support

[40] Iraq's much larger figure is partly a factor of it having one third fewer districts than Afghanistan and Philippines much lower figure is in part due to that country having four times as many municipalities as Afghanistan has districts. Both the figures from Iraq and the Philippines had to be brought to a monthly level of analysis for this comparison.

of the people. The mean amount of explosives cleared in a district month is .5 but the number reaches as high as 187.[41] A comparison of the means and standard deviations for insurgent attacks, explosives cleared, and energy customers provide evidence of overdispersion. Specifically, in each of these three cases the standard deviation is much larger than the mean. In all three countries the standard deviation of attacks is higher than the average confirming that high variability in violence across time and space is a common during insurgencies. There is a geographic reason for this over dispersion (see below). In Chapter 5 methods will take into account the effects of over dispersion for all CSTS models.

Table 4.1: Summary Statistics

	Variable	N	Mean	Std. Dev	Min	Max
Monthly	Insurgent Attacks	20,332	2.89	12.72	0	551
	Explosives Cleared	20,332	.5	2.95	0	187
	Total Dev Spending	20,332	155,113	2,228,088	0	144,000,000
	Econ Dev Spending	20,332	71,878	368,634	0	8,374,807
	Pol Dev Spending	20,332	2,879	18598	0	595,520
	Sec Dev Spending	20,332	79,475	2,175,088	0	144,000,000
Yearly	Energy Customers	1,955	1524	1147	0	234,368
	Poppy Cultivation	1,955	32.26	132.4	0	1,897
Districts	Population	390	72,166	180,187	2142	3,415,090
	% Voted Karzai	380	57.24%	27.37%	3%	100%
	Voter Turnout 09	378	39.96%	20.41%	0.64%	126%
	Voter Turnout 10	371	41.96%	28.52%	0%	170%

The average duration of a development project is one-hundred and seventeen days long which is thirty days longer than the average duration of Iraqi CERP projects (Berman et al.,

[41] Summary statistics on the percent of explosives cleared to detonated, not shown in Table 4.1, report that just under a quarter of all district months have at least one explosive incident and that on average almost fifty percent of all IEDs and mines are found and cleared.

2009). In addition to lasting longer CERP projects in Afghanistan cost on average about fifty thousand dollars more per district month. The average amount of money spent in a district month varies depending on the category of spending. Political development spending has the lowest average. This is likely due to the fact that many political development projects entail training which is not costly relative to the high price of construction entailed in economic development projects. Similar to insurgent attacks the median amount of money spent in a district month for each category of spending is zero. This is because spending on CERP projects is strategically focused on districts where U.S. commanders believe it can do the most good. One important fact to note about spending data is that the total spent in any one month could be the result of a single or dozens of ongoing projects.

The energy customers variable is a count of all households, organizations, and businesses who have signed up for service with DABS (Afghanistan's only power utility company). The majority of districts do not have access to electricity and therefore have no energy customers. For this reason, the average amount of customers overall per district is just over fifteen-hundred, but for only those districts with access the average jumps to over twelve-thousand. Poppy is only cultivated in about half of all districts in Afghanistan. Among districts with some level of poppy production the mean is sixty hectares compared to only thirty-three when averaging all districts. One important thing to know about poppy is that cultivation does not have a one to one ratio with opium production. Instead, yields can be affected by weather and disease. For example, 2009 to 2010 poppy cultivation stayed steady at 123,000 hectares but production fell from 6,900 mega tons in 2009 to 3,600 mega tons in 2010 (UNODC, 2010, p.57). Of course, when yields are low prices go up and so the effect of lower yields on profits is mitigated.

LandScan population estimates are available for all but one district in Afghanistan.

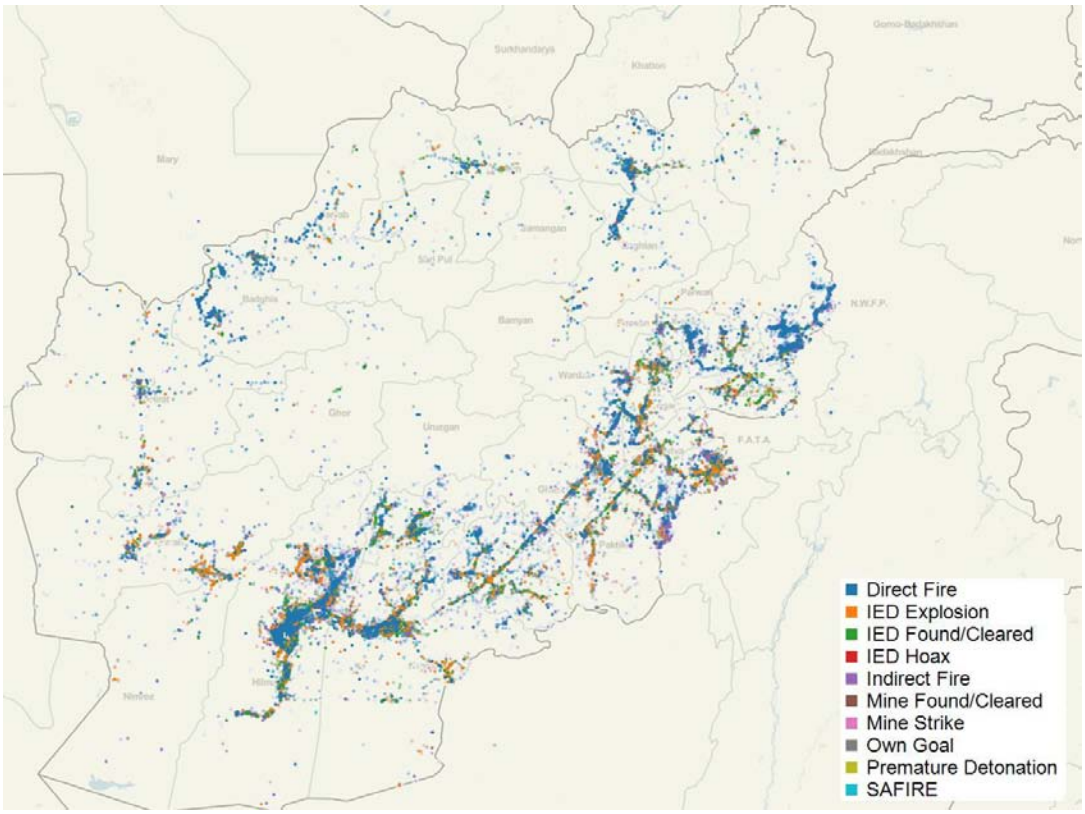
Afghanistan is almost mostly rural with a handful of large cities which are population outliers. The average population of a district in Afghanistan is just over seventy-thousand people, but the median is closer to forty-thousand. The last three variables are all derived from data on the 2009 and 2010 Afghan elections. For all three variables a number of districts are missing. This is because a combination of fraud and insecurity led to such a high number of polling stations not reporting that entire districts did not report results. Fifty-seven percent of Afghans voted for incumbent President Karzai in the 2009 election. The smallest amount of the vote Karzai won in any one district was 3%. That Karzai received one-hundred percent of the vote in several districts is a sign that a great number of fraudulent votes survived ECC audit that followed the election. One example of the fraud in the 2009 election were the hundreds of thousands of votes for Karzai from "ghost polling centers" which were in Taliban controlled areas where neither Afghan or international elections officials could visit (Galbraith, 2009). Although it was impossible to open these polling centers large numbers of votes for Karzai originated from them. Similarly, fraud also likely explains the over one-hundred percent voter turnout present in several districts. An additional reason for these impossible turnout rates is due to the way in which turnout was calculated for this study. In order to operationalize turnout it was necessary to have some figure for the voting age population in each district. The NDI provides an estimate of possible voters based on numbers of voters in previous elections. Subsequently, error in this estimation process may have also caused turnout rates to be impossibly high. This data reports a 42% turnout rate for the 2010 Wolesi Jirga elections, but the Afghan IEC estimated a turnout of 35%. Unfortunately, it is impossible to know which number is more accurate because, as the IEC admits, its turnout figure is also based on an expected number of voters.[42]

One aspect of the data that the summary statistics in Table 4.1 do not fully describe is the

[42] http://www.iec.org.af/pdf/wsfactsheets/fs_voter_turout_relevant_tc_figures_2010.pdf

spatial dispersion of insurgent attacks and development projects. In Figure 4.1 a map[43] of

Figure 4.1: Insurgent Attacks Plotted by Type, 2006-2010



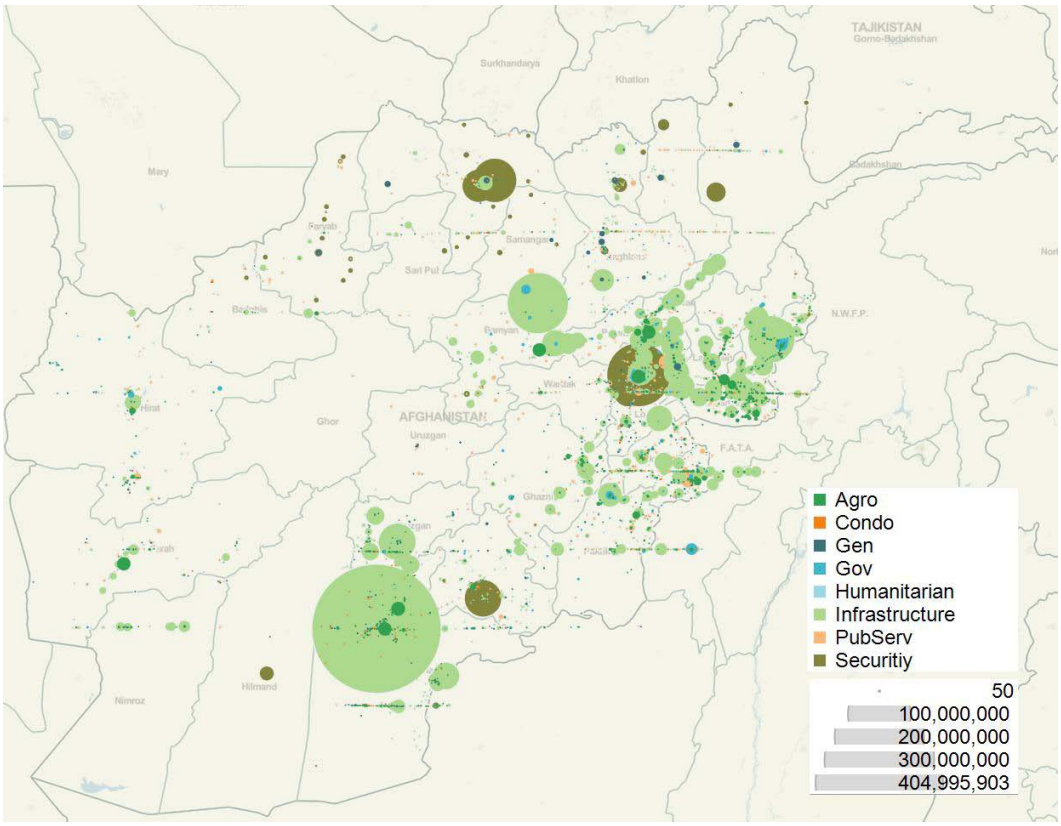
Afghanistan with insurgent attacks plotted using geo-coordinates is shown. As the legend explains the color of each dot denotes the type of attack. The light grey lines denote the borders between Afghanistan's thirty-four provinces. A number of patterns jump out from this map. First, is the big hole in the middle of Afghanistan where very few attacks take place. The hole exists because this region of Afghanistan is highly mountainous and sparsely populated. Similarly, there are very few attacks in the most southern region because it is a dessert. A second noticeable pattern is a circle of attacks that seems to follow Afghanistan's international borders. The attacks tend to cluster along Ring Road, a two-thousand kilometer highway that connects many of Afghanistan's major cities. A last pattern to recognize is that the vast majority of attacks occur in

[43] The maps in Figures 4.1 and 4.2 were created using Tableau Public software.

the south and east where Afghanistan borders Pakistan. These spatial signatures explain the high standard deviations and overdispersion that skews the insurgent attack data.

In comparison to insurgent attacks, Figure 4.2 displays the location of each development project in the CERP dataset[44]. Unfortunately, the geo-coordinates in the CERP dataset are not as

Figure 4.2: Development Projects Plotted by Type, 2006-2010



reliable as the SIGACT coordinates. As a result, a number of projects seem to unnaturally occur in lines from East to West and some even fall outside of Afghanistan's national borders. Despite these inaccuracies, however, the map is able to provide a helpful comparison to the locations of insurgent attacks. In this map, the color of each dot denotes the type of project and the size of the dot denotes the amount of spending on the project. As can be seen infrastructure and security

[44] Some projects could not be plotted in the map because, while they have a district designation, they did not have a corresponding geo-coordinate. As well, some of the projects plotted on this map were stripped from the dataset because the data seemed faulty.

projects are the most costly. Unfortunately, by sizing the dots by amount of money spent it is more difficult to see types of projects which do not cost as much and many projects are overlapped by other project dots. Comparing the two maps, it seems that spending on projects is concentrated in those areas that have the most violence but not exclusively in these areas. The highest concentration of projects occurs in proximity to the largest two cities in Afghanistan (Kabul and Kandahar). Despite these concentrations a great deal of variation exists across regions. Specifically, the total count of projects in any one province for the entire 52 months ranges from a low of only seven in Helmand to a high of about fifteen-hundred in Kandahar. This difference cannot be explained by population as the two Provinces have very similar populations. In fact, with the exception of Kabul and Kandahar, population seems to have little to do with the total count of projects in a Province. Since spending has a very high correlation with the total projects, Helmand is also the Province with the least spending, and Kandahar the Province with the most spending. The average number of projects in a Province is 367 which is about the total in Laghman. The median cost of a project was about $22,000 but ranged from as little as $500 to over one-hundred million dollars. An example of a very low cost project may be compensation given to repair damage done to an Afghan's car. A very costly example of a CERP projects would be the building of a brand new sewage treatment facility plant for a large city.

Section 4.2 Preliminary Analysis

Having data for attacks and spending overtime allows the creation of timeline charts which can be used to see if the number of attacks decrease as spending increases. Looking at a single timeline, however, is not useful because there is no spatial variation. By comparing attacks and spending timelines for each district or province this problem is alleviated. Unfortunately, there are far too many districts and provinces to present timelines for each one. Therefore, Figure

4.4 breaks down these timelines by ISAF Regional Commands (RCs). There are only six RCs: Capital, North, East, South West, South, and West. In this figure the axis labels on the left belong to insurgent attacks and the axis labels on the right belong to spending. The red lines

Figure 4.4: Timelines of Attacks and Development Spending Over Time

represent attacks and the green lines spending on economic, political, and security development projects. Therefore, these timelines represent a test of H1, that overall development spending will decrease insurgent attacks. All axes are independent to one another and are dependent on maximum amounts of attacks and spending in each RC. Therefore, the best way to compare RCs

to one another in terms of violence or spending is to look at the top of each axis. The visual signature of the predicted association between attacks and spending would be an increase in spending followed by a decrease in attacks or a decrease in spending followed by an increase in attacks. One easily recognizable pattern in the timelines is that when insurgent attacks rise or decrease in one RC they also do so in other RCs. This is likely the result of the summer fighting season which repeats four times from 2006 to 2010. In contrast the green spending lines follow dissimilar patterns (with the exception that in early 2009 spending spiked for all RCs) which may suggest no relationship with attacks. In RC Capital, however, in the latter part of 2009 and into 2010 it does seem that as spending increases violence decreases. Visual inspection of these timelines is complicated by seasonality and upward trends among attacks and spending. As well, RCs may not be spatially granular enough to see relationships which may exist at the provincial or district level. In all other studies of the effect of development projects on insurgency the authors have used the most granular spatial unit of analysis possible. In the case of research on Iraq it was the district an in the case of research on the Philippines the use of the municipality was even more granular. The decision to focus on small areas conforms with an unstated assumption in COIN theory that predicts that development projects are only effective in the villages, towns, and cities in which they are implemented. Considering the intended scope of these projects this assumption is valid. Consequently, statistical analysis of this data at the district level will give a better picture of the relationships.

In Table 4.2 the relationship between eight different sets of variables are examined using Pearson's Correlation Coefficients. Each set of variables, as labeled, are a test of one of the hypotheses in this study. The coefficient in the first row provides a useful comparison to the timelines in Figure 4.4. There is a .1 positive correlation between development projects spending

and insurgent attacks but this number is too small to provide proof of a strong relationship. Similarly, the timelines also shows no strong relationship between spending and attacks. It may be, however, that relationships do exist between spending and attacks when projects are disaggregated by type. The next three rows in Table 4.2 report coefficients that are even smaller, thus indicating no relationship. In fact, an inspection of the Pearson's r column shows that none of the pairs of variables seem to have a high correlation coefficient. Subsequently, the results in this table provide no support for any of the seven hypotheses in this study.

Table 4.2: Correlation Coefficients

	Dependent Variable	Independent Variable	Pearson's r	N
H1	Insurgent Attacks	Dev. Spending	.10	20332
H3	Insurgent Attacks	Econ. Dev. Spending	.07	20332
H6	Insurgent Attacks	Pol. Dev Spending	.03	20332
H7	Insurgent Attacks	Sec. Dev Spending	.09	20332
H2	Explosives Found	Econ. Dev. Spending	.05	20332
H4	Energy Customers	Infras. Dev Spending	.07	20332
H5	Voter Turnout '09	Pol. Dev Spending	-.07	378
H5	Voter Turnout '10	Pol. Dev Spending	-.04	371

While the results in Table 4.2 do not confirm the hypotheses presented in Chapter 2 they do confirm a number of theoretical arguments made in the literature. Specifically, a great many scholars write that development projects used to fight insurgency are unlikely to be successful because: 1) new institutions lack accountability to citizens (Suhrke, 2006); 2) the inherent difficulty in creating state capacity where none existed before (Krause and Jutersonke, 2005); and 3) requirements for inadvisable allegiances with local elites (Edelstein, 2004). Moreover, in numerous publications and reports to congress both SIGAR and SIGIR have reported that corruption, insecurity, and a lack of capacity, are also reasons why development projects have not been effective.

What's more, some scholars argue that development projects may actually exacerbate insurgent attacks (Belloni, 2007; Crost and Johnston, 2010). Recently, the news media has also

begun to highlight evidence that development projects in Afghanistan aid the enemy. The following two quotes published in a recent news article showcases that these negative messages are actually a reflection of top civilian leadership in the Afghan war:

> 'While U.S. agencies have taken steps to strengthen their oversight of U.S. funds flowing through the Afghan economy, they still have limited visibility over the circulation of these funds, leaving them vulnerable to fraud or diversion to insurgents,' the staff of acting Special Inspector General for Afghan Reconstruction Herbert Richardson.
>
> 'When we hear ourselves being called occupiers and worse, and our generous aid programs dismissed as totally ineffective and the source of all corruption, our pride is offended and we begin to lose our inspiration to carry on,' Eikenberry said during a speech at Herat University in northern Afghanistan (Dreazen, 2011).

Do the results in Table 4.2 support the argument that development projects increase insurgency? The correlations in the first four rows of the table are all positive but too small to prove that spending is increasing insurgent attacks. As well, while the results of these preliminary analyses are informative, they are not authoritative. Each model requires more sophisticated techniques (which take into account the nature of count and panel data) and greater specification through the introduction of control variables. In the following chapter the results of better specified models will be presented. Following the presentation of results in Chapter 5 a discussion of the implications and limitations of these results will appear in Chapter 6.

Chapter 5: Statistical Results

This chapter presents the results of statistical analyses that test each of the seven hypotheses presented in Chapter 2. In Section 5.1, the results of two OLS regressions suggest that political development spending has no effect on voter turnout for two elections in Afghanistan. Instead, spending on security projects tend to increase turnout. In Section 5.2, the results of a First Differenced (FD) OLS regression show that economic development spending does not have a significant relationship with the number of energy customers in a district. In Section 5.3, results from two FD OLS regressions reflect a significant positive relationship between economic development spending and levels of Afghan active support. Further, when economic development projects are disaggregated into four types, only spending on humanitarian aid is found to have a significantly positive correlation with active Afghan support.

In Section 5.4, results from a FD OLS regression find that a total of all development spending has no effect on the number of insurgent attacks. Lastly, in Section 5.5, results from a FD OLS regressions suggest that neither political or security projects have a significant negative relationship with insurgent attacks, but that economic projects do. In a second regression, the negative relationship between economic development spending and insurgent attacks is found only to exist in the post troop surge years of 2009 and 2010. Lastly, when economic development projects are disaggregated by type, results show that only humanitarian aid spending has a significant negative effect on insurgent attacks, and that this effect is stronger than for total spending on economic development projects.

In sum, the implications of these findings is that only two dimensions statebuilding through CERP in Afghanistan were capable of furthering development and decreasing insurgency. Spending on political development did not increase participation in elections but

security projects have an influence on turnout. Thus, as is maintained in the literature, a certain level of security is needed before statebuilding can be effective. Second, spending on infrastructure had no effect on the number of Afghans who had access to electricity. While access to electricity in Afghanistan has increased since 2001 there is no evidence that CERP projects were responsible for this improvement. Development projects, in the aggregate, as well as political and security spending when disaggregated, had no effect on insurgency. At first, it seemed economic development projects, at least, did have the ability to increase active support to counter-insurgents and decrease insurgent attacks. Upon further inspection, however, these effects were only present during troop surge years. Further, only one of the four types of economic development projects was actually responsible for the decreased insurgent attacks and the increased number of cleared explosives. As will be explained, humanitarian aid projects have certain unique features, which allow them to be an effective COIN tool. However, the features unique to humanitarian aid showcase how limited statebuilding strategies can be in the face of insecurity, corruption, and a lack of pre-existing state capacity.

5.1 Effect of Political Development Spending on Voter Turnout

Voting in an election validates and lends legitimacy to a regime. In Iraq, a Sunni boycott of the first election showcased a lack of faith or willingness to work with the new government. However, as time went on Sunnis became more and more willing to allow themselves to be co-opted into the new government system, leading to vast improvements in securing Iraq. Consequently, voter turnout is a good gauge to ascertain whether Afghans perceive their government as legitimate and worthy of participation. Typical political development projects in Afghanistan focused on building and equipping government buildings from district centers to court houses, training and education on rule of law and the Afghan constitution, conflict

resolution and mediation services for reintegration of former insurgents, and funding for village councils. Did spending on political development in Afghanistan lead to increased government legitimacy and therefore higher voter turnout?

In Tables 5.1 and 5.2, the results of two OLS regressions on voter turnout in the 2009 and 2010 elections appear. Hypothesis five predicted that political development spending would increase voter turnout. However, in neither of the two elections do these two variables have a significant relationship. This finding supports many of the arguments in the literature that assert the pursuit of democracy during conflict will be ineffective (Belloni, 2007; Ottaway and Lieven,

Table 5.1: Regression of Development Projects and Turnout in 2009 Election

	Coefficient	Robust Standard Errors
Population Density	-.003*	.002
Attacks Election Day	-3.00**	.921
Total Attacks	-.006*	.002
% PS Fraud	.134*	.051
% Voted Karzai	-.173***	.047
Energy Customers	7.28***	1.88
Security Project Spending	5.58*	2.18
Economic Development Spending	2.51	7.40
Political Development Spending	-4.49	1.52
Constant	49.1***	2.39
	N= 377	R^2=.14

* significant at 5% level, ** significant at 1% level, *** significant at .01 level

2002; Shurke, 2006). The theoretical prediction of a correlation between political development spending and voter turnout is persuasive. Without building the physical infrastructure of government, and training political leaders, Afghanistan's government would have no physical manifestation. By training Afghan leaders and building offices from which to govern, GIRoA's

power and importance becomes visible, and the consequences of elections are made clear. The implication is that political development projects are either ineffective at building or improving governance or that improved governance had no effect on turnout. One reason political development projects are ineffective is because of the frequency in which GIRoA officials have been targeted for assassination by insurgents. Many Afghan public offices remain vacant because of assassinations, and it is difficult to recruit replacements for such dangerous positions. Even when such officials can be recruited they often remain in the relative safety of Kabul rather than life in the districts they are meant to serve and represent. Consequently, spending on political development projects may not be effective at increasing legitimacy if public officials remain absent.

Table 5.2: Regression of Development Projects and Turnout in 2010 Election

	Coefficient	Robust Standard Errors
Population Density	-.001	.001
Attacks Election Day	-1.96***	.501
Total Attacks	-.012***	.002
% Votes Invalidated	.284*	.119
% Voted Karzai	-.020	.057
% Women	.275*	.116
Energy Customers	-5.79	1.55
Security Spending	2.41*	1.18
Economic Development Spending	-8.84	9.08
Political Development Spending	3.40	2.50
Constant	42.7	6.16
	N= 355	R^2=.22

* significant at 5% level, ** significant at 1% level, *** significant at .01 level

Second, Afghans may view elections and their government as too corrupt to bother to vote. As the official voting data makes clear, in both the 2009 and 2010 elections, fraudulent

returns led to millions of votes being removed from final tallies. If results are rigged there is little incentive for an Afghan to risk their lives to vote. In the aggregate turnout in Afghanistan has been decreasing: from 7.4 million voters in 2004 (Afghanistan's first ever presidential election), to 6.4 million in 2005 (Afghanistan's first ever parliamentary and provincial council elections), to 4.8 million in the 2009 election that reelected incumbent president Karzai, to a low of 3.6 million in the most recent parliamentary elections (Van Bijlert, 2010). Despite continued efforts to develop GIRoA's political institutions Afghans have become more and more disengaged in elections.

It may be also be, however, that political development projects were effective at improving governance, but that gains in political development were not able to increase turnout irrespective of increases in legitimacy. As Worden reports, "postelection polls show that most Afghans believe that widespread fraud occurred, yet also think that Karzai won legitimately and deserves to be recognized as president" (2010, p.19). Voter turnout in the 2004 Presidential election and the 2005 parliamentary election were high at 70% and 53% respectively (Ghurfan, 2005). However, in 2009 security conditions had worsened and the reorganized Taliban were able to depress the vote through violence and intimidation:

> When Afghans went to the polls in August 2009, they were doing so amid one of the most challenging environments that had ever faced a nationwide vote anywhere. For weeks, the Taliban had been threatening to attack polling sites and wreak reprisals on voters—all of whom would be marked for days with indelible ink on their fingers, indicating that they had been to the polls. Indeed, election day 2009 proved to be the most violent in Afghanistan since the Taliban's ouster in October 2001... In most cases, however, the violent attacks subsided by midmorning... Turnout was reported to be higher in more peaceful areas of the country, but the voter enthusiasm so evident in 2004 and 2005 was missing (Worden, 2010, p.18).

Consequently, security was likely the foremost concern of Afghan voters in 2009 and 2010 because violence and strength of the insurgency had been steadily increasing since 2005.

One unexpected finding present in Tables 5.1 and 5.2 is that, even after controlling for levels of violence, spending on security increased turnout in the two most recent elections.[45] Why did spending on security increase turnout? It could be that the presence of Afghan security forces, which likely correlates with spending on security forces, reassured voters that it would be safe to vote. However, it may also be that the security projects themselves were responsible. CERP security projects in Afghanistan are usually involved with construction of physical barriers around government buildings, hiring local Afghans to provide security, buying equipment for Afghan security forces, and building police stations, barracks, bunkers, check points, and guard towers. Districts which received greater spending on security projects most likely had more secure polling stations, and therefore, increased voter turnout. In fact, some security projects were actually involved with providing added security during elections. It is therefore unsurprising that higher spending on security tends to have a positive influence on voter turnout. The policy implication of this finding is that, in order to increase participation, statebuilders should focus on security.

Economic development spending did not increase turnout in either election. In many countries it has been shown that variables related to the desired outcomes of economic development projects, like income or education, increase turnout.[46] It is possible that districts with more economic development projects dollars had lower voter turnout rates because these projects were ineffective at increasing employment and improving access to education. However, it is also likely that there was too much insecurity for these projects to have any effect. While both of these factors are possible the former is most likely because economic development

[45] There have been four national election in Afghanistan since 2001 in the 2004, 2005, 2009, and 2010. However, detailed election results are only available at the district level in the latter two elections. Without district level data there is not enough spatial variation to conduct a quantitative analysis of turnout.

[46] The following studies from both American and Comparative politics confirm the importance of socio-economic variables at both the individual and country level: Blais, 2006; Blais & Dobrzynska, 1998; Leighley & Nagler, 1992.

projects are unlikely to have created large enough changes in income and employment to have made an indirect impact on turnout.

There is an interesting difference between Table 5.5 and 5.6. The percent of voters casting their ballot for Karzai is very significant for the 2009 election but not in the 2010 election. Interestingly, the greater the voter support for Karzai in 2009 the lower the general voter turnout rate. However, the effect was not very large and disappeared in 2010. As was explained in Chapter 3, percent of votes for Karzai could be acting as a proxy for percentage of the population that is Pashtun. Members of the Taliban, the largest insurgent group operating in Afghanistan, are primarily of the Pashtun tribe. Consequently, Pashtun areas are more supportive of the insurgents than are areas in the north and west where many tribes fought against the Taliban. Thus, Pashtun areas are less likely to show support for GIRoA in the elections. This does not explain, however, why the effect is not present in 2010. One reason could be that Pashtuns became more accepting of GIRoA in 2010. This could be due to the troop surge which secured many Pashtun areas in the south or because voting for local representatives for the parliament was more acceptable than for a national president. Another reason could be that non-Pashtuns had more to lose in the 2009 election, because of their minority status, and so voted in larger numbers against Karzai the Pashtun candidate. Of these three possible causes the last is the most likely because there is no anecdotal evidence of a change in levels of security or of Pashtuns having more interest in selecting local officials than a national president. Conversely, because there hasn't been a national census in many decades, the tribal make up of the country is in question, and this incentives smaller tribes to appear as numerous as possible.

Population density has a significant effect in 2009 election but the effect is very small and drops off in the 2010 election. Similarly, the number of energy customers is significant in 2009

and the coefficient is large but there is no similar relationship in 2010. Population density was included because it is typically easier to vote in an urban area where the distance to the closest polling stations is shorter. The number of energy customers was added as a control to this model because access to electricity is likely to correlate with levels of education and literacy. The effect of these two variables most likely dropped off because turnout was much lower in the 2010 election. Specifically, there were 1.2 million fewer voters in 2010 compared to 2009. The decrease is explained by the fact that in 2010 voters were electing representatives to the national parliament whereas in 2009 they voted for the president. The literature on presidential systems suggest that countries with an elected president for head of state and head of government tend to have higher voter turnout rates for the presidential elections than for legislative elections (i.e. mid-term elections). The same effect was apparent in Afghanistan in 2004 and 2005 where turnout decreased by 17% when the presidential election was followed by the election for seats in the Loya Jirga.

The remaining control variables were significant in both elections. A total count of insurgent attacks and security incidents on Election Day are both negative as would be expected. Indeed, violence at the polling stations kept even the most determined Afghans from casting ballots. In both elections the fraud variables are significant and positive. This is likely for two reasons. First, because fraud is a proxy for how contentious the election was in any particular district. Second, not all fraudulent votes in audited polling stations were thrown out. Obviously, if the latter is true the finding would indicate that the voter turnout variable is flawed.[47] On the other hand, however, committing fraud to support a preferred candidate is also a form of political participation. In fact, it is a form of participation that is more costly in terms of time and

[47] Even if not all the fraudulent votes were removed the number remaining is likely very small because the coefficients for each fraud variable are low.

money.[48] Fraud suggests that Afghans have a stake in the election outcome. If elections matter to Afghans, then GIRoA is not a meaningless foreign institution.

In the 2010 election, there is a significant positive relationship between the percentage of women voting and higher voter turnout.[49] The result makes logical sense because women make up about 50% of all eligible voters, if they do not vote, turnout will be lower. Of course, it is not a given that women in Afghanistan would go to the polls at all because of cultural norms and Taliban threats. While the data suggests more empowered women, anecdotal evidence indicates a great deal of "female votes" were made by male family members whereby, "a patriarch would bring dozens of cards allegedly representing the female members of his family to a sympathetic polling official and receive the same number of ballots so as to allow voting 'on their behalf'" (Worden, 2010, p.16). In more urban and liberal areas, however, women have gone to the polls to vote in all four elections. Moreover, Afghan women have also braved death threats to stand as candidates in both parliamentary as well as presidential elections.[50] Consequently, both the empowerment of women since the fall of the Taliban in 2010 as well as men voting by proxy for women explain the effect of percent women voting on turnout.

5.2 Effect of Infrastructure Spending on Count of Energy Customers

The fourth hypothesis states that development spending on infrastructure should be associated with increased access to electricity. Here spending on infrastructure is measured in dollars spent on CERP projects that involved infrastructure. Unfortunately, the CERP dataset did not allow for a specific category of infrastructure projects specific to power generation or power transmission lines projects. Access to energy is measured in the number of households,

[48] On way in which fraud took place was to purchase extra voter registration cards, which In 2009, "were the objects of a brisk trade, selling for up to ten dollars apiece in the bazaars" (Worden, 2010, p.16).
[49] Unfortunately, data on percent of women voters was not available for the 2009 election.
[50] In 2004 Massouda Jalal made history by being the first ever Afghan woman to run for the presidency.

businesses, or other organizations which have an account with the single national power utility in Afghanistan. In Table 5.3 the results of an OLS regression on the number of energy customers using the FD of each variable is shown. The variables on CERP spending were collapsed to the district year level in order to conform with the yearly total of energy customers in a district. The results show that spending on infrastructure projects per capita does not have a significant relationship with the number of energy customers. A number of other variables were added

Table 5.3: FD Regression of Infrastructure Spending on Energy Customers

	Coefficients	Robust Standard Errors
Infrastructure Spending	-.0285	.0267
Pol. Dev. Spending Per Capita	1.442	4.674
Security Spending Per Capita	.2172	.2558
Insurgent Attacks	-.1351	.4458
Post-Surge	-196.6	167.1
Constant	261.2*	132.7
	N = 1,564	R^2 = .0014

Yearly First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

to the model to control for other types of CERP spending, as well as levels of insurgent attacks, and a post-surge dummy variable. However, none of these variables are significant.

There are a number of explanations which could explain why spending on infrastructure did not increase access to electricity. The most obvious reason is that spending on infrastructure is too broad a category. In addition to electricity generation projects, infrastructure spending entails building roads, sanitation facilities, and telephone lines. It would be possible, though time consuming, to individually code projects according to whether infrastructure projects dealt with electricity generation or transmission. In this way, an electricity projects spending variable may explain increases in access to electricity, where as the general infrastructure projects variable did

not.

Also, a review of the free text description of CERP spending reveals that many projects involving electricity are for the installation of solar panels, diesel generators, and microhydro power plants that are not connected to larger electrical grids. Afghanistan has a very rugged terrain and electrical lines are susceptible to insurgent sabotage. Thus, a majority of CERP electricity projects focus on small scale projects in order to avoid the cost of rigging transmission lines that are vulnerable to insurgent attacks. For this reason, CERP projects may be increasing access to electricity without increasing the number of businesses and households enrolled with the national power utility. Subsequently, to be able to ascertain how effective CERP electricity projects are overall, a new source of data on access to electricity would be necessary.[51] This is not to say that CERP projects should not be expected to increase access to the national power grid. A great number of the electricity projects deal with wiring buildings so they can take advantage of electricity and also the construction of transmission lines and larger power generation facilities.

An additional reason why Hypothesis 4 found no empirical verification may be because CERP projects make up a very small percentage of total electricity projects in Afghanistan. Out of the $732 million dollars spent on Afghanistan's energy sector by the US government only $32 million was allocated by CERP and the remainder by USAID (SIGAR, 2010). As well, other organizations like the Asian Development Bank and the World Bank also invest a great deal of funds into the Afghan energy sector. Without controlling for these other sources of spending on the Afghan energy sector it is impossible to know if the $32 million in CERP project funds had a positive effect on access to electricity.

[51] One source of data that could be used would be night time illumination satellite imagery. However, in would be necessary to use a large number of images over time to detect changes in access to electricity.

The three previous possible explanations for why CERP infrastructure projects failed to increase access to electricity were all due to limitations of the data. There are also, however, persuasive theoretical reasons which explain the lack of a positive relationship between spending and access. Power sector projects in Afghanistan may be ineffective because of a lack of capacity needed for sustainability. That is, Afghanistan has a dearth of qualified personnel needed to maintain the electrical grid and power plants. As well, GIRoA lacks the capacity to collect the profits of their national power utility. Without this revenue it is even more difficult to continue to deliver electricity to the Afghan people. In comparison, the Taliban do have the capacity to collect revenue:

> Mark Moyar, a former professor at the Marine Corps University and a consultant to U.S. forces in Afghanistan, wrote in an article for the website Long War Journal in March that half the electricity ended up going to insurgent-controlled areas, 'enabling the Taliban to issue electric bills to consumers and send out collection agents with medieval instruments of torture to ensure prompt payment' (Dilanian, 2011).

Development projects in Afghanistan are constantly effected by a lack of security needed to ensure their success. In many scenarios the Taliban are able to steal, take credit for, or destroy the gains made by dollars spent on development. Therefore, another possible reason there was no relationship between CERP infrastructure spending and access to electricity could be because of incapacity and insecurity.

Despite a lack of confirmation of Hypothesis 4 aggregate figures furnished by SIGAR suggest that development spending has been able to increase the production of electricity nationally. Specifically, they report that, "Afghanistan’s installed energy capacity has grown from approximately 430 megawatts (MW) in 2001 to 1029 MW in September 2009" (SIGAR, 20010, p.ii). Moreover, power generation has also increased according to figures presented in Chapter 2. Specifically, since 2001 access to electricity has increased by 26%. These statistics demonstrate

that development projects have been able to provide dramatic improvements in the lives of Afghans despite insecurity and a lack of government capacity. However, the results in Table 5.3 show no confirmation that CERP spending was a part of the reason for this success.

5.3 Effect of Economic Development Spending on Afghan Active Support for ISAF

Hypothesis 2 in this study predicted that spending on economic development projects will be positively associated with the active support of the people. Theory supporting this prediction was based on the idea that Afghan quality of life should be increased by spending on economic development, thereby making Afghans more willing to report on insurgents. CERP spending on agricultural, humanitarian, infrastructure, and public service projects are all combined to measure economic development spending. Active Afghan support is measured in the number of explosive devices that are found and cleared before they have a chance to detonate. Many explosive devices are found and cleared because of tips generated from Afghans and around half of all explosives are found and cleared before they detonate. In Table 5.4 the results of an OLS regression on the number of explosives found and cleared using the FD of each variable is shown.

The variable of interest in Table 5.4 is economic development spending. Interestingly, the coefficient is not significant. One explanation for the lack of influence economic development spending has on active support is the way in which support is measured. The proxy for active Afghan support in this study is a count of explosives found by American and Afghan forces. This measure is flawed because the location of explosives is only one type of intelligence that Afghans could provide. The identity and location of those who support insurgents, or who are insurgents, as well as weapons caches is also very useful but not identified through a count of explosives found. As well, active support can also come in the form of tribal leaders who pledge

to support ISAF and use their own forces to fight insurgents, or the willingness of Afghans to risk their life by joining the Afghan armed forces. Were data available a connection may be found between economic development spending and these other indicators of active support. However, given this limitation, the data is still suggestive.

Table 5.4: Effect of FD Regression of Economic Development Spending on Active Support

	Coefficients	Robust Standard Errors
Econ. Dev. Spending Per Capita	-.0006	.0000
Pol. Dev. Spending Per Capita	-.0000	.0000
Security Spending Per Capita	-.0000	.0000
Explosive Attacks	.6086***	.1773
Energy Customers[52]	.3700**	.1470
Poppy Cultivation	-.0007	.0013
Season	.0219	.0118
Post-Surge	.0323***	.0097
Constant	-.0088	.0060
	N = 19,890	R^2 = .2818

First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

Additional limitations to this study come from a lack of control variables. For example, Afghans can only provide intelligence to ISAF if they have a means of communication. Many Afghans do not have access to telephones, or if they do, no cell reception to provide information on the location of hidden explosives. In fact, the Taliban specifically intimidate cell phone carriers into turning off service and destroy cell phone towers because they fear the local population may call in tips.[53] As well, control variable on the quality of roads, level of training of

[52] The energy customers coefficients in Tables 5.3, 5.4, and 5.5 represents per ten thousand customers.
[53] Many news agencies have reported that Insurgents see cell phone towers as a threat because they facilitate the ability of Afghans to tip-off ISAF, make it possible to track insurgent locations through their phones, and make it more difficult for insurgents to control the flow of information. The link to the following New York Times article is an example of these news reports: http://www.nytimes.com/2010/03/24/world/asia/24iht-letter.html

soldiers, availability of explosive detection equipment, and extent to which ISAF conducts mounted and dismounted patrols may all may have an effect on how often an IED is found and cleared rather than detonated successfully. If possible, future studies on the effectiveness of economic development projects to increase Afghan active support should include as many of these controls as possible.

There are, however, important control variables present in Table 5.4. The number of explosives which detonate before they can be found and cleared is the most significant variable in the regression. As would be expected there is a very strong and significant positive relationship between the number of detonated explosives and the number of found explosives. This is because the measure of detonated explosives is a proxy for how active insurgents are in planting explosives in any given district month. The greater the number of devices planted the more opportunity there is for tips to be generated from the populace. Once this level of opportunity is controlled for it is possible to find out what variables effect the ratio of explosives found to those exploded.

Two additional control variables in the regression are significant. Troop levels surged in 2009 and 2010 and with that surge came an increase in insurgent attacks of all types. To account for this effect a dummy variable was used. This finding suggests that greater troop density improves the chance that a devise is found before it can explode. This may be because additional soldiers allows commanders to increase patrols that search for these devises. Alternatively, Afghans may be more willing to report on the location of explosives when troop density is high because they feel more safe doing so. Ultimately, the deciding factor is the increase in patrols, because in their absence, Afghans will not feel more safe or have the chance to provide ISAF soldiers with intelligence.

The last significant control variable is the number of energy customers in a district month. Specifically, for every extra ten-thousand energy customers there are .37 more explosives found and cleared. One explanation is that people with access to electricity are both more willing and able to reach out to ISAF to inform on the location of explosives. This suggests that successful attempts to increase access to electricity have a positive COIN outcome. However, it may also be that areas with greater access to electricity are more urban, and more urban areas are better controlled by ISAF. The latter of these two explanations is more convincing because soldiers are more likely to patrol urban areas by foot, and it is easier to spot an IED while walking in familiar terrain, than from the window of a speeding vehicle.

The remaining control variables in Table 5.4 are not significant. Specifically, neither the summer season dummy variable nor the hectares of poppy cultivation have any relationship with explosives found. The summer dummy variable was added to the analysis because explosives may become more difficult to hide in winter when the earth is frozen. However, no effect was likely found because explosive devices can also be hidden in snow and low lying brush. The poppy cultivation variable was included in the analysis because opium production is used to fund the Taliban. In areas where cultivation is high, active support to ISAF troops may be low because of a lucrative relationship between poppy growers and insurgents. However, the lack of a relationship between these variables suggest poppy farmers do not uniformly ally themselves with insurgents.

In Table 5.5 an additional regression reports the results of an analysis where economic development projects are disaggregated by type. The humanitarian assistance project category is significant. Based on the coefficient every dollar spent per capita increases the number of explosives found by .0076 in a single month. This coefficient is small and indicates the effect of

humanitarian assistance on Afghan active support is modest. However, over the course of several months, and given a higher rate of spending, the effect could be substantial. This finding provides corroboration for Hypothesis 2 and the theory that improving the quality of life for Afghans can increase their active support. Like in the previous model the same control variables were significant with very similar coefficients. There are more explosives found post-surge, in areas with greater access to electricity, and in districts where explosives are more common.

Table 5.5: Effects of Disaggregated Economic Development Sending on Found Explosives

	Coefficients	Robust Standard Errors
Humanitarian Spending Per Capita	.0076*	.0031
Infrastructure Spending Per Capita	.0012	.0010
Agriculture Spending Per Capita	-.0114	.0251
Public Services Spending Per Capita	-.0104	.0110
Explosive Attacks	.6086***	.1773
Energy Customers	.3700*	.1470
Poppy Cultivation	-.0007	.0013
Season	.0212	.01188
Post-Surge	.0312***	.0010
Constant	-.0087	.0061
	N = 19,890	R^2 = .2818

First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

While economic development projects in the aggregate had no effect on explosives found, after disaggregated by type, spending on humanitarian projects was discovered to have a significant positive relationship with found explosives. This finding implies that only spending on humanitarian projects is able to win the active support of Afghans. This is interesting because, as stated in Chapter 2, a number of researchers suggest that other types of projects (i.e. spending on schools, hospitals, agriculture, and infrastructure) should have a positive effect on levels of

support. There are two possible reasons. First, it may be that, unlike other types of projects, humanitarian aid (in the form of food, blankets, and emergency shelter) is hand delivered by ISAF soldier to Afghans. If humanitarian aid is delivered in person, Afghans have an opportunity to meet and have a positive interaction with ISAF soldiers. Such interaction brings about increased communication between Afghans and ISAF soldiers which gives locals an opportunity to report on insurgent activity. In comparison, projects like hospitals, which are built by contractors and not ISAF soldiers, lack a direct connection. As well, such projects may not be directly identified with ISAF because others (like local strong men, politicians, or the Taliban) may take credit for projects. Second, because humanitarian aid is distributed by ISAF soldiers it is less likely to be diverted by corruption, the Taliban, or made ineffective through a lack of government capacity or insecurity. For example, in a recent article it was reported that,

> many experts believe a portion of aid is siphoned directly to the Taliban, often as protection money. Last year, an audit by USAID's inspector general concluded that as much as $5 million of a $349-million project funded by DAI, a Maryland-based firm that is one of USAID's largest contractors, was paid by subcontractors to the Taliban (Dilanian, 2011).

Provincial, district, and village level governments use development spending funds to buy off the Taliban rather than invest in development. In Chapter 2, several researchers suggest that development spending would not decrease insurgency because of corruption, insecurity, and the inability of GIRoA to administer development projects. If humanitarian aid spending is the only type of project immune to these problems it makes sense that it alone has an effect. Indeed, in most cases, it seems that the direct link between ISAF and humanitarian aid eliminates middle agents and corrupt local leaders. The theoretical implication of this finding is that corruption, insecurity, and mismanagement must be mitigated before development projects can be effective at winning Afghan support. The policy implication of this finding is that more money should be

spent on humanitarian aid or other projects in which aid is directly handed over by ISAF forces.[54]

5.4 Effect of development spending on insurgent attacks

Hypothesis 1 in this study predicts that spending on development projects will be negatively correlated with insurgent attacks. In Table 5.6 the results of an OLS regression with FD taken on each variable show there is no significant relationship between development spending per capita and insurgent attacks. Consequently, total development project spending has no effect on insurgent attacks despite the compelling arguments made by COIN theorists about the importance of increasing employment, deploying local security forces, and using new

Table 5.6: Effects of Development Sending on Insurgent Attacks

	Coefficients	Robust Standard Errors
Development Spending Per Capita	-.0004	.0028
Energy Customers	-.0850	.3220
Poppy Cultivation	.0046	.0027
Season	.1812**	.0633
Post-Surge	.1380**	.0486
Constant	-.0167	.0218
	N = 19,890	R^2 = .0007

First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

political institutions to co-opt insurgents. Instead, the results of the regression support the argument that insecurity, corruption, and incapacity make statebuilding impracticable. As explained in Chapter 2, COIN theorists take for granted that inputs, development spending

[54] The following link is to a video that interviews a member of the U.S. Air Forces as she goes about her duties in distributing humanitarian assistance to Afghans. The video shows how ISAF forces interact directly with Afghans during the process. http://www.dvidshub.net/video/104310/service-members-kandahar-airfield-provide-supplies-those-need-long-package

dollars, automatically lead to outputs, like greater employment rates and democratic institutions. Statebuilding critics do not argue that increased economic and political development would not lead to decreased insurgency but that development project inputs will not lead to the desired outputs. The lack of significance for development project spending is in line with results presented in Sections 5.1 and 5.2 where political development projects were not found to increase voter turnout and infrastructure projects did not increase access to electricity. Together these results indicate that external statebuilding efforts do not strengthen states, and therefore, do not decrease insurgency.

Despite the data limitations the results are suggestive and call into question some of the previous assumptions regarding COIN and statebuilding. Nevertheless, it is still important to discuss the limitations of this data for future research. In the case of the regression in Table 5.6 a missing control variable, the location, strength, and strikes of ISAF or GIRoA forces, may be leading to misleading results. ISAF and GIRoA troop movements and strikes certainly affect when and where insurgents attack and apply their resources and vice versa. Thus, a great deal of the variation in insurgent attacks is likely explained by ISAF troop locations and their strikes against insurgents. Previous research has shown that simultaneous equations can be used to model the interactive relationship between two forces battling for state control (Francisco, 1995). Unfortunately, the SIGACT data set only contain the attacks of insurgents, and not kinetic ISAF attacks (like search and cordons or drone attacks) on insurgents. The location and strength of ISAF and GIRoA forces is classified. However, one possible way to collect data on ISAF strikes would be through guided news searches on open source reporting. While news reports certainly miss a great number of ISAF COIN kinetic operations, and are likely biased towards larger operations, future research on insurgent attacks would benefits from a control for ISAF strikes.

Of the four control variables present in Table 5.6 only the summer season dummy variable and the post troop surge dummy variable are significant. As predicted there are more attacks in the summer. The coefficient suggests that the effect on average is an addition of .18 extra attacks per district month. This number may seem small considering Figure 3.4 in Chapter 3 but considering in most district months there are no attacks at all the effect is larger than it seems. Moreover, the effect is likely stronger in districts with more violence as well as districts with greater seasonal variation in temperature. Also as predicted there are more attacks in the post-surge period. Specifically, there are .14 more attacks per district month after the troop surge. The more troops available for missions the more aggressive stance ISAF troops can take. When troop levels are low there are too few soldiers to both defend bases and mount patrols. Therefore, in the post-surge period, not only are there more targets for insurgents to hit, but these targets are now more likely to be off base and easier to strike.

Poppy cultivation seems to have no effect on insurgent attacks at the district month level. Poppy cultivation was included because, as reported in Chapter 3, opium sales are a known source of income for insurgents. This is likely because poppy cultivated at the district level is sold to opium producers who make their profit by selling to international buyers. Therefore, although increased poppy production likely leads to increased funding for insurgents, there is no reason insurgents would spend more resources in districts where poppy is grown, because GIRoA and ISAF have been unable to keep farmers from cultivating poppy. Moreover, this data changes yearly and not monthly the model may be unable to detect a district level effect. The last control variable in Table 5.6, the number of energy customers in a district, also had no effect. The number of energy customers was included because it is a good proxy for urban district. Urban areas may have more attacks because they are likely to have a larger troop presence. One reason

why this control variable may not have been significant is because the data collected on energy customers is not updated often enough to explain monthly changes in insurgent attacks.

5.5 Effect of Development Spending, Disaggregated by Type, on Insurgent Attacks

Hypotheses three, six and seven predict that spending on economic, political, and security projects are negatively correlated with insurgent attacks. In the previous section, overall development spending that takes into account all three types of spending had no effect on insurgent attacks. However, as can be seen in Table 5.6 economic development spending per

Table 5.7: Effects of Disaggregated Economic Development Sending on Insurgent Attacks

	Coefficients	Robust Standard Errors
Econ. Dev. Spending Per Capita	-.0045***	.0013
Pol. Dev. Spending Per Capita	.0000	.0000
Security Spending Per Capita	.0000	.0000
Energy Customers	-.0849	.322
Poppy Cultivation	.0046	.0027
Season	.1815**	.0632
Post-Surge	.1377**	.0486
Constant	-.0165	.02174
	N = 19,890	R^2 = .0008

First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

capita does have a very significant negative relationship with insurgent attacks. For every extra dollar spent on economic development per capita there were .0045 fewer insurgent attacks per month. This coefficient may seem very small but the median amount of attacks in a district month is zero and on average is only 2.89. Even so, the effect is small and suggests that economic development spending is not an effective COIN strategy. The average amount spent on economic development in a district is $1.80 per capita. Therefore, over the course of a year an

average district with economic development spending, compared to one without spending, will have only .1 fewer attacks a year. The largest amount of money spent per capita on economic development in any district month was approximately $452. At this rate we could expect around 2 fewer attacks over the course of a month. However, this amount is highly irregular and represents an unsustainable level of spending.

In Berman et al. (2009) the authors find that the violence reduction value of CERP spending is stronger in post troop surge years. They theorize that development projects are more effective, not only because of increased troop levels, but also because of an increase in dismounted patrols and greater community engagement. They explain that these types of strategies "should help officials allocating CERP develop better information about community needs" and that their results suggest, "that the conditions under which development aid is delivered are critical to its' effectiveness" (Berman et al. 2010, p.30-31). In order to discover whether economic development spending is more effective in the post troop surge environment in Afghanistan, Table 5.7 shows two replications of the model in Table 5.6 for pre-surge and post-surge years. In the pre-surge years, economic development spending per capita is not significant. However, in post-surge years, the coefficient is significant and it is also somewhat higher than in Table 5.5. This suggests that, like in the Iraq campaign, as COIN doctrine evolves and troop levels increase development spending does become more effective. However, the increase of about .001 is very modest, and the coefficient remains inconsiderable. The effect of economic development spending per capita is strongest in 2009,[55] where the coefficient reaches .0084, double the effect of the overall time period. In fact, 2009 is the only year in which economic development spending per capita remains significant. It may be that, because only the first four months of 2010 are present in the data, that the coefficient for this year is insignificant.

[55] The table of regression results for 2009 alone is not presented.

Table 5.7: Effects of Disaggregated Development Sending on Insurgent Attacks		
	2006-2008	2009-2010
Econ. Dev. Spending Per Capita	-.0022 (.0042)	-.0053** (.0019)
Pol. Dev. Spending Per Capita	.2218 (.2356)	.1146 (1250)
Security Spending Per Capita	-.0395 (.0393)	.0010 (.0024)
Energy Customers	-.1020 (.3890)	-.1320 (.6270)
Poppy Cultivation	.0025 (.0039)	.0099 (.068)
Season	.1869 (.1102)	1.138*** (.3079)
Constant	.1869 (.0126)	.1809 (.0517)
	N = 13,650 R^2 = .0006	N = 6, 240 R^2 = .0038

First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

In all three models in Tables 5.6 and 5.7 spending per capita on political development and security projects is insignificant. Subsequently, there is no validation for hypotheses six or seven in this study. As well, neither the number of energy customers, nor hectares of poppy cultivation, are significantly related to insurgent attacks. The effect of the summer control variable likely becomes insignificant in the two models in Table.5.7 because there are fewer season cycles when the amount of years in the model is decreased.

In order to create a measure of spending on economic development it was necessary to aggregate four types of projects: humanitarian, infrastructure, agriculture, and public services. In Table 5.8 the results of a regression that disaggregates economic development projects by type is reported. As can be seen only humanitarian assistance projects have a significant and negative effect on insurgent attacks. For every dollar spent per capita on humanitarian assistance there are .07 fewer attacks in the following month. This coefficient is fifteen times as large as the effect of

Table 5.8: Effects of Disaggregated Economic Development Sending on Insurgent Attacks		
	Coefficients	Robust Standard Errors
Humanitarian Spending Per Capita	-.0731*	.0321
Infrastructure Spending Per Capita	.0018	.0033
Agriculture Spending Per Capita	-.0398	.0865
Public Services Spending Per Capita	.0183	.0292
Energy Customers	-.8500	.3220
Poppy Cultivation	.0046	.0027
Season	.1814**	.0632
Post-Surge	.1376**	.0486
Constant	-.0165	.0218
	N = 19,890	R^2 = .0008

First Differences reported with Robust Standard Errors, clustered by district
* significant at 5% level, ** significant at 1% level, *** significant at .01 level

the aggregated economic development spending variable. The average rate of spending on humanitarian projects per district month is only three cents and the maximum spent in any district month was $62. At the average rate of spending the effect of humanitarian projects on insurgency would be negligible. At the largest rate we would expect around 4.5 fewer attacks in a month. At this level of spending the effect is quite substantial and would noticeably decrease levels of insurgent attacks.

From January of 2006 to April of 2010 only 2% of all CERP spending was on humanitarian projects. A policy implication is that CERP spending priorities should change and increase the amount spent on humanitarian projects. The theoretical implications of this finding are similar to what was discussed in the Section 5.3 in which humanitarian aid was found to be the only type of spending that can increase the likelihood of locating explosives. Specifically, because humanitarian projects lead to direct interactions with Afghans they are the only project type to be immune from corruption, insecurity, and incapacity. What do these CERP

humanitarian projects entail? In the CERP data set there are free-text descriptions of almost every project. The following two descriptions below showcase the type of CERP projects that are typical of the humanitarian assistance category:

> To purchase Humanitarian Assistance off the local Farah market to spur economic growth and to allow PRT to react to existing shortages in food, clothing, and essential supplies to support ongoing operations and emergency/disaster relief.
>
> These funds will be used to provide food, jackets, blankets, and other humanitarian aid to poor and displaced families within the Zenda Jan District.

Items which are commonly handed out include tents, blankets, jackets, shoes, cooking oil, coal, beans, flour, rice, salt, sugar, and tea. One reason the distribution of such items lead to a decrease in the number of insurgent attacks is that the people who receive these items are less likely to join the insurgency. Another reason is that these items are often bought from the local market, humanitarian projects improve local economies. Also, as was explained previously, the direct communication that comes from handing out these supplies may also lead to greater intelligence gathering about the location and identities of insurgents.

These findings about the violence reducing effects of CERP spending differ from other research. For instance, in Berman et al. (2009) the authors find that total CERP spending has a violence reducing effect for Iraq. In the Iraq CERP dataset, there is no category for political development projects, security projects, or humanitarian projects. Instead the projects are broken out into education, electricity, health, transportation, and water and sanitation. When Berman et al. disaggregate CERP spending into these five categories only the water and sanitation project category is significant. However, the coefficient for water and sanitation is smaller than total CERP spending coefficient in their aggregated model. There is no simple comparison between this study and the Iraq study because the spending categories, unit of analysis, and the dependent variable are not the same. In the Iraq study, the unit of analysis is a district half-year and the

dependent variable is insurgent attacks per capita. In order to make the coefficients easier to interpret this study does not take insurgent attacks per capita.[56] The total economic development category in this study and the total CERP category in Berman et al. are the most directly comparable. In both studies the coefficient for these two categories is negative but the effect is stronger in Iraq at about .01.[57] Nevertheless, the results in this study suggest that the coefficient for humanitarian project spending is stronger than in any model in the Berman et al. study.

Overall, the data story in this Chapter demonstrates that the vast majority of CERP development projects have no effect on development outcomes, the active support of Afghans, or insurgent attacks. The most convincing explanation of these findings is that there are too many obstacles in a conflict environment for money spent on development to be effective. Specifically, insecurity leads to the destruction of schools, hospitals, and other manifestations of Afghanistan's infrastructure. As well, reports show that Afghans often take the money given to them for development and use it instead as protection money for insurgents. Lastly, insecurity also makes it impossible to properly monitor and audit dollars spend on development. This means corruption is able to divert a great deal of development money into offshore accounts even when the money is spent by IOs and foreign governments. At the same time, the Afghan government continues to lack the capacity to maintain infrastructure, provide oversight or leadership over their own armed forces, or to reign in corruption and electoral fraud. Consequently, there are too many barriers in place in Afghanistan to make development projects an effective COIN strategy.

Two results, however, point to victories that could be exploited to create greater success. First, increased spending on security did lead to increased voter turnout in the 2009 and 2010

[56] In order to allow a more direct comparison with the Iraq study an additional model was run in which insurgent attacks were taken per capita. The coefficient for economic development spending remained significant in this model.

[57] This may not be because CERP funds are more effective at decreasing insurgent attacks in Iraq but because they take insurgent attacks per capita as their dependent variable and also because they aggregate their data to a half-year.

elections. The implication of this finding is that when security is improved desired development outcomes can be achieved. Secondly, humanitarian projects, because they involve the direct transfer of goods to Afghans by ISAF soldiers, seem to be immune to insecurity, corruption, and government mismanagement. The lesson to be learned from this finding is that only development projects that can be ISAF monitored, kept secure, and can be maintained by the GIRoA, will be effective. These restrictions limit the types of development projects that can be exploited by ISAF but they would result in a more effective COIN strategy in Afghanistan.

Chapter 6: Conclusions

6.1 Contributions

Figure 1.1 in Chapter 1 is a summation of the COIN theory covered in Chapter 2. The breakout between three types of development projects and the further distinction between input, output, and outcome variables was essential to the execution of the analysis in Chapter 5. Had development projects not been broken out by type it would have been impossible to find that humanitarian projects alone had a negative relationship with insurgent attacks and a positive relationship with Afghan active support. Instead, the finding would have been that *all* development projects had no effect. Similarly, the distinctions between input, output, and outcome variables allowed multiple assumptions of COIN theory to be tested. The results in Chapter 5 report that spending on security has no effect on insurgent attacks. However, security project spending was also tested in an analysis of voter turnout in Afghanistan and found to be significant. Similarly, in Table 5.4 and 5.5 access to electricity was found to be positively correlated with the number of explosives found in a district month. Therefore, improving access to electricity in Afghanistan may decrease levels of insurgency. Previous research on military statebuilding has ignored output variables like turnout and access to electricity. However, the theoretical contribution of this study allows a deeper analysis of both the direct and indirect ways in which development projects may affect insurgency.

The entire data collection process for this study centered around Figure 1.1 so that hypothesis between inputs and outputs and outputs and outcome variables could be tested. The result of the collection process is a unique dataset on a case of insurgency that has previously not been investigated quantitatively. This dataset led to a number of findings that have policy relevant implications. First, that a certain level of security is necessary before military

statebuilding can be effective. This implication is based on three pieces of evidence in Chapter 5: first, only post-surge economic development spending had a negative effect on insurgency; second, voter turnout was higher in districts with greater security spending; and third, that the only type of economic development spending to have a violence reducing effect was uniquely immune to insecurity.

The second major finding is that statebuilding can win the active support of the indigenous people during an insurgency. This tenet of COIN theory has until now remained untested using a quantitative analysis. The effect of humanitarian aid projects was found to increase the number of explosives found. IEDs are the most deadly weapon in the insurgent's arsenal having been responsible for forty-one percent of all US casualties (Livingston et al. 2011). Each tipoff on the location of one of these devices could be saving a life. Unfortunately, because a planted explosive, even if found and cleared, is an insurgent attack, it was not possible to assess the effect of active support on insurgent attacks. To test this hypothesis additional data on tips generated by Afghans would be needed to test for a negative relationship with attacks.

If humanitarian aid projects are an effective part of COIN will it be possible for GIRoA to use this strategy to defeat insurgent after ISAF forces leave Afghanistan? The Afghan Ministries of Public Health and Rural Rehabilitation and Development work toward relieving poverty and ministering to poor Afghans but their mandates do not cover emergency relief. It is likely GIRoA has thus far neglected issues of emergency response and humanitarian assistance because ISAF and a number of IOs have already taken on this responsibility. In the future, however, when Western forces and organizations have departed, GIRoA may decide to internally build up this capability in order to receive active support from their citizens.

The third major finding is that insecurity, corruption, and a lack of preexisting state

capacity make the vast majority of CERP projects ineffective at development, winning hearts and minds, or decreasing insurgency. This determination was based on the inability of CERP infrastructure projects to increase access to electricity, the lack of a positive relationship between political development and turnout, and the finding that only humanitarian aid projects had any relationship with winning active support or decreasing insurgent attacks.

The fourth and final finding of this study is that statebuilding projects do not cause insurgency to increase. The introduction of democratic elections to Afghanistan's tribal society, the injection of billions of dollars into a pre-industrial economy, and the construction of a variety of soft targets for insurgents to hit, were all potential reasons stated in Chapter 2 for why development projects may actually do more harm than good. In Chapter 4, all the correlation coefficients connecting development spending and insurgent attacks were very small but positive. This evidence seemed to indicate it was possible that spending may actually cause insurgent attacks to increase. However, in Chapter 5 the FD OLS regression with control variables was able to show no significant positive relationship.

This research contributes to the literature on COIN by corroborating the studies of Berman et al. (2009) and Hanson et al. (2009) that also find development projects can have a violence reducing effect. The policy implications of this research are equally important. In fact, this author recommends three courses of action for the ongoing conflict in Afghanistan. First, as Major General Flynn has advocated, additional data on tip-offs, Afghan quality of life, and GIRoA need to be collected regularly at the sub-national level over time. Doing so will improve our ability to test the effectiveness of COIN theory. Second, CERP projects should focus more on providing humanitarian aid. Third, development projects should only be conducted in areas secure enough to ensure the project can be utilized by Afghans and also allow proper monitoring.

6.2 Limitations

The greatest limitation of this study is that it only investigates the effects of CERP spending and does not include spending by Afghan ministries, IOs, foreign countries, or other U.S. agencies like USAID or the DoD. Without data on all development spending in Afghanistan it is impossible to make a final ruling on the effectiveness of development spending as a COIN strategy in Afghanistan. This is especially true for DoD spending and the effectiveness of security spending projects because it is the DoD that is responsible for training and equipping the Afghan Armed Forces. In addition, without being able to control for these other types of spending, the effects of CERP found in this study are in question. This is especially so because CERP spending is actually a minority of total development spending in Afghanistan. In fact, CERP projects only make up about 14.5% of total US spending since the war began in 2001 (SIGAR, 2011). Instead, the ACSP, which is the most complete dataset of development projects in Afghanistan, should be utilized. Unfortunately, as was stated in Chapter 3, this dataset is currently classified as FOUO. Therefore, special permission must be granted before this data can be analyzed in future research.

A further limitation of this study is its artificial truncation of the statebuilding process in the data. While fifty-two months represents a relatively long period of time for a cross-sectional time series analysis, because statebuilding is an activity that spans decades, it may be that CERP funded projects have not yet had a chance to succeed. As well, because CERP and other statebuilding projects remain active in Afghanistan, this study cannot be a final evaluation. In sum, future research on the effectiveness CERP projects should attempt to continue to monitor output and outcome variables in the coming years.

The lack of data on blue forces and their kinetic operations against insurgents also

represents a major limitation of this study. As explained in Chapter 5, the variable most likely to predict insurgent attacks is the location and activities of ISAF and ANSF soldiers. The fact that the ratio of casualties to troops in Afghanistan has stayed constant while the sheer number of troops in Afghanistan has proliferated lends credence to this assertion. Collection of this data is limited by its sensitive nature but open source reporting of drone attacks, base locations, and major battles may help to fill this gap.

A final source of data missing from this analysis is qualitative in nature. Interviews with soldiers who have used CERP funds would be an invaluable addition to this research. Did soldiers handing out humanitarian aid receive intelligence from Afghans? Did spending on security projects mean the difference between keeping GIRoA officials safe from assassination? The answers to these questions would sharpen our understanding of what the quantitative results in this study mean. In fact, a small number of interviews with recently returned soldiers from both Iraq and Afghanistan were conducted for this study. One common message which prevailed in each interview was that CERP projects were important because they allowed the soldier to consider how he or she could address the needs of the community they were protecting. These considerations would lead to greater communication and interaction, and ultimately, trust with the community. However, each interviewee also explained that sometimes CERP projects did not turn out as planned. For example, a building meant to be a clinic would turn into a school because medical supplies were in short supply. Consequently, collecting additional qualitative data would draw a much more complete picture of the effectiveness of development projects.

6.3 Directions for Future Research

The results of the analyses in Chapter 5 suggest that statebuilding conducted by U.S. military forces has been mostly ineffective. However, because of a lack of data, the effectiveness

of all three varieties of project spending on both development outputs and insurgency outcomes remain untested. Each of the three statebuilding outputs in Figure 1.1 suggest multiple dependent variables that could be used to test for effectiveness. For example, in this study the effectiveness of political development spending on legitimate governance was voter turnout. In Iraq, increases in turnout over time pointed towards important strides against the insurgency. The use of this measure in Afghanistan, however, was flawed because violence often kept Afghans from voting even if they viewed their government as legitimate.[58] Further study on the effectiveness of political development spending should focus on additional dependent variables like incidents of corruption[59], reintegration of insurgents, court rulings, percent of political offices that stand vacant, and number of representatives living in the districts they represent (Kilcullen, 2010). Assessments of political development in any conflict or post-conflict environment must be multidimensional. No one measure can report on the overall health of a political system. Voter turnout is one way to ascertain if citizens view their government as legitimate but it may not be appropriate to evaluate the effectiveness of political development spending. Considering the types of CERP projects described in Chapter 5 a better measure of assessment may be the extent to which district and sub-district level governments have been established. Specifically, are village shuras meeting and do these village level councils receive support and leadership from their district and provincial centers.

The only variable for economic prosperity in this study is the percent of the population with access to electricity. Access to electricity is important because it can power items like

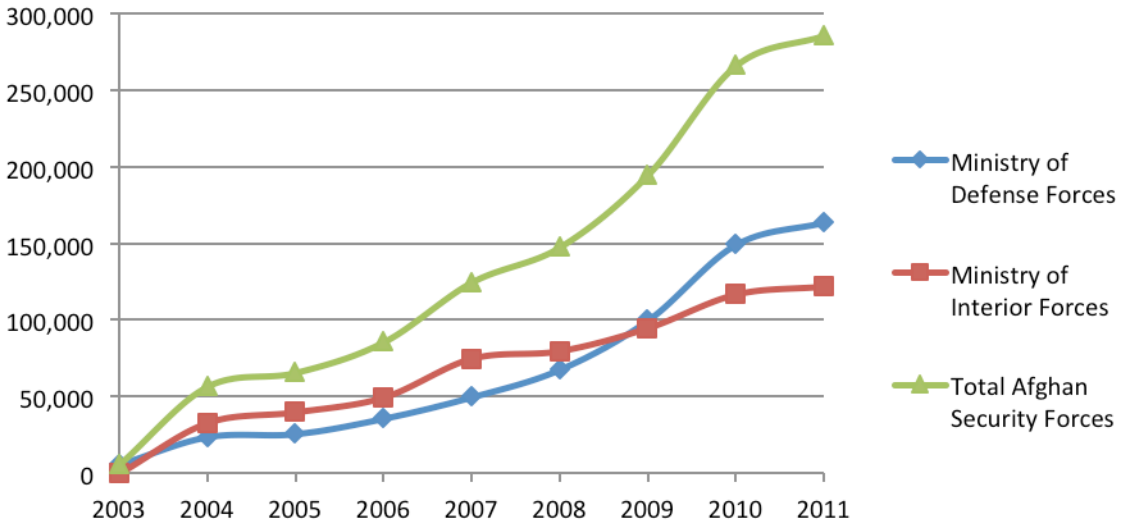
[58] An additional limitation of the effectiveness of the model on voter turnout is that certain explanatory variables common to studies on turnout were missing from this analysis. In every other model in this study time invariant district level attributes are automatically controlled for by taking first differences. However, because the turnout data in this study does not vary overtime it is necessary to control for district characteristics like literacy rates or average incomes.

[59] A novel way of measuring and detecting corruption has come from crowdsourceing. Future research on political development in Afghanistan could collect data by launching websites like http://ipaidabribe.com/

radios, cell phones, lights, refrigerators, and stoves that makes life easier and increase citizens' access to information. However, using access to electricity exclusively for a proxy of economic prosperity does not take into account many other important indicators like the quality of roads, unemployment rates, literacy, life expectancy, or economic activity. The vast majority of CERP projects were focused on improving the quality of life for Afghans. To show that this funding is really ineffective economic development projects need to be disaggregated by type and measured against appropriate dependent variables. For example, dollars spent on building schools could be compared against K-12 enrollment rates among children.

The third statebuilding outcome variable in Figure 1.1 is domestic security forces. Eventually ISAF forces will leave Afghanistan, if the ANA is unable to keep insurgents at bay, GIRoA will be toppled. Due to a lack of longitudinal sub-national data on the use of Afghan National Security Forces (ANSF) there is no test of the effectiveness of security spending in this study. In Figure 6.1 national level data on the growth of Afghan security forces in Afghanistan

Figure 6.1: Growth in Afghan Security Forces on Duty, 2003-2011[60]



[60] Data used to create this chart was collected from the Brookings Institute Afghanistan Index, updated as of June 30, 2011.

show that ISAF has been successful at increasing the number of deployed ANA and ANP forces. Nonetheless, the effectiveness of these forces is often called into questions because of illiteracy, lack of marksmanship skills, and reports that a very high percentages of soldiers are not present for duty.[61] In a recent interview with a New York Times journalist, a senior American trainer remarked that,

> soldiers are not required to qualify on their assigned weapon (M-16) prior to graduation. A fitness test is not required either. The list goes on and on. Soldiers 'graduate' from basic and advanced training simply because they did not go AWOL. If they are present on graduation day then off they go to their units (Chivers, 2010).

This anonymous quote explains why ISAF's own briefing slides report that only 1% of ANA soldiers are able to operate independent of advice and assistance from ISAF (Livingston et al., 2011, p.8). These uninspiring results are especially troubling considering that the US has appropriated $33.29 billion on training and equipping ANSF since 2002 (SIGAR, 2011, p.44).

However, additional data shows that the ANA is one of the most trusted institutions in Afghanistan (IWA, 2010). As well, in an interview with this author, a US Army soldier who regularly used CERP funding while deployed in Afghanistan reported that partnership with the ANA was crucial to success in the use of CERP funds. Specifically, he explained that Afghans were afraid to take money for development projects from Americans because they were afraid insurgents would target them for taking money from "infidels." Instead, US soldiers would partner with ANA soldiers so that development projects could be credited to GIRoA and not the US. Clearly, additional research is needed to explore these conflicting anecdotal narratives on the effectiveness of security force development in Afghanistan.

Were additional data for the statebuilding output variables described above available,

[61] ISAF estimates that approximately twenty-eight percent of ANSF are literate (SIGAR, 2011, p.6). As well, in ANA units anywhere from seven to fourteen percent of soldiers were Absent Without Leave out Leave (AWOL) in March of 2011 (SIGAR, 2011, p.58).

they could also be used to test the direct connection between levels of development and insurgency. In this study, only one output variable, access to electricity, is used to predict insurgent attacks and Afghan active support. However, Figure 1.1 puts forward a great deal more COIN theory hypotheses that remain untested. The Afghan case still has many more lessons to teach about the effectiveness statebuilding as a COIN theory. Overall, the results in this study paint a bleak picture on the usefulness of CERP. However, this research only scratches the surface of analysis that needs to be conducted before any final judgments can be made about CERP or other similar programs.

6.4 Conclusions

The purpose of this study was to assess the effectiveness of statebuilding, measured in dollars spent on development, as a COIN strategy. A review of research on this topic uncovered a divide between statebuilding critics and supporters. Supporters see development projects as a necessary and important part of a larger COIN strategy. Critics believe development projects are too susceptible to corruption, insecurity, and deficiencies in government capacity to be an effective COIN strategy. Can you spend your way out of an insurgency? Based on analysis of a portion of the funds spent on Statebuilding in Afghanistan the answer is no. The vast majority of CERP spending was ineffective at improving legitimacy, expanding access to electricity, increasing the number of explosives found, or reducing the number of insurgent attacks. Even when the troop surge was ongoing the effects of CERP projects were modest. Only very small scale spending projects, where goods are directly given to the population, were proven to be effective. In fact, the success of humanitarian aid projects could be seen as the exception that proves the rule. Corruption, insecurity, and mismanagement keep statebuilding from reaching its

development goals, and therefore, its COIN objectives. However, because humanitarian projects are immune to these issues it alone was shown to be effective.

An obvious questions stemming from these conclusions is whether the results of CERP on insurgency and development are generalizable to the larger statebuilding efforts in Afghanistan or even statebuilding in other countries experiencing insurgency. CERP projects differ from most efforts by USAID, IOs, and other organizations in their scale, project selection mechanisms, and personnel. In terms of scale, the average cost of a CERP project is much smaller than usual because they are designed to have local impact in the surrounding areas of deployed soldiers. The limited scope of CERP projects may mean other statebuilding efforts are more likely to be successful. This may be especially true in terms of finding noticeable improvement in Afghanistan's economic development. As well, CERP project selection is based on strategic concerns of soldiers and not on a determination of need for Afghans. If development dollars are more likely to be effective in areas with low levels of violence, and CERP projects dollars go to violence prone areas, then development by USAID or other agencies may be found to be more effective. Lastly, because CERP is administered by soldiers and marines, as opposed to development specialists who have experience in reconstruction, these projects may be less effective because of the lack of expertise needed to effectively administer millions of dollars worth of development funds.

This study's generalizability to other theatres of war is also limited because of the unique factors of the Afghan case. First, because Afghanistan is one of the few countries in the world that has experienced war and state failure for over twenty years it may be particularly hard to have success in statebuilding. Despite over ten years of civil war after the Soviet pullout, the brutal tactics of the Taliban were unable to secure all of Afghanistan, even with their knowledge

of the human terrain. Consequently, expectations for success in statebuilding in Afghanistan must be low. Second, because Afghanistan shares a border with Pakistan (which is in the grip of its own insurgency) insurgents have a great deal of mountainous terrain to use as a safe haven from ISAF forces. Safe havens are understood in COIN theory to be a major explanation for why COIN operations fail. Third, Afghanistan may have had too few troops to secure its large territory and rural population. The outbreak of war in Iraq led what to many considered too few resources for Afghanistan to be funneled away. In 2003 the Taliban appeared defeated after initial success in taking Kabul, Kandahar, and other major cities. However, because this success was not consolidated the Taliban were able to rebuild.

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